The Lived Experiences Of Muslim Women With Infertility

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THE LIVED EXPERIENCES OF MUSLIM WOMEN WITH INFERTILITY

by

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DEDICATION

I dedicate this dissertation and the completion of my doctoral education to my family. The love, support, and encouragement I received from my mother (Nahla), father (Jamal), sisters (Maysa and Amelia), and husband (Eyad) allowed me to be successful and complete my research. I also dedicate this dissertation to my son, Yusuf. This dissertation is dedicated to every woman living with or has lived with infertility and the women that participated in this study.
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CHAPTER 1 INTRODUCTION

Background and Significance

After being ready to embark on a journey to parenthood, couples' dreams may be shattered after realizing that dream may not come to reality. Disappointment, a sense of failure, anger, loneliness, and lack of purpose or meaning in life are all words that describe what many women feel as they struggle to conceive (Inhorn, 2018; Greil et al., 2011). Difficulty in achieving a pregnancy brings a harsh reality to many women that they may never be a biological mother. No one anticipates the roller coaster of emotions and difficulties that wait ahead. Each month of failing to conceive is another month of disappointment and helplessness. For many, after months of trying and failing to achieve a pregnancy, couples may begin to look for answers to why they are unable to get pregnant. "What do we do now? Where do we go from here? Will we ever be parents?".

Fertility, the ability to establish a clinical pregnancy, may be a central component of a women’s identity (McQuillan et al., 2015). The importance society places on fertility dates back to early creation. A review of archeological remains, iconographic evidence, symbols, and texts provides details on the significance of fertility during earlier periods (Behjati-Ardakani et al., 2016). The advancement of societies has shaped the timing of procreation, which may lead to postponing conception or eliminating it altogether. Regardless of the desired timing of conception, in reproductive couples wishing to start a family, fertility remains an integral component of a couple’s identity. Couples have described parenthood as being their central identity, a uniting symbol of love and affection that provides a unique bond (Purewal & van Den Akker, 2007). Difficulty in achieving a pregnancy or parenthood for those trying to conceive may have a devastating effect on the psychosocial well-being of an individual experiencing infertility.

Prevalence of Infertility

Infertility, ranked as the 5th highest global disability, is estimated to impact 186 million women worldwide (World Health Organization [WHO], n.d. -a). The definition of infertility varies
throughout the literature as it is either based on a clinical, demographic, or epidemiological foundation. Impaired fecundity is a term that may also be used in the literature interchangeably with infertility. It is important to know the difference between impaired fecundity and infertility as the prevalence rates in studies may be reported separately. The most accepted clinical definition of infertility, defined by the World Health Organization [WHO] and the International Committee for Monitoring Assisted Reproductive Technologies [ICMART], is a failure to achieve a clinical pregnancy after 12 months of unprotected sexual intercourse (WHO, n.d. -b). The clinical definition of impaired fecundity is broader and includes difficulty in achieving a pregnancy or carrying a pregnancy to term (Centers for Disease Control [CDC], 2019a). There are two classifications of infertility, primary and secondary infertility. Primary infertility refers to women who have never been diagnosed with a clinical pregnancy, while secondary infertility refers to women who have had a previous successful pregnancy and later have difficulty achieving another pregnancy (WHO, n.d. -b). The difficulty in achieving a pregnancy may be linked to either a male factor (30% of cases), female factor (50% of cases), both a male and a female factor (30% of cases), or an unknown factor (10% of cases) (Sharlip et al., 2002; Agarwal et al., 2015).

The prevalence rates of infertility are under reported thus the actual number of men and women with infertility may be higher than what is believed (Chandra & Copen, 2013). The global prevalence rates of infertility may vary significantly due to the differences in the formula, definitions and study method used, and use of both male and female factors when only estimating women with infertility (Chandra & Copen, 2013; WHO, n.d. -a). WHO (n.d. -a) has created a formula for nations to monitor infertility prevalence in women. However, the formula is not used routinely. Based on the consistent use of the clinical definition of infertility and interpretation and analysis of global monitoring used by the WHO and the Department of Reproductive Health and Research, this principal investigator will use the WHO's estimate of global prevalence rates of infertility. Prevalence rates of infertility often discussed in the literature may include a combined total of both primary and secondary infertility. Infertility is estimated to impact 8-12% of
reproductive-aged men and women globally (Borgh & Wyns, 2018). Findings reported by WHO have found that developing countries have a higher prevalence of infertility (i.e., one in four couples are diagnosed with infertility, WHO, n.d. -b). The overall rates of infertility in women in 190 countries have remained steady over the last 20 years (WHO, n.d. -a).

**Description of the phenomenon**

How a woman experiences a diagnosis of infertility may differ based on many factors such as education, socioeconomic status, culture, societal pressure, and religiosity or spirituality. Infertility is a socially constructed process that requires an individual to embrace parenthood as a desired social role (Greil et al., 2011). The centrality of motherhood to a women’s identity is shaped by the socio-cultural context of fertility (Greil et al., 2011). Infertility, unlike other disease processes or disabilities, is not seen as an individual problem rather, it is seen as affecting both partners. Therefore, an individual diagnosed with infertility may not seek medical treatment or advice immediately. Individuals who are infertile may first negotiate what next action steps to take with their partner or larger social networks (Greil et al., 2011).

**Socio-cultural context of Infertility**

The importance of parenthood is emphasized across all societies; however, there are some that place a significantly higher value on motherhood (Inhorn, 2018; Greil et al., 2011). Racial and class differences play a crucial role in the socio-cultural context of infertility. The U.S., similar to other nations, is considered a pronatalist society. The level of importance of motherhood differs widely in different racial and ethnic cultures. Surprisingly, the literature has found that Black and Hispanic women have a lower level of desire for motherhood compared to non-Hispanic white women (McQuillan et al., 2015). However, Black and Hispanic women have higher fertility intentions (McQuillan et al., 2015). Societal expectations, family and social values, and importance of motherhood were associated with fertility intentions (McQuillan et al., 2015). Muslim and Arab women were similar to non-Hispanic White women in that they placed a significant
importance to motherhood and like Black and Hispanic women had a high rate of fertility intentions (Inhorn, 2018).

**Emotional consequences of Infertility**

The emotional consequences of infertility may be heightened by the societal and cultural expectations of procreation. Investigators who reviewed the experiences of women with infertility have found many recurring themes. The psychological consequences of infertility in women include a feeling of loss, despair, grief, and inadequacy due to their bodies letting them down (Inhorn, 1996; Syme, 1997). Women experiencing infertility also described having an identity crisis, difficulty finding a place in their world, a feeling of numbness, lack of control, a sense of worthlessness, envy toward of other mothers, anxiety, and having lower life satisfaction (Karaca et al., 2015; Syme, 1997; Williams, 1997). A diagnosis of infertility may also strain a couple’s marital relationship and sexual satisfaction. The stress of infertility on a couple’s relationship may decrease marital satisfaction and increase sexual dysfunction (Luk & Loke, 2015; Oskay et al., 2010). Women who continued to experience infertility, even after years of cessation of treatment, continued to describe feelings of social isolation and grief (Greil et al., 2011).

**Relationship of Infertility and Islam**

The prevalence rates of infertility in women in North African and Middle East regions, which have a large Muslim population, are 2.1% and 3.1% respectively (Mascarenhas et al., 2012). The prevalence rate of men with infertility globally is unknown, as it is not well researched (WHO, n.d. -a). The annual prevalence rate of infertility in the U.S. is approximately 8.8% to 12.7%, of women aged 15-49 who reported infertility or use of infertility services (CDC, 2019b). Approximately, 9% of men aged 25-44 reported that they or their partner were seeking advice or treatment for infertility (CDC, 2019b), which translates to one in seven couples that are diagnosed with infertility (Borght &Wyns, 2018). There are no accurate data or estimate of the number of Muslim men and women experiencing infertility in the U.S. or Western nations. Similarly, there is no official count of the number of Americans that identify as Muslim. However, Pew Research
Center estimates that about 3.45 million or 1.1% of the U.S. population identify as Muslim (Mohammed, 2018). Approximately 58% of Muslim adults living in the U.S. are foreign-born and 42% are U.S. born (Pew Research Center, 2018).

**Islam and Infertility**

The experience of infertility may differ across ethnicities and religious groups. Muslim men and women follow the religion Islam. Islam is a way of life in which a person gives his submission and obedience to one ultimate authority, Allah (God), and shapes his/her behavior(s) according to laws and rules prescribed by that authority (Maududi, 1982). The Qur'an (religious scripture) and the Sunnah (legal customs) provide actions and rulings that guide a Muslims everyday life. The Qur'an and Sunnah provide some teachings or lessons regarding the importance of marriage, family, and procreation. The scriptures from the Qur'an discuss topics regarding fertility and infertility. The Qur'an says, "And God has given you wives of your own kind, and has given you, from your wives, sons, and grandsons, and has made provisions of good things for you" (Qur'an 16: 72). The Qur'an also provides direction regarding infertility. The Qur'an states, "Or He bestows both males and females, and He renders barren whom He wills/decrees. Verily, He is the All-Knower and is Able to do all things" (Qur'an 42: 50). While Islam emphasizes the importance of fertility, Islam uses its teaching through the Qur'an and Sunnah to illustrate the importance of patience and curability of infertility. The Qur'an provides lessons from revealing the story of the Prophet Ibrahim (peace be upon him) and his wife Sarah as well as the Prophet Zakaria. "And (remember) Zakaria, when he cried to his Lord: "O my Lord! Leave me not without offspring … So We answered his call and granted him Yahya. We cured his wife for him" (Qur'an 21: 89–90). Thus, many Muslim men and women suffering infertility go to the Qur'an and Sunnah or Islamic law for answers and guidance.

The majority of Muslims follow Islamic law and the Sunnah in order to achieve inner peace and obedience to Allah. Accordingly, the experience and acceptance of infertility is partly shaped by a Muslims religious conviction. Islamic jurisprudence (Fiqh) or ethico-legal guidelines, which
incorporates the Qur’an and Sunnah, governs a Muslim’s daily life, including the rulings on infertility treatment. Since the advent of Assisted Reproductive Technology (ART), a few Muslim scholars created rulings (fatwa) regarding infertility treatment. According to Islamic scholars, based on the teachings of Islam, ART is accepted to assist couples conceive. The Fatwa of the Islamic council delineates when it is and is not acceptable for ART (Chamsi-Pasha & Albar, 2015). One of the main stipulations is that ART is only permissible in married couples, using a sperm and egg only from that couple, as long as the marriage is valid (Chamsi-Pasha & Albar, 2015). This stipulation may cause some couples to face some challenges if they are unable to have biological children due to inability to ovulate or produce sperm. Thus, leaving some couples to face a very difficult question: accept the stipulation or go against the rulings and use a donor egg or sperm.

**Statement of the problem**

There are few studies discussing the experiences of Muslim women with infertility. The majority of these are limited to Muslim majority countries. The emotional and psychological consequences are similar to those from other ethnic and religious backgrounds. Muslim women with infertility have described their experiences of infertility as having a negative self-identity (Obeidat et al., 2014), sense of worthlessness (Behboodi-Moghadam et al., 2013, societal pressure to conceive, an identity crisis (Obeisat et al., 2012), a feeling of being stigmatized (Mumtaz et al., 2015), and a perceived inadequacy (Karaca & Unsal, 2015). However, a stark difference in the experiences of infertility in Muslim women that can be drawn from the literature is the emotional and physical abuse Muslim women endure, religious restrictions, and societal pressure to conceive.

There is a gap in knowledge regarding the experiences of Muslim American women with infertility, specifically those who are second or third generation. A Muslim woman's ethnic and religious identity may differ from her parent's formed identity. Thus, how she experiences infertility and the decision she makes regarding reproductive health may also differ based on the role her
faith, culture, and community play in her life. This knowledge gap limits the ability for healthcare providers to truly understand how the role social, religious, and cultural practices impact a diagnosis of infertility on Muslim Americans as well as on their decision-making factors. A failure in understanding how infertility is perceived and how it shapes couples’ practices or decision-making, may further alienate or ostracize couples who already feel neglected by their community (Karaca & Unsal, 2015). Accordingly, this study was designed to provide a deeper meaning and understanding of the experiences of Muslim American women with infertility.

**Purpose Statement**

This knowledge gap limits the ability to understand the socio-cultural and religious role of experiences of Muslim American women with infertility. To improve quality of life and provide appropriate interventions that will support Muslims women's journey through an infertility diagnosis, research is needed to discover the perceptions and meanings Muslim American women attribute to their experience with infertility. The purpose of this study was to describe and capture the meaning of the lived experiences of Muslim American women with infertility and provide a better understanding of the factors that assist or hinder Muslim women from seeking infertility treatment. Two research questions were employed to obtain this knowledge:

1) *What is the lived experience of second-generation (and later) Muslim American women with infertility?* and

2) *To what extent do sociocultural and religious factors impinge on the decision to seek treatment in reproductive care, specifically infertility?*

As there is little research on the experiences of Muslim American women with infertility, a qualitative research design was used to explore and describe the lived experience of an individual or group with shared experiences.

**Overview of research design**

A qualitative approach gives meaning and perspective from the individual or group of individuals in a descriptive rather than a predictive manner (Hammarberg et al., 2016). To
determine the appropriate methodological approach that should be employed, the phenomenon of interest, purpose of the study, and research question were reviewed. A phenomenological approach was deemed appropriate in studying the phenomenon of interest, i.e., experiences of Muslim women with infertility. A phenomenological approach allows a researcher to develop an understanding of an individual's experience(s) by exploring the participant's lived experience in their lifeworld and how they make meaning of it (van Manen, 1997). Unlike other qualitative approaches, phenomenology delves deeper into the pre-reflective self-awareness and self-consciousness of an individual to elicit a "naïve" description of the actual experience (Osborne, 1994).

van Manen's research method was used to guide this study. van Manen's six-step approach or themes allowed this investigator to select appropriate research techniques and procedures that followed a phenomenological approach. The application of van Manen's (1997) research method provided a deeper, richer, and more in-depth uncovering of the internal meaning structures of the lived experiences of Muslim women with infertility. Pre-reflective experiences are implicit and first-order awareness of an experience prior to reflecting and being explicitly aware or conscious of that experience (van Manen, 1997). Identifying a pre-reflective lived experience is a way in which the researcher is able to learn from the participants experiences as they are in it and are living through it before they reflect or make sense of that experience(s) (van Manen, 1997). Thus, to explore the reality as it is perceived by a Muslim woman's conscious experience of infertility, gain access to her pre-reflective lived experience, and to provide a detailed understanding of the essence of the lived experience in her lifeworld, in-depth interviews were conducted with Muslim American woman with infertility. Details on the specific design of this study are provided in Chapter 3.

Significance of the study

There is a growing body of knowledge on the psychosocial impact of infertility in non-Hispanic white women. There is limited research conducted on the role of religion facilitating or
foreclosing infertility treatment options. There have been a few studies that were conducted identifying the role of religion in a non-Hispanic white woman's experience with infertility. Discussion on the role of religion was usually centered on the use of religion as a coping mechanism, stigma, and justification of infertility. American women with infertility who identified as Latter-Day saints or Roman Catholic described their experiences as feeling stigmatized and socially isolated from their religious communities (Gezinski et al., 2020). Religion was also used to justify or provide explanations to their infertility (Klitzman, 2018; Gezinski et al., 2020). Women also invoked their religion or spirituality to help cope through their fertility struggles (Klitzman, 2018; Gezinski et al., 2020).

There is limited discussion on religions role on decision making in non-Hispanic white women, racial, religious, and ethnic minorities. Galic et al. (2021) surveyed 1,469 participants and found that religion was a factor in the concern to seek infertility treatment. Galic et al. (2021) found that ethnic and racial minority, specifically Latinx and Asian participants, were extremely worried about violating religious beliefs through the use of fertility treatment. They also found that Catholics were extremely worried about using science and technology to conceive (Galic et al., 2021). Similarly, Klitzman (2018) found women with stronger religious objections with ART or specific infertility treatment were concerned with messing with Gods plans and preordainment. However, there is a paucity in the literature on how a woman’s concerns from a religious perspective translates to decision making.

There is limited research conducted on the experiences of Arab and Muslim American women’s reproductive and sexual health, including infertility. Arab and Muslim Americans are an understudied minority group in the U.S. Previous studies, while limited, that have discussed the role of religion in infertility treatment do not include Muslims in their sample. The lack of representation in studies conducted in the U.S in general could be related to hesitancy of Muslim Americans to participate in research. Muslim Americans may be concerned that if they participant in a study that their information may be shared, or they may be identified as someone having the
problem or diagnosis being studied. Thus, there may be cultural and religious barriers from stigma to partake in research that may disclose their diagnosis. Visibility of recruitment may also reduce ability to recruit Muslim Americans. Placing flyers or posting online in areas that are not frequently used by a religious minority group may reduce the likelihood of them knowing about the research. Muslim Americans may also feel that researchers have a lack of understanding of their Muslim identity (Padela & Zaidi, 2018). The researcher may not include or recruit Muslim Americans in a specific research due to their limited knowledge of that group. For example, some healthcare providers may have an unfounded assumption that Muslims and African Americans are less likely to have difficulties conceiving, thus may be less likely to study non-Hispanic white women (Inhorn, 2018).

Muslim Americans represent approximately 1.1% of the U.S. population. The number of Muslim Americans is projected to continue to grow and is considered to be one of the fastest growing religions in the U.S. and worldwide (Pew Research Center, 2018). Muslim Americans make up a largely ethnic and diverse group that has ties from 75 different countries (Pew Research Center, 2018). The largest Muslim American group identifies as African or Asian American. Previous research has identified the importance Muslims place on their religious identity and how their religious value shapes their everyday lives and healthcare behaviors. It is imperative for researchers and healthcare providers to learn about Muslim Americans as they are likely to encounter a Muslim patient at some point in their career. The literature has shown that racial and ethnic minorities have and continue to face difficulties accessing and receiving healthcare due to structural, institutional, and interpersonal factors (Padela et al., 2011). Muslim Americans, who largely identify as an ethnic or racial minority, similarly discuss receiving inadequate or low-quality care due to healthcare providers lack of understanding of their religious values (Padela et al., 2011). Islam plays a central role in a Muslims identity and shapes their everyday life and decisions they make. A lack of research in understanding a diverse and growing population only further alienates, increases acculturative stress, and discriminates against a
minority religious group as has been seen in other religious and racial and ethnic minorities in the U.S. (Padela et al., 2018). Thus, this study focuses on developing an understanding of how the role of socio-cultural and religious factors play on the experience of infertility; including the decision to seek reproductive health.

Islamic or religious values may shape how a person perceives their health, as well their attitudes or beliefs towards their health. Religion informs decision-making regarding seeking healthcare, acceptance of treatment plans, and trusting healthcare providers (Padela & Zaidi, 2018). If a religious group such as Muslims, perceive discrimination they may be less inclined to interact with those outside of their community as well as the healthcare system. The lack of cultural sensitivity and accommodation may be perceived by Muslim Americans as discriminatory, thus influencing their future healthcare seeking behaviors (Padela & Zaidi, 2018). Muslim women in particular, have been subjected to this form of discrimination. Muslim American women make up approximately 1.5 million of the U.S. population and 1.9 million Muslim Americans are married (Pew Center Research, 2018). Many women have described their initial encounter with the healthcare system as negative. The verbal abuse and unwillingness to accommodate a Muslim women’s request by healthcare providers has been described by many Muslim American women (Reitmanova, S., & Gustafson, 2008; Shah et al., 2008). The perceived discrimination and lack of cultural or religious accommodation has only caused some Muslim American women to limit accessing the healthcare system (Shah et al., 2008). Identifying how a Muslim American woman’s religious and cultural values shape her identity, decision making, and acceptance of care is important to improve her overall well-being. Limiting the understanding of her religious values or practices will only further alienate, stigmatize, and isolate her from society and her community. Research is needed in understanding how religion shapes decision making in a Muslim Americans daily life including their health. Focusing research on religion and infertility in general would also allow researchers to identify what factors shape women’s experience with infertility. Understanding how interpersonal, intrapersonal, social, and religious factors impact the lives of
women with infertility would provide researchers and healthcare providers with ways to reduce the psychological trauma they are living through.

This study provided a rich, deep, and in-depth meaning of the lived experience of Muslim women with infertility. Identification of these meanings or understandings allows us to recognize how socio-cultural context shapes the experiences of Muslim women with infertility. Islam plays a central role in a Muslim's identity and shapes their everyday life and decisions they make. Knowledge gained from this review assists healthcare professionals in providing culturally appropriate educational materials and treatment options that coincide with a Muslim woman's religious preferences. Nurses, midwives, infertility specialist, obstetricians, and social workers may be able to identify how best to meet a Muslim woman's needs. For example, knowing that societal pressure plays a pivotal role in the experiences of infertility in Muslim women, may assist the Social Worker, Psychologist, Midwife or Nurse Practitioner in utilization of the appropriate counseling programs that address how to best assist women in coping with infertility. Also, identifying and recognizing social and religious factors that may impact a Muslim woman's decision to seek reproductive care may reduce the risk of offering inadequate, inaccurate, or insensitive interventions that go against a Muslim woman's beliefs.

Findings from this study provide empirical contributions to the extant literature. By completing this study, this investigator developed a deeper understanding and meaning of how Muslim American women experience the affairs of their day-to-day existence, their physical or bodily presence, their temporal landscape, and the lived relation they maintained with others in the interpersonal space that they share with them (van Manen, 1997). Findings from this study expands knowledge on the meaning of the lifeworld of Muslim American women with infertility by providing evidence of how societal expectations may change their quality of life and health outcomes.
Chapter Summary

Previous research that explored the experiences of Muslim women was focused on women in Muslim majority countries or first-generation immigrants. Research that examines the experiences of Muslim American women with infertility is limited. There is also limited knowledge regarding the impact cultural and religious factors have on the decision to seek reproductive care in this population. Therefore, to improve quality of life and health outcomes it is imperative to understand how Muslim American women perceive their infertility experience. A qualitative phenomenological approach was used to provide a deeper meaning and understanding how a Muslim American woman experiences infertility. Chapter 2 follows this introduction. Chapter 2 is a review of the literature on the experiences of Muslim women with infertility.
CHAPTER 2 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Rationale of the Study

Infertility is a serious global public health issue that may lead to devastating psychological and social consequences (WHO, n.d. -a). Negative psychosocial consequences of infertility or childlessness tend to be severe or dramatic in developing countries compared to Western nations (Ombelet, 2012). Childless women in developing countries are often neglected by their family and community, ostracized, stigmatized, and abused (Ombelet, 2012). Little is known about whether religious and ethnic minorities in the U.S. experience similar psychosocial consequences as those in developing countries. The gap in research on assessing the impact of infertility in religious and ethnic minorities in the U.S. and globally may be due to the lack of willingness of men and women to participate in research. Religious and ethnic minority communities are highly pronatalist societies and anyone unable to achieve parenthood may be stigmatized. Therefore, many men and women living with a stigmatized diagnosis typically live with infertility in secret and prefer to remain silent. Many men and women from racial and ethnic backgrounds may be concerned with disclosing their infertility status due to the concern of the stigma they may receive from within their community. The concealment of racial and ethnic minorities’ real social identity or undesirable attribute delayed pursuing fertility treatment by at least six months due to the concern of being stigmatized within their community (Missmer et al., 2011; Quinn & Fujimoto, 2016; Smith et al., 2011). This was similar in African American women who preferred to remain “silent” as others would not understand (Ceballo et al., 2015). Thus, the concern of communal gossip or judgement may play a large role in limiting not only seeking care for treatment but also participating in research.

This study provided an understanding of the experience of second-generation Muslim American women with infertility. The findings from this study expand on the knowledge of the lifeworld of Muslim American women with infertility. Findings from this study also identified how socio-cultural and religious factors play on the experience of infertility; including the decision to
seek reproductive healthcare in infertility. Developing an understanding of the psychosocial factors such as childhood adversity, discrimination, and trauma, may have on the experiences of infertility in a religious group allows researchers the ability to identify how an individual’s spiritual, social, and physical world interact with each other to create an experience. Focusing research only on psychological, biological, or social factors limits the ability to understand the complex world of an individual experiencing a disease (Argentieri et al., 2020). Researching psychosocial factors allows for a better understanding on how a life stressor or diagnosis may lead to maladaptive behavior or resiliency (Argentieri et al., 2020). Thus, allowing healthcare providers and policy makers to create effective interventions that incorporate these factors to improve health outcomes, access, and the psychological burden of infertility.

Muslim American women have identified the lack of cultural accommodation, insensitive care, and perceived discrimination based on their religious beliefs as a reason they distrusted the healthcare system and reduced seeking care (Reitmanova, S., & Gustafson, 2008; Shah et al., 2008). Visibility of a Muslim identity was also identified as an individual being reluctant to access care due to their previous experiences outside of the healthcare system with abuse and social discrimination (Padela & Zaidi, 2018; Shah et al., 2008). Ethical concerns or cultural conflicts adhering to Islamic ethico-legal guidelines or their interpretations or religious scriptures and health may influence healthcare seeking behaviors (Padela & Zaidi, 2018). A lack of understanding on the importance of a religious groups values and practices may further create a barrier and lead to an individual perceiving discrimination and alienation of the healthcare system. The ability to tailor interventions or treatment programs to an individual’s religious practices may potentially improve their willingness to continue to access and accept healthcare recommendations. Failing to understand the significance of infertility on an ethnic and religious minority group in the U.S. may result in irrelevant, insensitive, and ineffective therapies or interventions.
Review of the Literature

There have been a few studies conducted on the role of religion in facilitation or restricting treatment options in non-Hispanic white women. American women that identify as Latter-Day Saints or Roman Catholics living in a small community in Utah discussed their experiences of living with infertility (Gezenski et al. 2021). Decision on the acceptability of treatment was not discussed rather how religion assisted them in coping with infertility was (Gezenski et al. 2021). They also discussed feeling distressed and isolated from their religious community due to many religious events that were centered around children (Gezenski et al. 2021). Evidence from the research may provide some understanding on how religion in specific communities use their faith to reduce the burden of infertility. Other religious and minority groups have discussed similar findings (Batool et al., 2016; Ceballo et al., 2015; Karaca & Unsal, 2015; Obeidat et al., 2014; Taylor, 2018). There were studies that discussed concern of accepting infertility treatment in a religious group. Catholic and Protestants were concerned that the use of infertility treatment would violate their religious beliefs (Galic et al., 2021). Why men and women felt this way and how their concerns were not discussed.

This study may provide some understanding on the religious concerns a person may have when reviewing options or making a decision to accept or decline infertility treatment. Some aspects of previous research may provide some understanding on how religion impacts the experiences of a religious group. However, previous literature may not be completely translated to other religious or ethnic minorities due to many differences. Those studies do not address the gap in care, stigma from the community, gender preference of provider, socioeconomic status, cultural barriers, and level of religiosity. Previous literature on Muslim women has identified gender preference of provider and concern of lack of cultural and religious accommodation as limiting access (Reitmanova, S., & Gustafson, 2008; Shah et al., 2008). How this translates to infertility care is not well understood. Similarly, many Muslim Americans have discussed the importance of religion in making decisions in all aspects of their lives (Padela & Curlin, 2013).
Thus, this research was developed to provide an understanding how socio-cultural expectations and religious adherence may shape how Muslim American women experience infertility.

The following review extracts, analyzes, and synthesizes published research on the psychosocial experiences of Muslim women with infertility and decision-making factors. This review is designed to provide knowledge on the psychological and social impact of infertility in Muslim women and to identify gaps in the literature. Before delving into the literature, a brief discussion on 1) Muslims in America, 2) Islam and health, and 3) Islam and ART will be reviewed to provide a knowledge base of the phenomenon of interest. The rest of the chapter provides a review of current literature on the experiences of infertility and decision-making factors in health seeking behavior. The next section provides evidence of the gap in knowledge regarding experiences of Muslim American women with infertility and decision-making in reproductive care, which provided the foundation for the necessity of this research.

**Database Research Strategy**

**Search Strategy**

A thorough search of the literature was conducted using Pubmed, CINAHL, Google Scholar, and Scopus databases. Original research published in English from the years 2010 to 2021 was reviewed. A masters-prepared librarian, with a background in health science literature searches, was consulted to ensure a comprehensive search. The keywords or phrases used to conduct the search were "Perception OR attitude OR knowledge OR emotion OR mental health OR social OR psycho* OR stress OR anxiety OR depress*" AND "infertil* OR fertil* OR reproduct*" AND "Muslim OR Islam." A combination of some of the key search terms was developed to generate sources that were specific to the current review. The reference list of all the studies selected for this review, as well as systematic reviews published with similar content related to the topic of interest, were examined.
Muslims in America

The Muslim community is diverse with no single racial or ethnic group making up the majority (Pew Research Center, 2018). Muslim American ethnic origins are tied to 75 different countries (Pew Research Center, 2018). Americans who identify as Muslim make up about 1% of the U.S. population (Haddad, 2011; Mohammed, 2018). However, actual numbers are difficult to estimate as the majority of censuses do not inquire about religious identification or adherence (Haddad, 2011; Kettani, 2010). The history of Muslim Americans’ origin and immigration are usually discussed as happening in three waves. The actual arrival of the first Muslims in America is disputed, with some historians claiming that Muslim explorers came to the Americas before Columbus (Pluralism Project, n.d.). The first documented Muslim in America was a Moroccan who landed in Florida in 1527 (Pluralism Project, n.d). The majority of historians agree that the first wave of Muslims was in the 17th century (Nimer, 2002). There were a small percentage (10-15%) of African slaves that identified themselves as Muslims, which have been documented in many of African slaves’ writings (Nimer, 2002; Pluralism Project, n.d.). However, many African Muslim slaves had difficulty maintaining their religion, with some being forced to convert to Christianity (Nimer, 2002; Pluralism Project, n.d.). There is limited evidence of African Muslims maintaining Islamic beliefs, thus historians identify the true first wave as starting from the mid to late 19th century (Nimer, 2002; Pluralism Project, n.d.). A large number of Arabs, who originated from Lebanon and Greater Syria, immigrated to the U.S. during the late 19th century and 10% of Arab immigrants identified as Muslim (Haddad, 2011; Nimer, 2002). There were a small number of Muslims that immigrated to the U.S. during World War II and until 1965, which is considered the second wave of Muslim immigration (Haddad, 2011). The third and most visible wave of Muslim immigrants, was after the passage of the Immigration and Nationality Act of 1965 (Haddad, 2011; Nimer 2002). During the late 20th century, a large influx of Muslims began to immigrate to the U.S. from the Middle East and South Asia (Nimer, 2002). During this time, many African Americans rediscovered their African and Islamic roots (Nimer, 2002; Pluralism Project, n.d.).
The majority of Muslims emigrated to the U.S. to flee poverty, conflict, civil war or political turmoil, and to pursue educational and professional opportunities (Nigem, 1986; Awad et al., 2013). The rate of growth of Americans that identify as Muslim has increased over the last decade. It is projected that by 2050 the number of Muslim Americans will reach 8.1 million or 2.1% of the nation’s population (Mohammed, 2018). Foreign-born Muslims (first-generation) make up 58% of the U.S Muslim adult population (Pew Research Center, 2018). First-generation Muslim Americans come from different parts of the world, however the largest percentage of Muslims emigrated from South Asia (35%), other parts of Asia-Pacific region (23%), and the Middle East (25%) (Pew Research Center, 2018). The number of Americans who identify as Middle Eastern or Arab American is roughly 3.7 million (Arab American Institute [AAI], 2018). The majority of Arab Americans reside in a metropolitan areas (94%) in California, Michigan, New York, and Illinois (AAI, 2018). The countries of origin that Arab Americans emigrated from are Iraq, Egypt, Somalia, Morocco, Lebanon, Palestine, Yemen, Jordan, Syria, Algeria, Bahrain, Djibouti, Kuwait, Libya, Oman, Qatar, Saudi Arabia, Tunisia, and the United Arab Emirates (AAI, 2018). Second-generation Muslim Americans (18%) largely identify as Middle Eastern or North African (44%) (Pew Research Center, 2017). However, 52% of Muslim Americans have categorized themselves as white since there are no options to choose Middle Eastern or North African on the census (Pew Research Center, 2017). Third generation and later (24%), in contrast to first and second-generation, are more likely to identify as Black American (51%) (Pew Research Center, 2017).

Islam and Health

Religious values shape a Muslim’s understanding of disease and illness, adherence to medical recommendations, interactions with and expectations of the healthcare system and health-related behavior (Padela & Curlin, 2013). Muslims follow a God-centered framework for interpreting and making meaning of health and illness (Padela & Curlin, 2013). Islamic scripture and legal traditions provide a bio-ethical guide to decision-making in healthcare practices (Padela & Curlin, 2013; Rassol, 2014). Islamic scriptures teach Muslims the importance of caring for their
body and their health, as it is a gift from Allah (God) (Yosef, 2008). Teachings from the Qur’an and Prophetic teachings of Mohammed (known as hadiths) provide evidence supporting health promotion and disease prevention (Rassool, 2014; Yosef 2008). Examples of healthy behaviors that are encouraged in Islam are general hygiene, cleanliness, well balanced diet, exercise, and prevention of harmful practices towards the self, community, and environment (Yosef, 2008). Unhealthy behaviors such as smoking, intoxicants, and use of mind-altering drugs are discouraged as they are harmful to the body (Yosef, 2008). Illness or disease may be looked as preordained by Allah or Allah’s will (Yosef, 2008). However, teachings from the Prophet Mohammed describe the importance of praying to Allah for healing as well as seeking healthcare assistance (Rassool, 2014; Yosef, 2008). Thus, medical advancements and technology are acceptable to use as long as they follow Islamic jurisprudence (Inhorn & Serour, 2011). For instance, the use of treatments that include pork or alcohol is prohibited unless no other options are available.

Muslims are more likely to accept western treatment as long as it does not go against their faith (Padela & Curlin, 2013). However, there are some topics that are up for debate within the Muslim community specifically those regarding ethical decision-making such as end-of-life care and organ donation. Muslims typically look to the Qur’an, Islamic jurisprudence, and Islamic scholars for guidance (Inhorn & Serour, 2011). Even if there are opposing views on a subject matter, Muslim Americans are less likely to accept medical treatment that may not be fully supported by religious authorities or religious scriptures (Padela & Curlin, 2013). There is limited research on healthcare decision-making in Muslim Americans. Typically, a Muslim man or women looks to Islamic teachings and jurisprudence to assist them in making decisions about their healthcare. However, based on the importance of the family system in Islam, many men and women look to their parents for advice. Actions and decisions are typically family and culturally oriented and parents are usually consulted in all decision-making processes (Rassool, 2014). Similarly, parents may request their children make decisions regarding their healthcare. A study
in Saudi Arabia reiterated that decision-making involved the immediate family and care decisions may be discussed at the family level with the final decision coming from the patient (Halligan, 2006).

Misinterpretation of predestination, illness causation, concern for modesty and healthcare gender preferences are thought of as some factors that may reduce the likelihood of a Muslim seeking healthcare (Yosef, 2008). For example, Muslims may misinterpret the discussion of preordainment or divine destiny (qadar) in the Qur’an (Yosef, 2008). A Muslim then may be reluctant to participate in health promotion, disease prevention, and healthcare seeking behaviors (Yosef, 2008). The teachings from the Prophet Mohammed have clarified this misconception and have provided ample evidence to support maintaining one’s health and seeking homeopathic and medical treatment when necessary (Yosef, 2008). Concerns of discrimination and prejudices are also linked to poor healthcare seeking behavior. The lack of knowledge of Islam due to preconceptions based on vilifications of Muslims in the media and negative stereotypes have led to an increase in healthcare disparities and poor health outcomes (Padela et al., 2017). Post 9/11, Muslims reported an increase in levels of discrimination within their social spheres, employment, and healthcare systems (Padela & Heisler, 2010). After 9/11, one-quarter of Arab Muslims and Christians reported an increase in personal or familial abuse (Padela & Heisler, 2010). Perceived discrimination by Muslim Americans was found to lower their sense of psychological well-being, increase rates of depression or depressive symptoms and reduce their motivation for seeking medical care (Guilani et al., 2018).

Islam and ART

Islamic teaching provides evidence on the importance of the role of family. Islamic law and ethics provide an understanding of the moral obligations and responsibilities of social relationships which allows for a well-balanced individual and a just society (Padela et al., 2020). “O’ humanity! Indeed, We created you from a male and a female, and made you into peoples and tribes so that you may ‘get to’ know one another. Surely the most noble of you in the sight of Allah
is the most righteous among you. Allah is truly All-Knowing, All aware (Qur’an 49:13).” The Qur’an and Sunnah discuss the importance of caring for one’s parents, orphans, their children, spouses, and communities. Procreation is also discussed in the Qur’an as a way to preserve religion, human life, intellect, progeny and wealth (Padela et al, 2020). The teachings in the Qur’an and Sunnah discuss life lessons from the Prophets such as Zacharia and Ibrahim. Their stories provide evidence of infertility and the importance of prayer, curability, and patience. On the same token the Qur’an discusses that Allah is the grantor of offspring: “The dominion of the heavens and the earth belongs to Allah. He creates whatever He pleases. He grants females to whomever He pleases. He grants males to whomever He pleases... and causes whomever He pleases to be barren. He is All-Knowing, All-Powerful” (Qur’an 42: 49-50). While Islamic teachings provides evidence of the importance of procreation and having offspring in a marriage, it also recognizes that there are men and women who may be infertile. Thus, the purpose of marriage is not only important for procreation but also provides an establishment of love, family, and community relationships.

Islam allows the use of science, medicine, and technology as solutions in improving health outcomes and psychological well-being (Inhorn & Tremayne, 2016). The advancement in science has led to the creation of Assisted Reproductive Technology (ART). In 1978, the first “test tube” baby was born (Louise Brown) and from there has been a “veritable explosion of ART” (Inhorn & Tremayne, 2016, p. 423). Two years later, in 1980, a fatwa (legal ruling) was implemented by the Grand Sheikh of Egypt (Inhorn & Tremayne, 2016). Since then legal ruling of ART has been reassured and reaffirmed by fatwa-granting authorities in the Sunni Muslim world (Inhorn & Tremayne, 2016). The use of reproductive technology is permissible in Islam as long as it follows specific stipulations. The stipulations are as follows: 1) use of only the husband’s sperm or wife’s egg for artificial insemination, such as invitro fertilization (IVF) and/or intracytoplasmic sperm injection (ICSI) and 2) the couple must be married during the time of infertility treatment, if one is divorced, separated or deceased the partner is no longer allowed to use that egg, sperm, or
embryo (Inhorn & Tremayne, 2016; Padela et al., 2020). Cryopreservation or freezing of the egg/sperm/embryo and preimplantation genetic diagnostic (PGD) testing are acceptable (Inhorn & Tremayne, 2016). However, PGD testing for the sole purpose of gender selection, adoption, and third-party donors such as donor sperm, egg, embryo, or surrogacy is not permitted (Inhorn & Tremayne, 2016; Padela et al., 2020). Similarly, Shia Muslims, a minority branch in Islam that make up 10% of Muslims worldwide, follow many of the same rulings on ART (Inhorn & Tremayne, 2016). One major ruling that differs with Shia Muslims is the acceptability of third-party donation. The majority of Shia clerics have ruled that third-party donation is impermissible (Inhorn & Tremayne, 2016). However, the fatwa from Iranian Shia cleric Ayatollah Khamane’i in 1999 permitted third-party donation (Inhorn & Tremayne, 2016). Thus, there are some IVF clinics in Iran that allow for third-party donation.

The impermissibility of third-party donation is due to the concern of preservation of lineage and moral concerns (Padela et al. 2020; Inhorn & Tremayne, 2016). Islamic scholars are concerned that the use of donor egg or sperm could weaken or threaten a marital bond (Inhorn & Tremayne, 2016). The main concern is that the introduction of a third party to a sacred unity may be considered a form of adultery, irrespective of the process of donation (Inhorn & Tremayne, 2016). Another major concern is that of anonymous egg or sperm donors. There is a concern that there is potential for incest, which could occur among donor children and their biological half-siblings (Inhorn & Tremayne, 2016). Sunni Islamic scholars also discuss the importance in preserving family units and lineage (Padela et al., 2020). Third-party donation may further confuse kinship, inheritance and genealogical origins of each child (nasab). Thus, violating the child’s legal rights and biological inheritance (Inhorn & Tremayne, 2016).

Regardless of rulings, Muslims couples will decide on acceptance of treatment based on their interpretations of religious texts as well as their religious conviction. There are women and men who have found it difficult to accept infertility treatment due to concern of going against God’s will, believing infertility was a form of a test in this life, and desire to observe patience and accept
God’s decree (Inhorn, 1996). This author struggled with this notion for years before accepting western medicine. Some men and women have also discussed that infertility was a form of punishment from God due to previous sins that were committed, specifically zina (illegal sexual relations before marriage). A study on Arab American men with infertility discussed that the cause of infertility could be due to God punishing them due to promiscuous behavior (Inhorn & Fakih, 2006). Muslim Egyptian women who were living with infertility also agreed with the view that they were being punished for mistakes they made such as zina (illegal sexual relations), gossiping, committing a heinous crime, or wishing harm on another (Inhorn, 1996, p. 81).

If a couple is unable to have a biological child another option of becoming a parent is adopting. According to Islamic jurisprudence, adoption (taking in another child as your own) and surrogacy are not widely accepted or encouraged. However, Islam does encourage sponsoring orphans, raising and guiding them, treating them with respect and kindness and meeting all their needs. The difference in raising an orphan child or adopting in Islam, is that the child will always be aware of their lineage and those caring for them will be seen as a brother or sister in Islam, vs a mother or father. Thus, there are very limited options for Muslim couples struggling with infertility if they do not accept or fail a treatment.

**Comparison of permissibility of ART within the Abrahamic faith**

Islam, Judaism, and Christianity are Abrahamic faiths that describe the centrality of procreation (Inhorn et al., 2020). There are many commonalities, within the Abrahamic faiths, that exist regarding specific revelations, teachings, and rulings that are centered around procreation and marriage. A Muslim’s religious beliefs and practices not only stems from the Qur’an but also from the original religious scriptures of the Torah, Psalms of David, and the Bible. Therefore, it is imperative to provide a brief discussion on how ART is viewed in Judaism and Christianity.

Judaism, similar to Islam, encourages procreation (Inhorn et al., 2020). “Be fruitful and multiply, fill the earth and subdue it” (Genesis 1:28). There are three major sects in Judaism, which are: Orthodox, Conservative, and Reformed (the majority) (Sallam & Sallam, 2016). Each
sect differs in acceptability of various aspects of ART (Sallam & Sallam, 2016). IVF, preimplantation genetic diagnosis or screening [PGD and PGS], selective reduction, and embryo research are accepted by all sects. In Israel, IVF is funded by the government to provide each couple with two live births if they suffer infertility (Inhorn et al., 2020). Similar to Islam, third party donation is impermissible by the majority of Rabbis (Sallam & Sallam, 2016). However, there are Rabbis that allow third-party donation as long as the couple uses non-Jewish sperm (Sallam & Sallam, 2016). The major concern of sperm donation is that it may be seen as committing adultery (Sallam & Sallam, 2016). Cryopreservation is permissible by all sects, while surrogacy is impermissible by the majority (Sallam & Sallam, 2016). The rulings in Judaism regarding acceptability of ART are very similar to Islam.

Similar to Islam and Judaism, Christianity discusses the importance of procreation as one of God’s commandments (Sallam & Sallam, 2016). Christianity has various churches and denominations, with the majority of Christians following Catholicism (50%), Protestantism (37%), and Orthodox communions (12%) (Sallam & Sallam, 2016). Unlike Islam and Judaism, Christianity has a higher disapproval rate in the use of assisted reproductive technology (Inhorn et al., 2020). The Catholic Church forbids all forms of ART including surrogacy (Sallam & Sallam, 2016). The use of ART is considered immoral and illegal by the Roman Catholic Church (Sallam & Sallam, 2016). Intrauterine insemination (IUI) may be permitted if the sperm is collected during sexual intercourse (Sallam & Sallam, 2016). The Eastern Orthodox Church allows medical and surgical treatment of infertility including IUI (Sallam & Sallam, 2016). Other methods of ART such as IVF, donor insemination, surrogacy, and embryo donation are prohibited (Sallam & Sallam, 2016). ART is only acceptable if the couple suffering from infertility are unable to adopt (Sallam & Sallam, 2016). There are stipulations in using ART in the Eastern Orthodox Church, such as that the use of ART should not provide a surplus of embryos, embryos may not be destroyed, and donor embryos may not be used (Sallam & Sallam, 2016). The Protestant church beliefs vary in the acceptability of ART (Sallam & Sallam, 2016). There are some Protestant churches that
support the use of ART as long as couples are married. All embryos must be placed in the uterus but selective reduction is impermissible (Sallam & Sallam, 2016). The Coptic Orthodox church and other Christian churches of the global Christian population (Lutheran, Mormon, Baptist, et al.) permit the use of ART as long as it is the spouses gamete (Sallam & Sallam, 2016). No gamete mixing, donation, or embryo destruction is permitted (Sallam & Sallam, 2016).

There is little research on how religious practices or rulings shape a woman’s religious identity and if religion facilitates or limits treatment options. There have been a few studies that mentioned the concerns of Catholics and Protestants had with using science and technology to achieve a pregnancy (Galic et al., Klitzman, 2018). Klitzman (2018) discussed that some participants were concerned with all aspects of infertility treatment while others were concerned with specific aspects of infertility treatment such as third-party donation and surrogacy. There is limited discussion in the majority of the research that focuses on how concerns of men and women from different faiths translate to accepting or declining of infertility treatment as well as the role religion has on a woman’s religious identity. While limited, the majority of research that has included religion in understanding a woman’s experience with infertility discussed how religion was used to justify their infertility and as a coping mechanism. African American and non-Hispanic white women described their experiences with infertility as it related to the psychological and cultural aspects of their identity but also discussed using their faith as a coping mechanism (Gezinski et al., 2021; Taylor, 2018). African American and non-Hispanic white women also used religion to justify their infertility diagnosis (Ceballo et al., 2015; Gezinski et al., 2021; Klitzman, 2018).

**Summary**

There are specific religious rulings regarding medical and reproductive care, such as the use of ART in Islam. While religious teachings provide some evidence of a Muslim woman’s reproductive rights, how they are accepted and translated into her everyday life is highly
dependent on societal, family, and cultural values. A woman’s religious and ethnic identity and religious adherence to Islam may impact how she experiences an infertility diagnosis.

**Decision-making**

There are numerous theories that attempt to define and explain decision-making, which is beyond the scope of this dissertation. Decision-making is defined as the process of making a decision or choice by gathering information and assessing alternative resolutions that are influenced by how people think, behave, communicate, and react to their external world (Oliveria, 2007). Decision-making integrates both the beliefs about events and people’s subjective reactions to those events (Oliveria, 2007). Decision-making regarding many aspects of a Muslims life is based on religious scriptures, laws, and input from Islamic scholars. The culture in which one resides in also plays a role in decision-making. Islam teaches the importance of following the Qur’an and Sunnah in a Muslims daily life. When a decision is to be made, a Muslim is advised to look into Islamic teachings and to ask Allah for assistance in directing them or guiding them in a decision. Allah says: “And rely upon on the exalted in Might, the Merciful” (Qur'an 26:217). “Then when you have taken a decision, put your trust in Allah…” (Qur’an 3:159). There are specific supplications that assist a Muslim when seeking Allah's help in making a decision or finding comfort in the decision to be made. Similarly, there is a specific prayer known as the prayer of seeking guidance (istikhāra) that may be completed prior to making a decision. While Muslims are instructed to ask Allah for guidance, the Qur’an also provides evidence of the importance in consulting with others such as family members, religious scholars, and those close to them. “And consult with them in conducting matters. Once you make a decision, put your trust in Allah. Surely Allah loves those who trust in Him” (Qur’an 3:158).

Decision-making regarding one’s health is similar to decisions made in other aspects of a Muslims life. Typically, religious scriptures, religious scholars, and families are consulted to help with decision-making. Islam allows individuals to make their own decisions without consultation of others, which is similar to the American culture. However, Islamic teaching does discuss the
benefits and importance of consulting others to provide a better understanding of one’s diagnosis and treatment options prior to making a decision (Attum et al., 2020; Rassool, 2014). A shared health decision model is typically utilized in decision-making in Muslim families (Boucher et al., 2017; Martin, 2015). The majority of research, while limited, discusses how Islam plays a significant role in influencing decisions on health and healthcare seeking behavior rather than what factors lead a Muslim to make a certain decision. For example, research conducted on end-of-life decision-making typically discusses the role of Islam and the healthcare provider, such as how the beliefs of Muslim physicians affects their approach to end of life care (Saeed, 2015), or how Islam influences end-of-life decisions (Leong et al., 2016) and understanding Islamic considerations of end-of-life decision-making and on the application of patient’s autonomy in end-of-life decision (Malek et al., 2018). These topics are very important to address but leaves a gap in understanding if Islam is the only factor in decision-making. There is minimal research distinguishing the level of religiosity to decision-making, which could be due to the fact that for many Muslims, religion influences how they perceive, label, and evaluate their illnesses (Padela & Curlin, 2013). Another area of research that is being explored is the impact of discrimination on healthcare behaviors in Muslim Americans. Perceived discrimination was identified as one factor that decreased trust in the healthcare system, which has led to poor health seeking behavior (Padela & Curlin, 2013; Martin, 2015).

Discriminatory and prejudice behavior or actions have led Muslims to distrust the healthcare system. Muslim women described abuse and discriminatory actions due to wearing of the hijab (Padela & Heisler, 2010). Arab Muslim women immigrants who wore the hijab discussed that healthcare providers assumed they were ignorant, “stupid”, were oppressed, and were abused (Shah et al., 2008; Reitmanova, S., & Gustafson, 2008). Muslim women were also provided inappropriate counseling or at times services were refused (Shah et al., 2008). Kakoti (2012) discussed that clinicians encouraged Muslim women to remove the hijab and offered inappropriate interventions. Similarly, Inhorn (2018) described an encounter of a young Muslim
couple that desired assistance with conception and was turned away. She was told by a physician that she was too young, “what we think about you-we think you are babies!” (p. 147). These encounters within the healthcare system have led Muslim women to distrust the healthcare system and physicians. Thus, reducing the likelihood of accessing healthcare and increasing poor health outcomes (Padela & Heisler, 2010).

The role of Muslim women in decision-making

There is limited research conducted on understanding the decision-making process and the difference in gender roles on healthcare decision-making of Muslim Americans. The presumptions of a male dominant household in decision-making has negative implications for management of disease, psychosocial support, and shared decision-making (Boucher et al., 2017). Many scholars and healthcare practitioners have discussed the role of family in healthcare decision-making in Muslim Americans but have minimally discussed the role of women in decision-making. Islam protects the rights of a women in decision-making specifically marriage, education, employment, and reproductive health.

The teachings of Islam provide clear evidence of equality for Muslim women and men, specifically what their rights and responsibilities are (Rassool, 2014). According to teachings of the Prophet Mohammed, women shall be treated with respect, kindness, and have equal rights to inheritance, to own a business, to choose a husband, to divorce, to take paid employment, the right to an education, and reproductive rights and autonomy (Rassool, 2014, p. 57; Women’s Islamic Initiative in Spirituality and Equality (WISE), n.d.). “And they (women) have rights (over their husbands as regards living expenses, etc.) similar (to those of their husbands) over them (as regards obedience and respect, etc.) to what is reasonable, but men have a degree (of responsibility) over them (Qur’an 2:228).

The Qur’an, Sunnah, and Islamic law demonstrates the acceptability of a Muslim women in making decisions regarding reproductive and sexual health. Islam permits the use of contraception, abortion, and fertility treatments as long as a Muslim follows the guidelines on
when, how, and what type of intervention is acceptable. For example, the use of abortion is permitted in certain cases such as if the pregnancy is endangering a women’s life or after rape or incest (Rassool, 2014; WISE, n.d.). Contraception may also be used if it is reversible and is used to protect the women from a complicated pregnancy or delivery, avoidance of poverty, and to preserve her body (Rassool, 2014; WISE, n.d.). While many Muslim societies equate children with marriage, Islam does not make childbearing a requirement of marriage, rather it is for companionship and love (Rassool, 2014; WISE, n.d.).

How these rulings and practices are translated and applied may differ based on ethnic origin, level of religiosity, interpretation of religious scriptures, community involvement, and residence. Obtaining reproductive care is a choice that, according to Islam, is solely made by a woman. There are many factors that play in the decision to seek health or reproductive care, such as family involvement, religious beliefs, or concern for discriminatory treatment. A study that reviewed health beliefs and decisions to access medical treatment found that Muslim women preferred to make their own decision regarding their health, but they enlisted the support of their husband during medical evaluations and treatment (Walton et al., 2014). However, Muslim women who live within or are raised in patriarchal societies may be restricted in being a part of or making decisions. Said-Foqahaa (2011) found that Arab women’s participation in the decision-making process was limited due to patriarchal systems in Middle Eastern and North African countries. Arab women decision-making style was thought to be made through democratic consultation with their peers and colleagues and took into account their family, community, and society (Said-Foqahaa, 2011).

The role of family was also reported to impact a Muslim woman’s decision on seeking and accepting healthcare services. One theme that was identified by mental health practitioners (in social work, psychology, psychiatry and youth counseling) who provided counseling services to Muslim women was that cultural restrictions delayed seeking services or assistance (Saleem & Martin, 2018). Muslim women discussed the concern of seeking counseling service due to the
“fear of their husbands’ opinion of them, losing their children, and their reputation in their community” (Saleem & Martin, 2018). One young Muslim woman discussed parental involvement in making life decisions for her (Saleem & Martin, 2018). However, it may be culturally appropriate for parent’s involvement in decision-making based on their religious and ethnic background (Saleem & Martin, 2018).

**Reproductive care decision-making**

Studies on decision-making regarding reproductive care in Muslim women are discussed below. Nahar (2010) completed a qualitative research and found that Bengali Muslim women \( n = 31 \) with infertility initiated treatment in secret. Prior to disclosing the initiation of infertility treatment to their husbands, Bengali women involved their mothers and sisters in the process. Similarly, Pakistani and British Pakistani women initiated reproductive care and involved their husbands after speaking to a specialist (Hampshire et al., 2012). Thus, providing some evidence that Muslim women made their own decision regarding infertility care and treatment. However, if it is evident that a couple is struggling to have children, Muslim women will have discussed that with their mother and sister-in-law who may have pressured the couple to seek reproductive care (Obeisat et al., 2014; Nahar, 2010).

The social institutions and patriarchal systems in some cultures, such as those in Kenya, prevent Muslim women from making family planning decisions such as on child spacing, number of children, and contraceptive use (Abdi et al., 2020). Husbands and other family members are usually involved in all decision-making (Abdi et al., 2020). Muslim women in Morocco \( n = 23 \) were able to navigate their patriarchal and religious society in order to make decisions regarding reproductive care. Hughes (2011) interviewed Moroccan women and found that the women \( n = 23 \) “negotiated and reinterpreted their own Islamic understandings to validate their use of contraception and other reproductive health services” (p. 420). A few other studies provided evidence that decision-making was not always made jointly rather the husband made most of the decisions regarding contraceptive use and spacing of children (Abel-Fattah et al., 2007; Ali et al.,
Muslim women discussed that family planning method decisions were impacted by their family and communities as they were concerned with the stigma of delaying motherhood (Abel-Fattah et al., 2007; Ali et al., 2011; Hampshire et al., 2012; Pell, 2017).

There is no singular factor that was discovered regarding decision-making on health and reproductive care in Muslim women. There are many differences in who plays a role in decision-making in regard to health in Muslim women. Arrifin et al. (2017) surveyed Muslim women (n = 1140) residing in Washington D.C., Tehran (Iran) and Kuala Lumpur (Malaysia) regarding decision-making in marriage, child spacing, contraceptive use, and abortion. Muslim women from Malaysia, Iran, and the U.S. typically made decisions on marriage, child spacing, abortion, and contraceptive use jointly (with their spouse). However, only a small percentage of Muslim women made independent decisions of child spacing (2.1% in Malaysians, 10.5% in Iranians, and 8.2% in Americans) and contraceptive use (2.6% Malaysians, 16.6% Iranian, and 20.3% in Americans).

Religious beliefs impact on reproductive care decision-making in women of other faiths were also reviewed. Catholic and Protestant women in the U.S. (n = 4,492) were surveyed on the use of contraception (Hill et al., 2013). Catholic women were more likely to use contraception on a only as needed basis compared to Protestant women who accepted use of contraception as desired (Hill et al., 2013). Regardless of religious affiliation and the appropriate timing to use contraception, a large percentage (n = 70%) of Catholic and Protestant women used some form of contraception (Hill et al., 2013). Similarly, Catholic women in Poland exercised their rights to use contraception. Catholic women reinterpreted religious teachings to support contraceptive use and if concerned with use they would confess their sin as a way to cleanse themselves from acceptance of contraceptive use and continued using contraception (Mishtal & Dannefer, 2010). Only a few Catholic women (n = 3) discussed that their religious devotion prevented them from using any other method besides the calendar method to prevent pregnancy (Mishtal & Dannefer, 2010). There is limited discussion on reproductive health decision making in Jewish women in the U.S. and globally. Granak and Nakash (2017) discussed the importance of procreation is
emphasized in the Jewish faith, specifically of Israeli women. Granak and Nakash (2017) reviewed the literature and found that while the importance of reproduction is emphasized in Israeli Jewish women, the role of patriarchal and militarist norms shape women’s choices and experiences on reproductive health and the decision to have children. The emphasis of motherhood by providing unlimited fertility treatments within Israeli patriarchal society provides evidence of pressure women receive to reproduce (Granak & Nakash, 2017). Based on religious and demographic beliefs motherhood is a requirement in Israeli Jewish communities and being childless is an unacceptable option (Granak & Nakash, 2017). Thus, reproductive decision making in Catholics and Jewish women was not solely based on religious beliefs, but other factors also played a role such as personal preference or societal pressure.

**Summary**

A Muslim women’s beliefs, lifestyle choices, and decision-making processes are also influenced by Islam (Dwairy, 2006). Regardless of religious convictions and Islamic jurisprudence, many Muslims may not seek care or treatment due to distrust of the healthcare system or feeling they are not being provided culturally sensitive care. Identifying care that is culturally sensitive or culturally congruent would improve the ability to understand religious implications and practices on health, illness, and medicine (Wehbe-Alamah et al., 2021). For example, physical contact should be limited by healthcare providers of the opposite gender for Muslim and Jewish patients (Wehbe-Alamah et al., 2021). Food or medication that has alcohol, non-Halal animal products, or pork should not be offered, or other medication options should be recommended (Wehbe-Alamah et al., 2021). Providing a quiet place for prayer and religious rituals would offer religious groups a place to ask for healing and provide solace (Wehbe-Alamah et al., 2021). Accommodating gender preferences in healthcare provider as well as allowing a women time to place her hijab (headscarf) on before entering her room would provide culturally congruent care (Wehbe-Alamah et al., 2021).

The lack of cultural sensitivity in the healthcare setting has led many Muslim women to delay care (Padela & Zaidi, 2018). Concerns that the healthcare system will not accommodate
their request for modesty has also led to a delay in preventative health screenings, such as annual physical exams including pap smears (Padela & Zaidi, 2018). These concerns, as well as adherence to Islamic jurisprudence, may translate into a Muslim women's reluctance to seek healthcare assistance or reproductive healthcare. Decisions to seek care by Muslim women may be undermined by their concern of being stereotyped as oppressed, abused, or uneducated and their upbringing in a patriarchal household. There remains a paucity in the literature regarding decision-making in reproductive care specifically infertility treatment in Muslim American women. The purpose of this study was to provide a better understanding of the factors that assist or hinder Muslim American women from seeking infertility treatment.

**Psychosocial responses of Muslim women with infertility**

A review of the literature focusing on the psychological and social impact of infertility on Muslim women was identified and categorized into four focus areas: (1) emotional responses, (2) interpersonal relationships, (3) social relationships, and (4) moderators of stress.

**Emotional Responses**

The psychological toll infertility places on a woman range from feelings of shock and disbelief to anger and sadness. Thus, a diagnosis of infertility may lead women to feel as if they were on an emotional rollercoaster. This systematic review confirms that women experience psychological turmoil after a diagnosis of infertility. The data collected from this review were analyzed, and five themes were extracted regarding emotional consequences or responses to infertility. Those themes are identity crisis, life without excitement, low self-esteem, reduction in quality of life, and depression.

**Identity Crisis**

Identity is defined as the unique characteristics of an individual, the role they play, and the social groups they belong too (Stets & Burke, 2014). Motherhood identity is culturally mandatory in Muslim societies around the world (Inhorn & Gurtin, 2012). The centrality of a women's identity is placed on the ability to be a mother, and failure to reproduce is seen as a loss of womanhood.
(Greil et al., 2011; Luk & Loke, 2015). Muslim women experiencing infertility described going through an identity crisis. An identity crisis is when an event leads to a person questioning their sense of self or place in the world (Stets & Burke, 2014). Feelings of being incomplete (Obeisat et al., 2012), loss of womanhood (Behboodi-Moghadam et al., 2013), and loss of motherhood (Karaca & Unsal, 2015; Obeidat et al., 2014) were feelings described by Jordanian, Iranian, and Turkish women with infertility. "To be a mother is the most important thing that any woman wishes..." and "...every one of us dreams of being a mother" were words Jordanian women used to describe their experiences with infertility (Obeidat et al., 2014, p.3; Obeisat et al., 2012, p. 446). Turkish women ($n = 24$) were interviewed and also expressed the desire to have a child, be a mother, give birth, and breastfeed (Karaca & Unsal, 2015). Pakistani and Gambian women described the desire of motherhood as natural and essential (Batool et al., 2016) and a form of pride and companionship (Dierickx et al., 2018). The importance of having children which allows "...a woman to reach her final evolution when she can bear a child" and “the word ‘Mother’ is sacred, and not everybody deserves to be a mother...", were feelings Iranian women ($n = 10$) used to discuss their experiences with infertility (Behboodi-Moghadam et al., 2013, p. 44). Albanian Muslim women ($n = 11$) also shared the same sentiment as Iranian women stating, "I sometimes feel that I am not a woman because I cannot bear a child" (Tahiri, 2015). Through the descriptions women provided in these qualitative studies, it is evident that being childless led Muslim women to experience an identity crisis.

**Low self-esteem**

Self-esteem represents a person's evaluation of themselves in relation to or comparison to others (Stets & Burke, 2014). Low self-esteem is when one lacks self-confidence or thinks poorly of themselves (Stets & Burke, 2014). Low self-esteem was echoed by women with infertility in three (qualitative) of the twenty-one studies included in this review (Behboodi-Moghadam et al., 2013; Karaca & Unsal, 2015; Sadati et al., 2017). Iranian women ($n = 35$) with infertility discussed feeling like a failure, inadequate, useless, and undeserving, and failing as a wife...
(Behboodi-Moghadam et al., 2013; Sadati et al., 2017). Interestingly, Iranian women \((n = 25)\) also discussed a fluctuation in their self-esteem during menstruation and when others asked about her fertility, as it was a reminder of failing to get pregnant and being a mother (Sadati et al., 2017). An interview with Turkish women \((n = 24)\) further revealed that women with infertility experienced a negative self-concept, self-blame, and low or negative self-esteem (Karaca & Unsal, 2015).

**Life without excitement**

The difficulty in achieving a pregnancy not only changes a woman's identity and decreases her self-esteem, but it also affects her enjoyment of life. Life without children was described as meaningless, bitter, dull, and monotonous in Iranian women \((n = 25)\) with infertility (Sadati et al., 2017). Jordanian women \((n = 25)\) further discussed feelings of having no purpose in life, feeling unmotivated, and desires to quit planning for the future without children during interviews (Obeisat et al., 2012). Life satisfaction was measured quantitatively in one study examining the psychosocial well-being of infertile couples in Jordan \((n = 248)\). Mahadeen et al. (2018) found that Jordanian women experiencing infertility reported an overall low level of life satisfaction.

**Reduction in quality of life**

Quality of life is a complex concept and may be difficult to truly assess, as it is an individual's perception of their position in life in relation to their physical health, psychological state, personal beliefs, social relationships, and their relationship with their environment (WHO, n.d.-a). In essence, a review of 21 studies included in this review provided some information regarding the quality of life of women experiencing infertility (Behbodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2013; Demirel et al., 2021; Goker et al., 2017; Karaca & Unsal, 2015; Khalid & Dawood, 2020; Mahadeen et al., 2018; Marzieh et al., 2017; Mumtaz et al., 2013; Navid et al., 2018; Obeidat et al., 2014; Obeisat et al., 2014; Sadati et al., 2017; Tahiri et al., 2015; Vizeh et al., 2015). Women with infertility described their experiences with infertility as contributing to a lack of enjoyment in life, social exclusion and isolation, low self-esteem, and a change in their identity (Behboodi-Moghadam et al., 2013; Karaca & Unsal, 2015; Obeidat et al., 2014; Obeisat
et al., 2012; Mahadeen et al., 2018; Sadati et al., 2017). In sum, the experiences reported by the participants affirm that women with infertility have a reduction in quality of life. From the 21 studies included in this review, four specifically measured the quality of life of women with infertility (Goker et al., 2018; Marzieh et al., 2017; Namdar et al., 2017; Navid et al., 2017). Marzieh et al. (2017) and Navid et al. (2017) analyzed the quality of life in Iranian couples with infertility. They found that women significantly scored lower in quality of life compared to men. Quality of life was also measured in 127 Turkish couples (Goker et al., 2018). Women scored lower in emotional, mind/body core, tolerability, and total FertiQOL scores than men indicating that women had an overall reduction in quality of life (Goker et al., 2018).

**Depressive Symptoms**

The difficulty conceiving and changes in a woman's relationship with family, friends, and her spouse may increase the likelihood of her developing depressive symptoms. Depression was only classified as a theme in three qualitative studies (Batool et al., 2016; Dierickx et al., 2018; Obeidat et al., 2014). Jordanian women (n = 30) described their experiences with infertility as leading to recurring suffering and sadness (Obeidat et al., 2014). British Pakistani (n = 8) and Pakistani women (n = 6) discussed the impact of infertility as leading to anxiety and depression (Batool et al., 2016). Gambian women (n = 33) also described their experiences with infertility as stress, grief, and depression (Dierickx et al., 2018). Turkish women (n = 24) also provided description of their experiences during their interviews that led this author to conclude they suffered from some form of depression. Women discussed preoccupation with thoughts of infertility, which led to sleep and eating problems (Karaca & Unsal, 2015). Two of the quantitative studies, in this review, measured depression in women using the Beck Depression Inventory (Beck et al., 1961). Marzieh et al. (2017) and Mahadeen et al. (2018) reported that women (n = 29%) suffered from depression and scored higher than men in moderate to severe depression. Approximately 30% of Iranian women (Marzieh et al., 2017) and 70% of Jordanian women (Mahadeen et al., 2018) with infertility reported mild to moderate depression. Maroufizadeh et al.
(2017) also measured depression and anxiety in women with infertility, using the Hospital Anxiety and Depression scale (Zigmond & Snaith, 1983). Iranian women with infertility scored higher in anxiety ($n = 58.1\%$) than depression ($n = 33.9\%$) (Maroufizadeh et al., 2017). However, women who suffered with infertility for more than 5 years ($n = 571$) were 1.51-fold more likely to have anxiety and 1.30-fold more likely to have depressive symptoms (Maroufizadeh et al., 2017).

**Interpersonal relationships**

Experiences of infertility may be shaped by a woman’s relationship with those closest to her. The relationships with her partner, family, and friends may change due to the challenges she faces with infertility. The strain it may place on relationships or the lack of support may be factors that reduce the likelihood a woman with infertility would be open to discuss her struggles. A review of the studies identified for this review found two major themes related to relationships: abuse and harassment and a weakened marital bond.

**Abuse and harassment**

Studies on infertility typically focuses on the psychological well-being or emotional responses of individuals with infertility. Few researchers have examined the psychological and physical abuse women endure. The lack of inclusion of abuse may be due to the differences in the emphasis of procreation in certain socio-cultural and religious societies. Nine of the ten qualitative studies discussed the verbal and physical abuse women endured due to infertility. Verbal abuse and humiliation in women with infertility were reported to be perpetrated by her close relatives (Hasanpoor-Azghdy, 2013), sister and mother-in-law (Hasanpoor-Azghdy et al., 2013; Obeidat et al., 2014; Tahiri et al., 2015; Mumtaz et al., 2013) and husband (Dierickx et al., 2018; Behboodi-Moghadam et al., 2013; Hasanpoor et al., 2013; Obeisat et al., 2012; Mumtaz et al., 2013). Women with infertility also experience physical abuse from their husbands (Hasanpoor-Azghdy et al., 2013; Behboodi-Moghadam et al., 2013) and his family (Mumtaz et al., 2013). Iranian women from two studies included in this review (Hasanpoor-Azghdy et al., 2013; Behboodi-Moghadam et al., 2013) reported they were physically abused by their husbands.
The prevalence of domestic violence experienced by Iranian women with infertility were measured in three quantitative studies (Aljani et al., 2018; Ardabily et al., 2011; Sheikhan et al., 2014). The most reported form of domestic violence in Iranian women with infertility was psychological abuse (Aljani et al., 2018; Ardabily et al., 2011; Sheikhan et al., 2014). Iranian women (n = 400) also reported sexual (n = 47.3%) and physical abuse (n = 5.3%) (Sheikhan et al., 2014). Besides physical and verbal abuse, 6% of Iranian women reported sustaining injuries from the physical abuse (Ardabily et al., 2011). On the opposite end of reporting abuse, women's whose husbands and family believed in God's will suffered less physical and emotional abuse (Hasanpoor-Azghdy et al., 2013).

**Weakened marital bond**

Infertility also played a role in marital satisfaction and sexual satisfaction. Seven of the nineteen studies included in this review reported some form of marital instability or dissatisfaction among women with infertility (Behboodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2013; Mumtaz et al., 2013; Obeidat et al., 2014; Obeisat et al., 2012; Tahiri et al. 2015; Vizeh et al., 2015). A lack of relation intimacy (Obeidat et al., 2014), loss of trust (Behboodi-Moghadam et al., 2013), and decrease desire in fulfilling sexual needs (Obeisat et al., 2012) were feelings women described when discussing their marital relationships. A cross-sectional analysis conducted by Vizeh et al. (2015) reported that Iranian women (n = 123) had less marital and sexual satisfaction than their husbands. Similarly, British Pakistani women (n = 8) discussed in interviews that having infertility negatively impacted their physical and sexual relationship (Batool et al., 2016). The encouragement of remarriage and divorce by Gambian women's in-law led some to lose trust in their husbands, as they were constantly worried about divorce due to infertility (Dierickx et al., 2018; Hasanpoor-Azghdy et al., 2013; Obeisat et al., 2012; Tahiri et al. 2015). Albanian women (n = 11) echoed the feelings of losing trust in their husbands during interviews and discussed noticing a rift between the two as they felt their husband had minimal interest in them and were looking to remarry (Tahiri et al., 2015). Therefore, many women included in this review believed
that having children would allow for the stabilization of the family and would ensure marital security (Behboodi-Moghadam et al., 2013; Mumtaz et al., 2013; Tahiri et al., 2015).

Social relationships

A change in social relationships may positively or negatively influence how women experience infertility. Social relationships are recognized as an important determinant of health and can shape morbidity and mortality (Pachucki, 2016). Parenthood is culturally and religiously mandatory in many Muslim societies (Inhorn & Gurtin, 2012). Social pressure and negative attitudes placed on infertility have led many women to feel stigmatized, socially isolated, and excluded. These three themes were echoed among women with infertility across the studies included in this review (n = 8) (Behboodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2015; Karaca & Unsal, 2015; Mumtaz et al., 2013; Obeidat et al., 2014; Obeisat et al., 2012; Sadati et al., 2017; Tahiri et al., 2015).

Stigma

Stigma can be seen as a relationship between an attribute and a stereotype (Goffman, 1963). Social pressure and interference by their social systems (Obeisat et al., 2012) and social labeling or blame (Mumtaz et al., 2015; Obeidat et al., 2014; Sadati et al., 2017) led many women to feel stigmatized. Mumtaz et al. (2015) completed interviews in women with infertility (n = 11) and reported they are highly stigmatized in Iran due to societal pressure to have children and the psychological abuse they endure from those around them. Gambian women (n = 33) discussed in their interviews feeling stigmatized by their community members and family-in-laws as they were excluded from social events or functions (Dierckx et al., 2018).

Social isolation

Women experiencing infertility preferred to be alone, avoided certain people or social events, and experienced self-imposed isolation to limit social interactions with family and friends (Behboodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2013; Sadati et al., 2017; Tahiri et al., 2015). Socially isolating themselves would reduce the likelihood of being asked or reminded
they were infertile, which would reduce feeling stressed (Behboodi-Moghadam et al., 2013; Sadati et al., 2017; Tahiri et al., 2015). Turkish women \((n = 24)\) and Pakistani women \((n = 14)\) described further withdrawal and isolation from social environments where they would encounter children in their interviews (Karaca & Unsal, 2015; Batool et al., 2016).

**Social exclusion and alienation**

A diagnosis of infertility shaped not only a woman's interpersonal relationships but also their social relationships. Iranian and Turkish women reported being excluded from social events such as birthday parties by their family members and relatives (Hasanpoor-Moghadam et al., 2013; Karaca & Unsal, 2015). Besides being excluded from social events or conversations, Iranian women described challenges they faced when they were around children, pregnant women, or attended social or religious ceremonies (Hasanpoor-Moghadam et al., 2013; Sadati et al., 2017). Hasanpoor-Moghdam et al. (2013) and Sadati et al. (2017) reported women felt uneasy during certain social interactions as they were scrutinized if they refrained from or participated in an event.

**Mediators of stress**

There is limited discussion within many of the studies reviewed that addresses if Islam facilitates or restricts seeking infertility treatment. Only a few studies have discussed the use of Islam or their religious beliefs as a coping mechanism. The vast majority of research included in this review did not address mediating factors that would negate the impact of infertility on a woman's psychosocial well-being. Only two of the twenty-one studies included in this reviewed addressed coping strategies (Karaca & Unsal, 2015; Khalid & Dawood, 2020). Karaca and Unsal (2015) completed a qualitative study that provided two themes that addressed mediating factors that assisted women's psychosocial well-being \((n = 24)\), which were spousal support and spiritual coping. Karaca and Unsal (2015) reported that 92% of women described their husbands as their most important source of support. In Khalid and Dawood (2020) quantitative study, Pakistani infertile women \((n = 158)\) were surveyed. They found that social support provided by participants’
significant other, family and friends reduced feelings of depression, stress, and anxiety. Obeidat et al. (2014) also reported \((n = 30)\) women in their interviews found support from their family and friends. In three qualitative studies, Turkish \((n = 24)\) and Jordanian women \((n = 30)\) reported that intensifying religious practices such as prayer, attending religious rituals, turning to God, and reading the Qur'an were effective coping strategies that reduced stress from infertility (Karaca & Unsal, 2015; Obeidat et al., 2014). Demirel et al. (2021) surveyed Turkish women \((n = 168)\) with infertility and found that participants that reported adopting intense religious practices decreased their level of infertility distress. Pakistani women \((n = 6)\) in a qualitative research reported using religious coping, passive avoidance, and meaning-based coping (Batool et al., 2016). Khalid and Dawood (2020) surveyed Pakistani women \((n = 158)\) and found that active-distractive coping reduced depression in infertile women.

**In Conclusion**

The majority of the included studies in this section of the review focused on the psychological and social implications of infertility in Muslim women from Muslim majority countries. This review of the literature, while limited, has provided some evidence that Muslim women with infertility discussed feeling societal pressure to conceive, an identity crisis, and a perceived inadequacy due to being infertile that has led them to social isolation, depression, and reduction in quality of life (Behboodi-Moghadam et al., 2013; Karaca & Unsal, 2015; Mumtaz et al., 2013; Obeidat et al., 2014; Sadati et al., 2017). Thematic analysis of the psychosocial consequences of infertility provided insightful understanding on the impact of infertility on Muslim women. While research provided some evidence that demonstrated the value of motherhood, emotional constraints, and the unacceptable status of childlessness in women in different Muslim majority countries, there remains a paucity of published research conducted with Muslim American women and their experiences as well as what shapes their decision to seek infertility treatment.
Section Summary

The importance of fertility status in developing and developed countries shapes the way women experience infertility. Some women without children from developed countries are presumed to be voluntarily childless compared to childless women from developing countries who are expected to have children (Greil et al., 2011). The pressure on women to procreate in developing countries may lead to an increase in psychological distress when a pregnancy is not achieved. In Muslim majority countries, the socio-cultural expectations of procreation were discussed in many of the studies in this review (Behboodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2015; Karaca & Unsal, 2015; Mumtaz et al., 2013; Obeidat et al., 2014; Obeisat et al., 2012; Sadati et al., 2017; Tahiri et al., 2015). Participants from Turkey, Iran, Albania, Jordan, Gambia, and Pakistan all reported some form of societal pressure to conceive. The emphasis placed on having children in these societies, led some women to feel ostracized. Women experiencing infertility discussed feeling socially isolated, alienated, excluded and stigmatized (Behboodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2015; Karaca & Unsal, 2015; Mumtaz et al., 2013; Obeidat et al., 2014; Obeisat et al., 2012; Sadati et al., 2017; Tahiri et al., 2015). The vast majority of women in these studies discussed the burden placed on them to conceive. Changes in identity, low self-esteem, and a reduction in quality of life were experienced by women with infertility, much of which could be related to the pressure placed on women to procreate (Behboodi-Moghadam et al., 2013; Karaca & Unsal, 2015; Obeidat et al., 2014; Obeisat et al., 2012).

The findings in this focused review concur with the broader literature regarding the psychological and social impact of infertility on women. Greil et al. (2011) discussed findings from a review of the literature that suggested women with infertility globally and within Western societies experienced a negative identity, social isolation, lower life satisfaction, and inadequacy. These findings were similar to data collected in this review focused on women with infertility in Muslim majority countries (Behboodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2015;
Karaca & Unsal, 2015; Mumtaz et al., 2013; Obeidat et al., 2014; Obeisat et al., 2012; Sadati et al., 2017; Tahiri et al., 2015).

An unexpected finding in this review was the abuse and humiliation women endured due to infertility. There is limited knowledge regarding the physical and psychological abuse women suffer from their spouse or family members in developed countries. This may be due to the emphasis placed on researching the psychological or emotional consequences of infertility in women in Westernized nations. This focused review found that a large proportion of participants described some form of humiliation or abuse at the hands of their husbands, husband's family, or close relatives (Behboodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2013; Obeisat et al., 2015; Tahiri et al., 2015; Mumtaz et al., 2013). Muslim women in these studies did not discuss or address if the abuse was a factor in seeking infertility treatment or whether they felt that a successful pregnancy would end the abuse. However, one study reported that women sought fertility treatment in secret to reduce the likelihood of their partner or his family knowing of any failed attempts and to reduce verbal abuse (Tahiri et al., 2015). Further research needs to be conducted to determine the impact of abuse on fertility treatment and if abuse continues after a successful pregnancy. The physical and psychological abuse women suffer may lead to further psychological turmoil as they are already in a fragile state. The limited amount of support they received from their family and communities would only further lead to long-term suffering. The stigma of infertility experienced by Muslim women may reduce the likelihood women would seek advice, support, or guidance from their families and communities. Similarly having a stigmatizing diagnosis in a community that is highly pronatalist may also impact seeking infertility treatment.

The literature identified the Muslim community as isolating or alienating women with infertility. However, there is a limited discussion on the role of religion and culture on shaping acceptance of fertility treatment in Muslim women, especially in a community that stigmatizes women for being childless. This study provided some data on the impact of stigma within the community on decision making and women’s experiences with infertility.
Theoretical Framework

The use of theoretical frameworks in qualitative research may provide a better focus on research questions, predictions about variables of interest or about relationships among variables, and relationship between codes or determining initial coding schemes (Hsieh & Shannon, 2005). Personal experience, previous research, and existing theory will be used to develop an understanding on the lived experiences of Muslim women with infertility and the role social factors play on decision-making in reproductive care, specifically infertility treatment. Two specific theories (1) theory of stigma and (2) cultural construction of reality, were utilized in framing the research questions, guiding the development of the interview guide, and will shape data analysis.

Theory of Stigma

Motherhood, a central transition in life, is heavily pushed upon a woman through family and societal values of procreation. The expectation of motherhood plays a central role in the formation of her identity in her individual and social roles, thus shaping her behavior and experiences. Societal pressure to procreate in many communities may lead to devastating effects on individuals who are unable to conceive. Early research on infertility mainly focused on the psychological pathology and psychological adjustment to infertility (Miall, 1985). The role of society on an individual’s experience with infertility and the impact of infertility on an individual’s social world and identity formation is missing. What is known is that while changes in the timing of childbearing and fertility intentions has slightly shifted, the acceptability or social norm of childlessness remain high (Sweeney & Raley, 2014 and McQuillan 2015). Regardless of fertility intentions or importance of motherhood, being involuntarily childless in a pronatalist society or religious community may be “discrediting or stigmatizing” as childlessness is seen as a deficient or abnormal condition (Miall, 1985, p. 384).

A diagnosis of infertility may be stigmatizing as it could be seen as an abnormal bodily function or accidental or involuntary deviance (Miall, 1985). Infertility is seen as an invisible or secret stigma, as there are no outward physical disability or external differences in men and
women diagnosed with infertility (Miall, 1985; Whiteford & Gonzalez, 1985). Stigma was previously defined by Greeks as “bodily signs designed to expose something unusual and bad about the moral status of the signifier” (Goffman, 1963, p.1). Goffman (1963) defined stigma as an “attribute that is deeply discrediting” and is a “special kind of relationship between an attribute and a stereotype” (p.1). Goffman (1963) described three “grossly” different types of stigma: (1) “abominations of the body” such as physical deformities, (2) “blemishes of individual character” such as mental disorder or addiction, and, (3) “tribal stigma of race, nation, and religion” (p.2). An individual that has one or all of these undesired attributes or differences possess a stigma (Goffman, 1963).

Stigma is seen as a deviant condition or flaw that is characterized by society (Goffman, 1963). Society establishes attributes and categories considered an ordinary, natural, and normative expectation of a person (Goffman, 1963). An individual who possesses an attribute that is different from others or is a less desirable attribute goes from being seen as “usual” or “whole” to someone who is “tainted and discounted’ (Goffman, 1963, p.2). Thus, stigma “constitutes a specific discrepancy” between how the person is categorized by society (virtual identity) and an attribute that they really possess that is incongruous with social expectations (actual social identity) (Goffman, 1963. p.2).

An individual with an undesirable attribute that is not visible, such as infertility, is seen as discreditable as he/she may conceal his real social identity (Goffman, 1963). Many men and women with infertility have preferred not to disclose their diagnoses with others. In the Midwestern U.S., African and Asian American women reported they were three or four times more likely to express concerns of social stigma when considering infertility treatment compared to white women (Missmer et al., 2011). Racial and ethnic minorities in the U.S. were 7 to 18 times less likely to reveal a diagnosis of infertility or disclose the use of infertility treatment to close family and friends (Missmer et al., 2011). The concealment of racial and ethnic minorities real social identity or undesirable attribute delayed pursing fertility treatment by at least six months due to
the concern of being stigmatized within their community (Missmer et al., 2011; Quinn & Fujimoto, 2016; Smith et al., 2011). Muslim women also discussed concerns about revealing an infertility diagnosis to family and friends as they were concerned about being stigmatized by their community members and family-in-laws (Dierckx et al., 2018; Mumtaz et al., 2015).

Stigma is a socially constructed process that is shaped by the individual’s sociocultural environment (Goffman, 1963; Yang et al., 2007). The socialization process of stigma goes through two phases: (1) “the stigmatized person learns and incorporates the standpoint of the normal, acquiring thereby the identity beliefs of the wider society…” and (2) “the individuals learns the he possesses a particular stigma, and this time in detail, the consequences of possessing it” (p.31). While the meanings and outcomes of a stigma differ greatly across cultures (Yang et al., 2007), those who have a “particular stigma tend to have similar learning experiences and changes in conception of self- a similar moral career that is both cause and effect of commitment to a similar sequence of personal adjustments” (Goffman, 1963, p.30). The moral experience concept of stigma “provides an understanding of the engagements and responses over what matters most to participants in a local social world that is shaped by the lived experience of stigma” (Yang et al., 2007, p. 1530). Examining an individual’s moral experience allows the researcher to better understand the behavior of those who are stigmatized, what matters most to them, and how stigma affects them (Yang et al., 2007).

A review of the literature and theory of stigma provides evidence that women with infertility may have similar stigmatizing experiences. However, an individual's lived experience of stigma is unique to their local social world. Stigma may impact a woman in many areas including her intrapersonal and interpersonal relationships. The inability to be a mother may have women question their identity as a woman, feeling hopeless and inadequate, feeling like a failure and useless, and negative self-concept and self-esteem (Behboodi-Moghadam et al., 2013; Karaca & Unsal, 2015; Sadati et al., 2017). Non-Hispanic white women shared similar sentiments of the role stigma has on their intrapersonal being (Gezenski et al., 2021). The community or culture
may influence the way a woman perceives her infertility experience. The level of stigma received from a woman’s community may impact her interpersonal relationships. Muslim women described being stigmatized, labeled, judged, and blamed for their infertility status (Mumtaz et al., 2015; Obeidat et al., 2014; Sadati et al., 2017). African American women also described the stigma on the importance of motherhood within the culture of Black women (Ceballo et al., 2015).

Many Muslim women discussed feeling stigmatized from their communities thus feeling alienated and excluded from social events Hasanpoor-Moghadam et al., 2013; Karaca & Unsal, 2015). Similarly, non-Hispanic white women discussed similar social exclusion from their religious institutions at specific events that centered around children (Gezenski et al., 2021). These forms of exclusion and isolation may lead to women reducing religious practices or presence in their religious institutions. While discussion is limited on religion and stigma, non-Hispanic white women discussed reducing their presence in their religious institution (Gezenski et al., 2021). African American women continued to access their church as it was a way to help cope with infertility (Taylor, 2018). Muslim women intensified religious practices such as prayer and attending religious rituals to cope with infertility (Karaca & Unsal, 2015; Obeidat et al., 2014).

Based on the studies reviewed, it is evident that Islam provides coping mechanism to reduce the impact of infertility on a Muslim woman’s psychosocial well-being and the societal pressure to have children and shapes the level of stigma experienced by Muslim American women. Discussion of the role of religion in assisting with coping with infertility or justifying or explaining infertility status, and decision making in reproductive health in general, provides evidence that a Muslims religious identity may shape acceptance or declination of infertility treatment in Muslim American women (Akarsu & Beji, 2019; Arrifin et al., 2017; Karaca & Unsal, 2015; Obeidat et al., 2014). Thus, it appears that Islam shapes stigma by reducing the experience of stigma from their family and community and provides coping mechanisms when women are faced with infertility. The construct of stigma, specifically the moral experience and social identity concept, were used to guide the interview questions and data analysis.
Cultural Construction of Reality

The socio-cultural and religious expectation of procreation not only play a pivotal role in the experience of Muslim American women with infertility, but it also shapes decision making and health seeking behaviors. As previously discussed in the beginning of this chapter, religion plays a large role in a Muslim’s health specifically health seeking behavior. Kleinman’s cultural construction of reality may be used to understand how religion influences health and health seeking behavior. Kleinman et al. (1978) discussed three structural domains of health care in society: (1) professional (2) popular and (3) folk. According to Kleinman et al. (1978), decisions on seeking care and healthcare in general mainly takes place in the popular domain (family, social network and community). “Each domain possesses its own explanatory systems, social roles, interaction settings, and institutions” (Kleiman et al., 1978). Each of the structural domains yield an explanatory model that is used to determine what are the cause(s) of symptoms with an individual and what therapy or intervention should be utilized (Kleinman et al., 1978). The cultural construction of reality is the negotiation of the health care provider with the patients’ medical realities (Kleiman et al., 1978). The illness or disease experience of an individual is shaped by their cultural beliefs, religious values, and social role, which influences his/her perception of their clinical reality, their health behavior, and decision making (Kleinman et al., 1978). Clinical realities are culturally constituted and vary across culture and domains of health (Kleinman et al., 1978). The discrepancy between the clinical reality as viewed by the provider and the patient may lead to inadequate or poor care (Kleinman et al., 1978).

Religious factors may influence an individual’s decision and may be dependent on which structural domain of healthcare an individual seeks assistance. As previously stated in the beginning of Chapter 2, Islamic law may shape the perception of the Muslim American woman’s diagnosis with infertility by influencing her expectations about the diagnosis and the personal and social meaning she attaches to being infertile (Kleinman, 1978). Kleiman’s framework provides a model that focuses on the patient-doctor interactions between the explanatory models of illness
as it provides an understanding on how culture and religion influences health and healthcare seeking behavior (Kleinman et al., 1978). The cultural construction of clinical reality provides a framework for understanding how religious and social factors govern certain health behaviors. Thus, the use of this model allowed for the uncovering of how Islam influences a Muslim American woman’s cultural construction of disease, specifically infertility. The cultural construction of clinical reality was used to guide the interview questions and data analysis. Based on previous literature, the PI assumes Muslim American women in this study will look to their popular domain and religious beliefs to decide whether or not to seek reproductive care.

Theory of stigma and the cultural construction of reality share commonalities with the philosophical underpinnings of hermeneutic phenomenology (methodology used in this research). All three provide an understanding on the impact of society and language on the individuals perception, consciousness, and lived experience. The theory of stigma, the cultural construction of clinical reality framework, and phenomenology will allow the researcher to construct and make meaning of a Muslim American woman’s behavior, actions, intentions, and experiences of their lifeworld (van Manen, 1997).

**Chapter Summary**

While data collected from this review cannot be generalized to all Muslim women experiencing infertility, it adds to the knowledge base regarding the psychosocial impact of infertility in women. This review provides some evidence of the importance of fertility status in women from Muslim majority countries. Religion plays an important role in decision-making as many women who delay seeking care have done so due to concern of modesty and the desire to have a female provider (Vu et al. 2016; Walton, 2014). The decision to seek reproductive care has many layers. While little is known decision-making in seeking infertility treatment in Muslim American women, what is known is that there are many barriers that may limit a Muslim women’s ability to make decisions such as, family involvement, gender preference for providers, concern
for modesty, fear of discrimination, low health literacy, patriarchal society or household, and religious acceptance (Tackett et al., 2018; Vu et al., 2016).

Further studies need to be conducted to understand how socio-cultural and religious context impacts experiences of infertility in Muslim women. Questions that remain unanswered are (1) What is the lived experience of second-generation Muslim American women with (primary) infertility? and (2) To what extent do sociocultural and religious factors impinge on the decision to seek treatment in reproductive care specifically infertility?. Social factors such as gender preference, social economic status, and social network were previously identified as important factors in the experience of infertility as well as decision making, thus those factors were reviewed during interviews conducted in this study.

To address the gaps in knowledge, this study described and captured the meaning of the lived experiences of Muslim American women with infertility using a phenomenological methodology. The findings of the study provided a deeper understanding and meaning of how Muslim women experienced the affairs of their day-to-day existence, their physical or bodily presence, their temporal landscape, and the lived relation they maintained with others in the interpersonal space that they shared with them (van Manen, 1997). Identification of these meanings or understandings allowed us to recognize how socio-cultural context shaped the experiences of Muslim women with infertility. Identifying how a Muslim American women’s religious and cultural values shape her identity, decision making, and acceptance of care is important to improve her overall well-being. Religious values and beliefs can be seen in all aspects of a Muslim American woman’s daily life. The importance of prayer, fasting, charity, modesty, following religious rulings guide her everyday life. Limiting the understanding of her religious values or practices will only further alienate, stigmatize, and isolate her from society and her community. Focusing research on religion and infertility in the population of this study provided a window for other religious groups in identifying factors that shape a woman’s reproductive healthcare and decision making. Learning from Muslim American women participants in this study
identified what and how interpersonal, intrapersonal, social, and religious factors impact the lives of women in other religious groups and ethnic and racial minorities. Details on the specific design of this study are provided in Chapter 3.
CHAPTER 3 METHODOLGY

Methods

There is a paucity of literature examining the impact of infertility in racial, ethnic and religious minorities in the U.S. Two studies that discussed the experience of African American women with infertility (Ceballo et al., 2015; Taylor, 2018) provided evidence of the psychological toll they experienced. The role of religion is not well discussed but what is available concludes that the role of religion is justifying or explaining infertility using religious beliefs and the use of religion as a coping mechanism (Ceballo et al., 2015; Gezenski et al., 2021; Klitzman, 2017; Taylor, 2018). Similarly, there is little information on the impact of infertility on a Muslim American women’s experience with infertility. What remains to be uncovered is how socio-cultural and religious factors influence a woman’s experience with infertility. This gap limits the health care provider’s ability to provide culturally sensitive reproductive health care to women. Thus, limiting the effectiveness of appropriate educational resources, treatment options, and counseling services for Muslim women experiencing infertility. This investigator’s phenomenon of interest is the experiences of Muslim women with infertility. The central purpose of this study is to describe and capture the meaning of the lived experiences of Muslim American women with infertility and provide a better understanding of the factors that assist or hinder Muslim women from seeking infertility treatment. This chapter will provide a brief discussion of the researchers’ philosophical perspective, phenomenology, and van Manen’s methodology followed by a description and outline of the method and procedures that were used in this study.

Philosophical Perspective

According to qualitative research methods, prior to conducting the research it is imperative for the researcher to be aware of and identify their assumptions, beliefs, and biases regarding the phenomenon of interest. Many qualitative researchers believe one should suspend their beliefs about the reality of the natural world prior to conducting and analyzing research, i.e., bracketing (Dowling, 2005). However, some qualitative researchers may find it difficult to set aside their
knowledge about the phenomenon. Hermeneutic phenomenologists, such as Gadamer and van Manen, offer an alternative view and believe a failure in explicating one’s understanding, beliefs, biases, assumptions, and presuppositions may restrict the researchers’ openness (Gadamer, 2004, as cited by Sundler et al., 2019; van Manen, 1997). Bringing the researcher’s assumptions, beliefs, and biases to the forefront allows the researcher to “hold them deliberately at bay and even turn this knowledge against itself, as it were, thereby exposing its shallow or concealing character” (van Manen, 1997, p. 47). For this study, rather than suspending my beliefs, my biases, predisposing assumptions, and personal beliefs will be made explicit.

**Assumptions and Biases**

Assumptions that underlie my theoretical perspective related to the phenomenon of interest are explicated from my personal experience with infertility, personal philosophical and religious beliefs and values, beliefs about nursing’s metaparadigm, and knowledge of infertility. Assumptions and biases based on my beliefs of the phenomenon of interest are as follows:

1) Societal and cultural factors play a large role in seeking infertility treatment.
2) Muslim women with higher religiosity have a harder time accepting infertility treatment.
3) Muslim American women are less likely to disclose their struggle of conceiving to their families.
4) Women who are infertile have a reduction in quality of life.
5) Muslim women’s extended family and friends do not provide psychological support, rather cause social isolation and distress.

**Personal philosophical beliefs**

An individual’s basic belief system, or paradigm, guide’s their actions and how they approach a research inquiry (Guba, 1990). Three major questions must be answered in a disciplined inquiry: 1) what is the nature of reality (ontology), 2) what is the relationship between the knower and what can be known (epistemology) and 3) how should the inquirer go about finding out knowledge (methodology) (Guba, 1990). The answer to these questions will assist in determining my basic belief system or paradigm. My philosophical beliefs (below), which continue to expand, are based on my personal experiences and religious values:
1) The subjective experience of an individual’s world as they interpret it or place meaning to it will influence decisions they make.
2) There are multiple realities with multiple ways of knowing.
3) A nurse must establish a trusting relationship (human being), provide active listening, incorporate the women's social network (environment), and incorporate evidence-based practice to identify and interpret the unique experiences of Muslim women with infertility (health).
4) To develop a deeper understanding of the essence of a phenomenon (such as infertility), it is important to describe and interpret the experiences of individuals.
5) Knowledge is derived through examining human cultural activity through socio-cultural and historical influences.
6) Culturally sensitive interventions should be employed to assist women with infertility.
7) The subjective experience of an individual's world as they interpret it or place meaning to it will influence decisions they make.

**Ontological stance**

The perception of reality defines the ontological belief of a researcher and informs his/her study. My ontological belief, or how I see the nature of being in the world or reality, is that there are multiple realities of the subjective experience. To understand the subjective experience of reality, the researcher must acquire knowledge of an individual’s reality, their multiple truths, and their interpretation of their experience (Levers, 2013). A constructivist/interpretivist paradigm seeks to identify the meaning of human experiences and actions and posits that the “lived experience is an interpretive process situated in an individual’s lifeworld” (Levers, 2013; Neubauer et al., 2019). The ontological belief of an interpretivist paradigm resonates with my philosophical beliefs. Thus, I plan on investigating the essential truths of the reality of the lived experience in Muslim women with infertility.

**Epistemological stance**

Epistemology is the study of knowledge or the relationship between the knower and the knowledge (Levers, 2013). Objectivist and subjectivist are two main epistemological stances that inform a researcher’s inquiry (Levers, 2013). The relationship between the researcher and the participant varies based on one’s epistemological view of the world. Understanding the “insider’s” perspective would provide a “native view” of the cultural group’s language, beliefs, and experiences (Annells, 1996; Osborne, 1994; Streubert & Carpenter, 2011). The
constructivist/interpretivist paradigm identifies with subjectivism or the notion that the researcher is part of his/her research and can never be fully removed from their research (Levers, 2013). I agree with this stance and also believe that knowledge of the lived experience of infertility is achieved through the shared experiences and relationships of the participants and the researcher.

**Methodological stance**

A review of philosophical assumptions, personal beliefs of the phenomenon of interest and the nursing metaparadigm has led me to investigate the phenomenon of interest using an inductive approach. The epistemological view of subjectivism and ontological view of relativism best informs an inductive approach or a qualitative methodology for this study (Denzin & Lincoln, 2018). Qualitative research is designed to identify and provide knowledge of the human experiences of a phenomenon and to empower individuals to share their stories (Creswell & Poth, 2018). A qualitative approach gives meaning and perspective from the individual or group of individuals in a descriptive rather than a predictive manner (Hammarberg et al., 2016). There are numerous qualitative approaches that may be used to explore a problem or issue that empowers an individual to allow their story to be heard (Creswell & Poth, 2018). The majority of the qualitative approaches have been developed using a non-nursing perspective. There are a few nursing perspectives or methodologies, such as interpretive description or reciprocal-interaction worldview that may be applicable to the researcher’s phenomenon of interest. While both approaches discuss similar ontological (relativist) and epistemological (subjectivism) perspectives, the methodological and philosophical assumptions do not entirely echo my stance.

It is not only important to understand the interactions between the researcher and the subject's view of their world, but it is also imperative to understand the meaning of an individual’s experiences: by identifying and interpreting their language and assumptions of the world as they see it. This view of the world would provide meaning to how the phenomenon of interest is experienced, thus providing comprehensive and richer data. A qualitative approach that explores a phenomenon of interest by describing and interpreting the individual’s realities as it is influenced
by the world they live in, best resonates with my philosophical beliefs. A phenomenological approach allows for a deeper truth of the meaning of an individual’s experience with infertility. This form of inquiry would provide an understanding and meaning an individual or a group ascribes to a social or human problem (Creswell & Poth, 2018).

**Method of Inquiry**

A phenomenological approach was used in this study, as it allowed the investigator to make meaning of what it is like living in the reality of a Muslim woman with infertility. The difference in the use of a phenomenological approach, compared to ethnography and grounded theory, is that using a phenomenological method would allow an understanding of the subjective phenomena and the essential truths about the reality of the lived experience (Streubert & Carpenter, 2011). The lived experience of Muslim women with infertility is best developed through gaining access to their pre-reflective lived experience, which provides a detailed understanding of the essence of the lived experience in their lifeworld.

**Phenomenology**

Phenomenology is a philosophy or “theory of the unique” (pg. 7) that focuses on understanding the lifeworld to uncover and describe the “internal meaning structures of the lived experience” (van Manen, 1997, p.10). Edmund Husserl, is credited for the development and introduction of phenomenology (Dowling, 2012; Munhall, 2012). Husserl’s main objective in the creation of phenomenology is to provide a way in which we attain real or natural knowledge (Tassone, 2017). “We have primordial experience of physical things and a primordial experience of ourselves and our states of consciousness”, but “we do not have is primordial experiences or perceptions of others vital experiences” (Husserl, 1931/2013, p. 51). Thus, “the living experience of others”, their “real world” or “real being” is accessed “through the perception of their bodily behavior” (Husserl, 1931/2013, p. 52). The concepts of perception, intentionality, and experience create the original modes of consciousness (Husserl, 1931/2013; Munhall, 2012).
The aim of phenomenological research, according to Husserl, is to uncover the essence or true meaning of the lived experience (Husserl, 1931/2013). To gain insight or the essence of the lived experience of an individual, the researcher must bracket or disconnect their perceived reality of the world, suspend their prejudices, preconceptions and beliefs through bracketing or phenomenological reduction (Husserl, 1900/1973; Husserl, 1931/2013; van Manen, 1997). To access an individual’s experience, the investigator comes together with the individual and listens to their perception of an experience, allowing their voice to be heard (Husserl, 1931/2013; Munhall, 2012). Studying the lived experience of Muslim women with infertility, allows for an uncovering of the essence or true meaning of their lived experience and how they perceive that experience.

**Heideggerian/Hermeneutic phenomenology**

Martin Heidegger, a student of Husserl, challenged Husserlian phenomenology. According to Heidegger, Husserl’s concepts were primarily descriptive and phenomenology should provide an interpretation and explication of the lived experience (van Manen, 1997). Hermeneutic phenomenology is a human science that studies a person with the aim to gain a deeper understanding of the nature or meaning of their experiences (van Manen, 1997). Heidegger’s work was focused on answering the meaning of being. Being or Dasein (the being there, being in the world) is explicated through the exploration of everydayness and hermeneutic, which would provide an understanding of being-in-the-world and interpretation of the lifeworld (Heidegger, 1927/2008). Hermeneutic phenomenology goes beyond “pure descriptions of lived experience” and includes an “interpretation of experience through text or a symbolic form” (van Manen, 1997, p. 25). Hermeneutic phenomenology focuses on the interpretation of human existence through a prereflective, nonreflective, or atheoretic lived experience (van Manen, 2017). A hermeneutic approach also describes the need to understand the nature of language and meaning of the individual’s subjective experiences of the world that are linked by social, political, and cultural contexts (Lopez & Willis, 2004).
The aim of hermeneutic phenomenology is to understand and reconstruct experiences and knowledge (Kafle, 2011). The researcher’s reflections, information gathered from their participants, and depictions of the participant’s experiences are data points collected in a hermeneutic phenomenological research (Laverty, 2003). The data collected are then analyzed through “the hermeneutic circle,” which includes reading, reflective writing, and interpretation of data (Laverty, 2003; van Manen, 1997). The use of a hermeneutic approach allowed this author to illuminate Muslim women’s experience with infertility and to create meaning and a sense of understanding through unveiling their life world or human experience as it was lived.

**Justification of using a hermeneutic approach**

The use of a qualitative approach allowed this investigator to develop a detailed understanding of the lived experience of Muslim women with infertility. This can only be established by directly talking with people and allowing their stories to be told (Creswell & Poth, 2018). To determine the methodological approach that is best suited to address the phenomenon of interest, this investigator reviewed her philosophical beliefs, aim or goal of the study, and phenomenon of interest. A review of the literature regarding the phenomenon of interest, i.e., experiences of Muslim women with infertility, provided a limited amount of knowledge on the impact of infertility in Muslim women. To truly understand how a diagnosis of infertility impacts all aspects of a Muslim woman’s life, I believed women needed to be able to share their life stories of what it was like to live with infertility and how they made meaning of it. Therefore, a hermeneutic approach provided a deeper understanding of the nature of language and the meaning of the phenomenon by interpreting the written description of the phenomenon (Streubert & Carpenter, 2011).

The hermeneutic philosophical underpinnings best resonate with my personal beliefs and philosophy. To translate the meaning of the experiences of the individual, the researcher must identify and understand an individual’s language, assumptions, methods, or notions through the individual’s experiences of the world (Lopez & Willis, 2004). This view would allowed me to
understand and make meaning of what it may be like living in the participant’s reality and to interpret the individual’s reality as it is influenced by the world in which they live in. Understanding the subjective experiences of the world that are linked by social, political, and cultural context would allow a comprehensive, richer, and deeper understanding of human existence (Lopez & Willis, 2004). A hermeneutic phenomenological approach provided this researcher with the ability to understand the prereflective experience of Muslim women with infertility. Delving into the consciousness of an individual would allow for a “naïve” description of the actual experience (Husserl, 1931/2013; Osborne, 1994). The goal of this study was to develop a rich and deeper understanding of the shared lived experience of Muslim women with infertility, which is best achieved using hermeneutic phenomenology. There are other qualitative approaches that may be suitable in researching the phenomenon of interest such as ethnography or case studies, however, I did not believe they would achieve or capture the same breadth, depth, and meaning of the lived experience. Hermeneutic phenomenology allowed the investigator to capture the essence of what it was like to live with infertility.

The use of hermeneutic phenomenology also provided the ability to generate or test theory from themes uncovered during a thematic analysis of the data. As previously stated, there is limited knowledge of the impact of infertility on Muslim women. There may be partial or inadequate theories that exist that do not adequately capture the complexity of the problem in certain populations or samples (Creswell & Poth, 2018). Therefore, findings uncovered from this study provided further data to support or negate findings of extant theories such as the theory of stigma and the cultural construction of clinical reality. Identification of patterns and themes uncovered from Muslim women’s stories of the lived experience with infertility provided the ability to draw on descriptive and causal inferences.

The observable themes developed through thematic analysis of responses on how infertility is experienced among Muslim women in the U.S. provided this investigator the ability to make inferences based on the analyzed sample to a larger population. Through process tracing
and the pieces of evidence developed, i.e., causal process observations (CPOs), this investigator was able to identify or single out specific observations that determined if specific claims or findings of a theory holds true (Mahoney, 2010). CPOs are considered “nuggets” of data that seeks to establish social processes through which possible causes affect outcomes (Brady & Collier, 2010). Generating and testing theory, according to Mahoney (2010), may be accomplished through process tracing and causal process observations. King et al. (1994) provided some knowledge regarding how to make descriptive and causal inferences in qualitative research. However, many found difficulties in methods they posed and developed what Mahoney (2010) described as the new methodology post-KKV, which expands on the use of process tracing. Process tracing focuses on unfolding events of situations over time (Mahoney, 2010). Through the noncomparable observations of cases through the sequential processes within a particular case, causal inferences can be made (Mahoney, 2010). This investigator reviewed the implications of hypothesized explanations in theory of stigma and the cultural construction of reality to determine if there were any pieces of evidence gleaned from this study that supported the specific dimensions included in those theories. Furthermore, the CPOs uncovered in this study focusing on the social and emotional context of infertility or decision-making processes can provide a useful test in testing pre-existing theoretical claims.

Individual processes were captured to develop themes, patterns, or codes in order to provide causal descriptions to test the claims of a theory like the biopsychosocial theory of infertility, which discusses dimensions of stressors and moderators of those with infertility experience. Mahoney (2010) discussed the mechanism of CPOs to test a theory, and this was be used to draw upon causal inferences from the data collected in this study. The methods of van Manen (1997) were utilized to collect the data as it provided this investigator a clearer direction on conducting a hermeneutic phenomenological study.
van Manen Methodology

van Manen provides a six-step approach that employs the philosophical assumptions and approach of phenomenology (descriptive) and hermeneutic (interpretive), with the intent to guide researchers in nursing, psychology, and other professions (van Manen, 1997). A combination of the philosophical underpinnings and assumptions of Husserlian and Heideggerian phenomenology was used to guide the methods and procedures of this study. van Manen is a Dutch philosopher whose work is grounded in pedagogical research and hermeneutic phenomenology. van Manen (1997) describes phenomenological research as a way to understand how we experience the world, through the intentional act of attaching ourselves to the world. Thus, phenomenological inquiry is the explication of a phenomenon as they present themselves to consciousness through a person’s reflection of a lived experience that has passed or lived through (van Manen, 1997). To gain insight or the essence of the lived experience of an individual, the researcher must bracket or disconnect their perceived reality of the world, suspend their prejudices, preconceptions and beliefs through bracketing or phenomenological reduction (Husserl, 1900/1973; Husserl, 1931/2013; van Manen, 1997). Studying the lived experience or the lifeworld of an individual, provides the researcher with a way to understand the taken-for-granted and pre-reflective experiences; to uncover new or forgotten meanings (Kafle, 2011; van Manen, 1997). The aim of phenomenological research is to construct, make explicit, and seek universal meaning of human actions, behaviors, intentions, and experiences of the lifeworld (van Manen, 1997).

van Manen’s Methods

van Manen’s (1997) philosophical notions of a hermeneutic phenomenological approach rely heavily on describing and interpreting the lived experience of the lifeworld or the world as a person immediately experiences it pre-reflectively. van Manen (1997) further describes hermeneutic phenomenological research as uncovering the meaning structures of the lived experience of being in the world. Hermeneutic phenomenology provides a fuller grasp of what it
means to be in the world while taking into account socio-cultural and historical traditions (van Manen, 1997). A methodology is a theory behind the method; it is the philosophical framework, assumptions, and characteristics of a human science perspective (van Manen, 1997). A method is considered the mode of inquiry (van Manen, 1997). Phenomenologists state that there are no methods or set of investigative procedure(s) of phenomenological or hermeneutic research (van Manen, 1997). However, van Manen proposes a six-step guide or recommendations for a principled inquiry. He describes some methodological themes and methodical features of human science that may be used to guide a researcher following a hermeneutic phenomenological approach. van Manen’s six-step approach was utilized in the method of inquiry in this study. The steps are as followed:

1. Turning to the nature of lived experience
   a. an interest in the phenomenon
   b. a question to discover the meaning
   c. assumption and preunderstandings about the phenomenon
2. Investigating the lived experience
3. Hermeneutic Phenomenological reflection
4. Hermeneutic Phenomenological writing
5. Maintaining a strong and oriented relation
6. Balancing the research context by considering parts and whole.

van Manen’s six-step approach or themes allowed this investigator to select appropriate research techniques and procedures to study the phenomenon of interest. The application of van Manen’s (1997) research method provided a deeper, richer, and in-depth uncovering of the internal meaning structures of the lived experiences of Muslim American women with infertility. Studying the social and religious factors that impinge on their decision to seek treatment in reproductive health also allowed the researcher to explicate the existential meaning of Muslim American women’s lifeworld. Investigating the lived experiences provided construction of context and detailed description of human actions, behaviors, intentions, and universal essence of experiences as it is in their lifeworld (van Manen, 1997). The following section provides a description of the application of van Manen’s method to this study.
Application of van Manen’s Methods

The Nature of the Lived Experience

van Manen’s (1997) proposed methods allow for a description and interpretation of an experience or event. The goal of van Manen’s (1997) method is to capture the essence of a human experience in order to transform it into a linguistic description. What is meant by the phrase “lived experience”? Phenomenological human science begins with and ends with the lived experience (van Manen, 1997). While there are numerous definitions or answers to this question, the definition of lived experience that resonates with this investigator is that the lived experience is gathered reflectively by “giving memory to them. Through meditations, conversations, inspirations, and other interpretive acts, we assign meaning to the phenomena of lived life” (van Manen, 1997, p. 37).

van Manen (1997) suggests the phenomenological researcher orients themselves to a phenomenon that they find particular interest in. Once an interest in the nature of a selected human experience is identified, the phenomenological research question, “what is the nature of this lived experience is made possible” (van Manen, 1997, p. 42). This investigator’s personal experience with infertility has piqued her curiosity on how women of the same faith experience infertility. Thus, the research question, what is the lived experience of Muslim American women with infertility, was developed. After the development of a research question is formed, van Manen (1997) recommends that all understandings, assumptions, beliefs, presuppositions, and theories be explicitly stated in order to “hold them deliberately at bay and even to turn this knowledge against itself, as it were, thereby exposing its shallow or concealing character” (p. 47). The investigator’s assumptions, biases, and beliefs of the phenomenon of interest were stated at the beginning of this dissertation and were continuously reviewed through a self-reflective journal throughout the study.
**Investigating the Lived Experience**

The second step of van Manen’s method is that the researcher should develop an understanding of one’s own experience, which would allow the researcher to orient themselves to the phenomenon being studied (van Manen, 1997). The purpose of investigating the lived experience is to “borrow other people’s experiences and their reflections on their experiences in order to better be able to come to an understanding of the deeper meaning or significance of an aspect of human experience, in the context of the whole of human experience” (van Manen, 1997, p.62). Thus, van Manen (1997) suggests phenomenologist complete a description of a personal experience as “you lived through it” in order to allow the researcher to gain access to other people’s experiences. The researcher should describe the experience from the inside, focusing on particular examples and examples that stand out while avoiding casual explanations, generalizations, beatification, and abstract interpretations (van Manen, 1997). Once a researcher completes a description of a lived experience, they will be able to know what a lived experience looks like and can move on to obtaining descriptions from participants (van Manen, 1997). The lived experience exercise suggested by van Manen was completed prior to the start of interviews in order to develop a better understanding of how others may experience a phenomenon.

**Data analysis** (van Manen’s steps 3-6)

Hermeneutic phenomenological reflection (3rd step) is a way to grasp the essential meaning of something, which can be achieved through thematic analysis (van Manen, 1997). Themes allow the phenomenologist to make sense and meaning of the symbolic form (words) of the essence of a lived experience (van Manen, 1997). This investigator used thematic analysis to uncover themes and experiential structures that embody evolving meanings of the work. Thematic aspects were isolated following a detailed reading approach in which each sentence or sentence cluster were reviewed to determine what experience is being described (van Manen, 1997). This allowed the investigator to discern if there were any themes that recur. Thematic analysis was completed after each interview. Data were organized, read and reread, coded, and entered into
NVivo12 to identify themes and patterns. Once a recurrence of a theme was identified, and no new themes emerge, the interview process was completed.

Writing, van Manen’s fourth step, is completed through the entire research process in phenomenological research, as its objective is to create a phenomenological text (van Manen, 1997). The process of writing and rewriting allows the researcher to uncover hidden structures or meanings of a phenomenon (van Manen, 1997). The written word allows the researcher to describe and interpret unspoken experiences of hidden structures of the participants in their lifeworld (van Manen, 1997). The use of various stories illuminates the meaning of the structure of an experience (van Manen, 1997). Linguistic descriptions is the only way in which a research may bring specific experiences into a symbolic form (van Manen, 1997). Writing and reading are essential in developing and sustaining a conversational relation (van Manen, 1997). Thus, the researcher must really listen in order to be attuned to the deep tonalities of language (van Manen, 1997).

Maintaining a strong and oriented relation is the fifth step in van Manen’s (1997) method. van Manen (1997) also suggests the researcher constantly reflect on their views, how they are situated in the world, and remain strong in orientation to the basic questions or aim of their research. Four conditions must be met to render a human science text valid and powerful, which are the texts need to be oriented, strong, rich, and deep (van Manen, 1997). To develop these conditions, the investigator must orient herself to the phenomenon by reading and rereading the text (gained from the lived experience of participants), going through it, consuming it, and reflecting on it; in an iterative fashion (van Manen, 1997). This process will strengthen our understandings and interpretations, provide rich and thick descriptions of the lived experience, and will go beyond what is immediately experienced to provide a dimension of depth (van Manen, 1997).

The last step of van Manen’s (1997) research method is balance the research context between the parts and the whole. During reading, rereading, writing and rewriting the researcher
should take a step back at many points during the research process to look at the whole, in this way the researcher will be able to truly delve deeper into the experience and uncover hidden meanings of the experiences compared to only identifying parts of the participants experience (van Manen, 1997). This is achieved through being open, flexible, and allowing for a change in techniques, procedures, and sources throughout the research process, that may have been unforeseeable at the onset of the study (van Manen, 1997). van Manen (1997) provides a guide on how to approach and organize a human science research proposal. He discusses five ways to textually organize phenomenological writing: thematically, analytically, exemplificatively, exegetically, or existentially (van Manen, 1997). The investigator organized her writing thematically by conducting an interview, coding, and going back to the field as themes emerge (using an iterative process).

**Research Activities and procedures**

**Sample**

The sampling procedure, participants selected, data collection tools, and data analysis were all dictated by the phenomenon of interest. In qualitative research, specifically phenomenology, the sample should include all those who have had experiences related to the phenomenon of interest. The investigator must identify and recruit the appropriate sample (participants) to gather and collect data on the lived experiences of Muslim American women. In order to do so, a set of inclusion and exclusion criteria for participants were created to identify those who would capture the essence of the lived experiences of Muslim American women with infertility. Inclusion criteria for the participants included: 1) identify as Muslim, 2) English or Arabic speaking, 3) reside in a metropolitan area, such as Metro Detroit, 4) at least second-generation American (i.e. U.S. born), 5) are of Syrian, Jordanian, Palestinian, or Lebanese descent, and 6) have difficulty conceiving and/or carrying a pregnancy to live birth with the same partner for at least 12 months, or 6 months for women over the age of 35. Potential participants were excluded if they were 1) currently pregnant, or 2) had a medical diagnosis and/or were actively seeking
treatment for a major psychiatric disorder; which includes major depression, severe anxiety, and bipolar disease, to prevent confounding responses to behavioral symptoms. Women who were actively undergoing infertility treatment or were in the midst of seeking reproductive care, or those who were postponing further infertility treatment after a failed cycle, remained eligible to participate in this study.

The countries of origin that were included in this study represent what was once known as Bilad al-Sham or the Levant (land to the north prior to conquest). Jordan, Lebanon, Syria, and Palestine not only share borders, but they also share many commonalities in their traditions, way of life, language, food, et al. There is a difficulty in clearly distinguishing a person’s religion and culture. Ramadan (2010, pg. 215), states, “the core of religion is clothed in the forms of the various cultures in whose midst a religion exists.” Due to the difficulty in separating cultural and religious values, the investigator believes selecting participants who share similar cultural qualities would allow enhancement in the portrayal of their religious convictions. Also, selecting participants that are at least second generation reduced some of the cultural values of the parent’s country of origin. Another factor in selecting the second-generation and beyond was based on the assumption that there would be more of a diverse population in terms of education, income, SES, and age.

Metropolitan areas attract ethnic and racial minority populations. Ethnic and minority groups are represented in large numbers in California, Texas, Florida, New York, New Jersey, Michigan, and Illinois (Sandefur et al., 2001). Michigan, specifically the Metro-Detroit area, has one of the largest Muslim and Middle-Eastern populations in the U.S. (Mohammed, 2018). Currently, there are over 350,000 Middle-Eastern individuals in the Metro-Detroit area, with a large proportion that are Muslim (Mohammed, 2018). Therefore, participants were mainly recruited from the Metro-Detroit area in Michigan.

Purposive and snowball sampling
Sampling was completed through purposive and snowball sampling. Purposive sampling is one of the most common, nonprobability approaches utilized in qualitative research (Gentles et al., 2015). The use of purposive sampling identifies participants that are best suited in explicating the phenomenon of interest, which in this study is Muslim American women experiencing infertility. Therefore, participants who would allow for information-rich cases of central importance to the purpose of the study will be selected (Patton, 2002). There was a major concern of a lack of participation due to the sensitive nature of the topic of interest. Snowball sampling will be utilized to combat this issue. Snowball sampling is another technique that will allow for an expansion of the sample by asking interviewees for assistance in identifying or recommending other participants to this study.

**Sample Size**

In qualitative research, there are no specific rules or equations that are used to determine the sample size. A research study is considered to have the appropriate number of participants once data saturation is achieved. Data saturation is achieved when there are no new themes or findings. There is no consensus on the number of participants that provide saturation. However, there are some recommendations by qualitative researchers that saturation may be met by as few as 5-10 participants (Creswell & Poth, 2018). Studies with the purpose to explore the lived experience of women with infertility using a phenomenological approach were reviewed. Data saturation was achieved by 10-15 participants (Khodakarmi et al., 2010; Ranjbar et al., 2015; Tiu et al., 2018). This investigator determined sample size once data saturation or redundancy was achieved within the stories provided by Muslim American women, which was 12 participants.

**Recruitment**

Approval to conduct this study was submitted to the Institutional Review Board (IRB) at Wayne State University. Once approval was obtained, recruitment began in April 2021. Participants were recruited through ACCESS (Arab Community Center for Economic and Social Service), Obstetric and Gynecological offices, and Reproductive Endocrinology (REI) offices in
Dearborn and Dearborn Heights, Michigan. ACCESS has 11 locations and provides care for mainly Muslim and Middle Eastern men and women residing in the Metro-Detroit area. Recruitment strategies changed to mainly a virtual based platform due to the COVID-19 pandemic, which led to a reduction in in-person office visits and social gatherings to minimize the spread of infection. A letter of support was obtained from each site, indicating support and assistance with identification of potential participants for this study. ACCESS posted a flyer the current study on their website and social media accounts. Local Obstetric and Gynecological and REI offices allowed flyers to be posted in their waiting rooms. The receptionist at each location placed flyers at the front desk and any Muslim woman who was seeking assistance due to concerns with fertility was given a flyer prior to discharge by office staff.

Due to the inability to physically recruit at each site the utilization of social platforms was relied heavily upon to recruit participants. Social media accounts, such as the Wayne State University home page, and the Dearborn City, Dearborn Heights City, local Mosques, private Muslim women social group Facebook page and public Facebook and Instagram pages were utilized to recruit participants. Once participants agreed to join the study, the investigator identified potential participants meeting the inclusion criteria by evaluating age, type of infertility, ethnicity, citizenship, and religion. Participants that were eligible to be included in this study were contacted through email and a date for interview was scheduled. Participants also received demographic data sheet, consent form, and information about the study prior to scheduling the interview.

Data Collection

van Manen (1997) recommends various ways of “gathering” and “collecting” lived experience materials such as using personal experience, tracing etymological sources, searching idiomatic phrases, obtaining experiential descriptions from others, interviewing, observing, protocol writing, keeping a diary or journal, and consulting phenomenological literature. This investigator collected data in various forms, such as interviewing, obtaining experiential
descriptions from others, using personal experience, and field notes. Demographic data were also collected during this study.

**Personal experience and demographic data**

Personal experience is the starting point of phenomenological research (van Manen, 1997). It is important to be aware of the structure of one’s own experience of a phenomenon, which will provide “clues for orienting oneself to the phenomenon” and “other stages of phenomenological research” (van Manen, 1997, p. 57). Thus, the investigator wrote down her own personal experiences with infertility prior to conducting interviews in order to be reflectively aware of certain experiential meanings of her lived experience and reducing the risk of projecting or comparing her experiences to those of the participants. Also, the investigator shared with participants her history of infertility without mentioning any details of her lived experience, diagnosis, length, and duration of infertility, outcomes, or opinions; in order to develop a relationship.

Demographic data were collected prior to the initiation of the interview. Demographic data obtained included age, length of infertility, cause of infertility, type of infertility, marital status, level of education, income, ethnicity, citizenship, and religion. These data confirmed participants eligibility for inclusion in the study and provided evidence if there were any variations in demographic factors (see data form for details in Appendix B).

**Interviews**

The research question posed will determine what method is appropriate in collecting the lived experience material (van Manen, 1997). To obtain experiential descriptions from others is to “borrow” other people’s experiences and to reflect on them (van Manen, 1997). One way to gather and collect the human experience is through interviews. The purpose of an interview is to explore and gather experiential narrative material and to develop a conversational relationship with the interviewee about the meaning of an experience (van Manen, 1997). The inquiry process such as a conversational interview may serve different purposes it may allow the researcher to gather
lived experience material such as stories and recollections of experiences or provide the researcher with a reflection on a lived experience (van Manen, 1997).

For this study, an informal, face-to-face, semi structured, in-depth interview in a responsive interviewing style was utilized. Due to the nature or sensitivity of the phenomenon of interest, the likelihood that participants would either not respond or give brief answers was high. An opened ended and informal conversation allowed the investigator to gain the participants trust and allowed them to move the interview forward. The preference was to conduct interviews in person, but due to the challenges of the global pandemic our society was facing, interviews were transitioned to a virtual platform i.e. Zoom video calls, which still provided some form of face-to-face interaction. Participants were offered options of mode of interview, such as phone, Zoom, or facetime. All interviews were conducted over Zoom. Interviews were conducted in a private setting based on the participants location of choice. The interviewer conducted the interview in an office alone in an effort to make the interviewee more comfortable talking about such a sensitive topic and to minimize interruptions. During the interview, the investigator redirected the participant in a courteous manner when responses were more general in nature. All interviews were recorded digitally via Zoom recording and transcribed by Nvivo12 transcription and by the investigator after each interview. A sample interview guide was created for this study (see Appendix A). However, the interview guide was only used as a guide.

There were two interviews that were conducted with each participant. The first interview provided more in-depth discussion on the participants experiences of infertility. The goal of the first interview was to learn and see the world from the perspectives of the participants, to hear their stories, and to allow their experiences to flourish. van Manen (1997) recommends interview questions be concrete to reduce the risk of a lack of sufficient or over abundant material. Therefore, the following open-ended questions or grand tour questions, “what was it like to discover that you were having difficulties becoming pregnant” and “tell me what it is like at family or social gatherings with family or friends who have children or are pregnant?”, were used to elicit
data from participants to assist with understanding and identifying themes related to how participants assign meaning to their experiences of infertility. To further elicit a description of the lived experience the PI probed further with “could you tell me more about that” or “could you tell me what you mean” when necessary. The second interview was used as a follow-up to ask any additional questions that remained unanswered, to clarify some answers that were provided and to confirm accuracy of findings. Data collected from participants started in April 2021 and were completed in November 2021. Data analysis began after each interview was completed and transcribed and continued during recruitment. Memos were also completed after each interview, that reviewed key points, further questions that may needed to be further answered, and the PI’s personal feelings and experiences.

Twelve participants were recruited and a total of twenty-four interviews were completed (two interviews for each participant). Interviews were stopped after twelve interviews as the primary investigator felt saturation occurred. At the beginning of the second interview a brief description or summary of key findings was reviewed with participants to confirm accuracy of findings. Codes or themes that were found based on her story as well as general themes based on other participants experiences were reviewed. This not only allowed the investigator the opportunity validate results but also allowed for further discussion of the participants experiences.

**Data Analysis**

Data collected were organized, read and reread, coded, and entered into NVivo12. Recordings were transcribed by NVivo12 transcription and confirmed by the PI after each interview to identify themes and patterns. The PI continued to return to the field in an integrative process of coding and collecting data until there were no further recurrences of a theme identified, and no new themes emerged, thus the interview process was completed. Data collected were transcribed by NVivo12 transcription and confirmed by the PI and then read line by line to determine similar words and phrases in each interview. Each interview was listened to multiple times and data from each interview were analyzed from final transcripts completed by the PI.
Categories and codes were then developed after line by line coding was complete for each interview. Codes developed from each interview were then compared to each other to determine similarities and differences in experiences with infertility.

First and second interviews ranged from 40 to 90 minutes. Nine of the twelve participants resided in Michigan; thus, interviews were completed in their residential homes in Michigan, two participants completed interviews from their residential home in Ohio, and one participant completed her interview from her residential home in Illinois. Email correspondence was only utilized to schedule interviews and send the research information sheet, consent form, resource list, and demographic data form.

van Manen discusses four foundational lifeworld themes (existential) that provide a guide for reflection and writing in phenomenological research. The four themes are lived space (spatiality), lived time (temporality), lived body (corporeality, and lived human relation (communality) (van Manen, 1997). Spatiality, temporality, corporeality, and communality provide a process in which the researcher is able to connect the individual or “human being’s” experience(s) to their lifeworld (van Manen, 1997). Writing and rewriting involves reflexive activity involving our physical and mental being (van Manen, 1997). Therefore, one must write, rewrite, revise, and edit their work in order to create depth or multiple layers of meaning. This investigator employed an iterative process of writing and rewriting in order to provide a textual reflection of the meanings embedded in the experiences of infertility.

**Human Subject Considerations**

As stated previously, approval to conduct this study was obtained from Wayne State University Institutional Review Board (IRB) and once approval was obtained, recruitment began. The investigator reviewed the purpose and procedure of the study to potential participants and sites. Women who planned on partaking in the study were given an informed consent prior to data collection. Demographic data and interview information were deidentified and each participant was given a pseudonym. The pseudonyms were used to label recordings, transcripts, and files
within NVivo12. The recordings, transcriptions, NVivo12 data, and demographic questionnaire were kept secure on the principal investigator’s laptop computer that is password and fingerprint protected. All documents were saved under a password protected file. The investigator was the only one able to access the files as stated above. The investigator anticipated minimal to low risk of exposure of harm. Due to the sensitive nature of the research topic the investigator discussed with participants that they may end the interview and may decline answering questions at any time during the interview. All participants were provided with a local therapist’s information to help with any emotional distress that may have arisen during the interview. If the participant appeared upset, sad or distressed, had a change in facial expression or volume or tone of voice, tearful or crying, or appears agitated or hesitant, the interviewer stated “I can hear or see that this conversation is upsetting you. I think we should stop now, would you like some help? I can provide you a phone number for someone who can help you.” At that point a list of resources would have been given to the participant and the interview would have ended. A few participants appeared to be emotional during the interview which prompted the PI to ask similar questions to those stated above.

**Trustworthiness**

The researcher’s position as it relates to their research, may be reflected in the research process and outcomes (Berger, 2015). The personal experience of the researcher may impact the way questions are posed, how information is gathered and may shape the findings and conclusions of the study (Berger, 2015). Positionality refers to the position a researcher takes in relation to the social and political context of the study (Coghlan & Miller, 2014). The position adopted by a researcher may impact all aspects of the research, starting from the research question (Coghlan & Miller, 2014). This investigator's personal experience with infertility, clinical experience, and religious and ethnic background may have posed a risk of bias throughout her research. The participants in this study resembled this investigator's background. I am a second-generation Muslim American woman with a history of infertility. My position in regard to
experiences with infertility may have led to biases from recruitment to drawing conclusions. The main concerns I had was that my position related to my own experiences with infertility, may have led me to project my feelings on my participants, push participants to answer questions the way I expect them to feel, and only select themes that agree with my personal experiences. Positionality may have also influenced the interview questions I developed, what patterns, themes, or codes I found relevant, and conclusions I drew. If I do not bring my positionality to the forefront, I run the risk of developing incomplete or inaccurate depictions of the participants’ experience, thus rendering my findings useless. To combat these major issues, I was conscious of questions asked in the interviews, tone of voice, nonverbal behavior, and how I made meaning of the participant's experiences.

It is imperative to be aware of one’s position, as there is no way to truly separate one’s position from one’s research. There are strategies to reduce biases due to a researcher's positionality as it relates to their phenomenon of interest. Maintaining reflexivity by applying measures to counteract the balance between the researcher’s own experiences and that of the participants would allow the participant's experiences and thoughts to be heard, versus those ideas and experiences of the researcher (Berger, 2015). Reflexivity is seen as a process to assist the researcher in critically self-evaluating their beliefs (Berger, 2015). A researcher may employ strategies to maintain reflexivity such as prolonged engagement, keeping a diary, peer support networks, member checking, and audit trails (Berger, 2015).

I employed self-reflection and “unconscious editing” to bring attention to my own reactions, beliefs, values, and emotions throughout the research process. Peer consultation also assisted in eliminating or reducing bias as the PI’s committee members reviewed interview questions developed, data collected, and data analyzed to ensure all findings are a true representation of the participant's experiences. Also, a random review of recorded interviews was provided to some of the PI’s committee members for review to ensure this investigator was not leading participants to answer questions in a specific way. Another strategy to reduce the risk of bias is member
checking. This investigator provided all participants with a brief summary of what was discussed to confirm that data were interpreted correctly. The use of these measures was in place from the beginning to the end of the research and provided an unbiased conclusion and allowed the data to truly represent the participant.

**Limitations of Phenomenological Research**

There are potential limitations of using a hermeneutic phenomenological approach. Hermeneutic phenomenology provides the ability to develop an understanding of a phenomenon as experienced by several individuals (Creswell & Poth, 2018). In order to research the phenomenon of interest, individuals who share the experiences of being Muslim with infertility were sampled. Through purposive sampling, participants were selected a priori. Selection bias is a major concern with using purposive sampling as participants were selected based on the researchers’ judgment. However, the intent of qualitative research is not to be generalizable to all but to provide a gateway in understanding what it is like to experience a phenomenon in a small subset or group. Another concern with a phenomenological approach is the focus of studying subjective experience. There are some concerns that a narrowed focus on the pre-reflective experiences of participants would reduce the ability to understand what outside factors are associated with the experience, which limits the ability to truly explain the experience (Stephenson et al., 2018). While this may be a limitation, the goal of qualitative research is to allow what is important to the participant to shine rather than what is important for the researcher to discover.

Interviews are one of the main data collection tools used in hermeneutic phenomenology research. Some may argue that the use of an interview will not capture the essence of the lived experience of the phenomenon of interest. However, strong and well thought out interview questions that elicit a detailed story or narrative of the experience may strengthen the data collected from the interview. Journal and field notes of observations of nonverbal cues and the participant's review of their responses will allow the researcher to capture the essence of the participant's experiences.
Bracketing is also a concern in hermeneutic phenomenology. Suspending one’s belief may be a daunting and difficult task; thus, van Manen (1997) suggests making them explicit prior to the start of the research. This may allow the researcher to be aware of their preconceived biases and assumptions, however, that does not mean that those notions cannot seep back into the research. Therefore, the use of a journal during the research and analysis phase allowed the researcher to identify any biases that developed during data collection and analysis. The researcher was then able to determine her feelings and if any decisions made during the research process were biased by her preconceptions.

**Chapter Summary**

The findings of this study provided some empirical contributions to extant literature. Currently, there is a paucity of knowledge regarding the lived experiences of Muslim women with infertility, including the psychosocial impact of infertility. This investigator believes that themes gathered and collected from the research would support previous findings in studies discussing the psychological and social consequences of infertility in Muslim women, such as social exclusion, isolation, negative identity, and stigma (Behboodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2015; Karaca & Unsal, 2015; Mumtaz et al., 2013; Obeidat et al., 2014; Obeisat et al., 2012; Sadati et al., 2017; Tahiri et al., 2015). The findings from this study further expand on the knowledge of the lifeworld of Muslim American women with infertility by providing evidence of how societal expectations may change their quality of life. Themes gathered from the data collected may provide an understanding of the role socio-cultural and religious factors play on the experience of infertility; including the decision to seek reproductive health.
CHAPTER 4 FINDINGS

The purpose of this phenomenological study was to describe and capture the meaning of the lived experiences of Muslim American women with infertility and to provide a better understanding of the factors that assist or hinder Muslim American women from seeking infertility treatment. More specifically this study sought to address two research questions:

1) What is the lived experience of second-generation Muslim American women with infertility?

2) To what extent do sociocultural and religious factors impinge on the decision to seek treatment in reproductive care, specifically infertility?

In this chapter, eight themes that emerged through the exploration of the lived experiences of Muslim American women with infertility are presented. These themes emerged from data analysis and reflected commonalities found among the participants. They were organized based on van Manen’s (1997) recommendation of phenomenological writing. Eight themes (and 16 subthemes) were identified: 1) discovering difficulties of conceiving, 2) life decisions, 3) fertility expectations, 4) rationalizing fertility status, 5) emotional toll, 6) dynamic relationships, 7) pursuing support, and 8) identity. The existential phenomenological themes were described by illuminating the participants corporeal, temporal, spacial, and relational experiences (Van Manen, 1997). The following section provides a thematized description of the lived experience of a Muslim American woman with infertility. Themes were defined and are followed by quotes that illustrate each finding. This chapter includes a discussion of the research setting, data collection, data analysis, evidence of trustworthiness, demographics, themes, and a chapter summary. Below is a table of themes and subthemes.
### Table 1

*Major Themes*

<table>
<thead>
<tr>
<th>Themes</th>
<th>Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Discovery of Difficulties Conceiving</td>
<td></td>
</tr>
<tr>
<td>2. Life Decisions</td>
<td>1. Everyday life decisions</td>
</tr>
<tr>
<td></td>
<td>2. Seeking answers</td>
</tr>
<tr>
<td></td>
<td>3. Seeking fertility treatment</td>
</tr>
<tr>
<td>3. Fertility Expectations</td>
<td>1. Personal</td>
</tr>
<tr>
<td></td>
<td>2. Cultural</td>
</tr>
<tr>
<td></td>
<td>3. Religious</td>
</tr>
<tr>
<td></td>
<td>4. Family/Friends</td>
</tr>
<tr>
<td></td>
<td>5. Spousal</td>
</tr>
<tr>
<td>4. Rationalizing Fertility Status</td>
<td></td>
</tr>
<tr>
<td>5. Emotional Toll</td>
<td>1. Discovering fertility issues</td>
</tr>
<tr>
<td></td>
<td>2. What if…</td>
</tr>
<tr>
<td></td>
<td>3. Living with it</td>
</tr>
<tr>
<td></td>
<td>4. Traumatic life events</td>
</tr>
<tr>
<td>7. Pursuing Support</td>
<td>1. Desired support</td>
</tr>
<tr>
<td></td>
<td>2. Barriers of seeking support</td>
</tr>
<tr>
<td>8. Identity</td>
<td>1. Rebuilding one’s identity</td>
</tr>
</tbody>
</table>

**Research Setting and Data collection**

Recruitment for this study was challenging as many of the Obstetric and Gynecological (OB/GYN) and Reproductive Endocrinologist and Infertility (REI) offices did not allow researchers on site. There was also a lack of participation, most likely due to the sensitive nature of the topic.
of interest. Many of the participants were referred from a participant that completed the study. Participants disclosed they were concerned about confidentiality but when their friend completed the interview and described the process, they were reassured of the ability of the researcher to keep all information confidential. All participants were interviewed separately, and interviews were conducted over Zoom. The PI completed all interviews in her private home office. Twelve participants were recruited for this study. All interviews were audio recorded and transcribed through NVivo12. Two interviews were conducted for all participants. Ten of the twelve participants completed both interviews on Zoom using video and audio function. Those participants were in their home in a private room alone with minimal interruptions. Two of the twelve participants used Zoom’s audio only function for both interviews. Both participants had some minor interruptions. First and second interviews ranged from 40 to 90 minutes. Nine of the twelve participants resided in Michigan; thus interviews were completed in their residential homes in Michigan. Two participants completed interviews from their residential home in Ohio, and one participant completed her interview from her residential home in Illinois. Email correspondence was used to schedule interviews and sending of research information sheet, consent form, resource list, and demographic data form.

All twelve participants were recruited through social media posts on Facebook and through snowball sampling. All interviews used an informal, semi-structured, in-depth responsive interviewing style. Opened ended and informal conversation allowed the investigator to gain the participant’s trust and allowed them to move the interview forward. The interview began with the following open-ended questions or grand tour questions, “What was it like to discover that you were having difficulties becoming pregnant?” and “Tell me what it is like at family or social gatherings with family or friends who have children or are pregnant?”. Probing questions such as “Could you tell me more about that?” or “Could you tell me what you mean?” were used when required to elicit a description of the lived experience. The majority of the women were able to tell their story with the initial grand tour question. However, to further understand religious implications
of their experiences as a Muslim American woman with infertility the question “What does being a Muslim woman mean to you?” or “What does Islam mean to you?” followed by further probing questions (see Appendix A) were used.

The second interview was used as a follow-up to ask additional questions that remained unanswered from the first interview, to clarify some answers that were provided and to confirm accuracy of findings. On the second interview the PI began the interview reviewing the findings from the previous interview. All participants were asked if this represented their journey. Upon review of the findings the majority of the participants began to further discuss their journey. From there the PI asked any additional questions that remain unexplored from the previous interview.

Data analysis

Thematic analysis using van Manen’s method uncovered themes and experiential structures that embodied evolving meanings of the work. Data collected were organized, read and reread, coded, and entered into NVivo12 to identify themes and patterns after each interview. The PI continued to return to the field in an iterative process of coding and collecting data until there were recurrences of a theme identified, and no new themes emerged, thus the interview process was completed after interviewing 12 participants (each participant was interviewed twice). All interviews were audio recorded and took place from April 2021-November 2021. All interviews were transcribed by NVivo transcription services and uploaded into NVivo 12 for the PI to code and analyze data. Codes were created inductively after listening and reading transcriptions.

Demographics

The data that were collected came from a sample of twelve Muslim American women who were recruited using purposive and snowball sampling. All participants met inclusion criteria, which was expanded to include women experiencing secondary infertility due to the low response rate. Participants provided their age, education level, religious preference, marital status, income, citizenship, parents citizenship, ethnicity, duration of infertility, and if they received a diagnosis (Table 1). The women were between the ages of 27 to 41 and struggled with infertility from one
and half years to sixteen years. All were born and resided in the United States. All participants were second generation Muslim and Middle Eastern Americans. Fifty percent of participants had an annual income of greater than $74,999 (n = 6) and thirty-three percent had an income of less than $74,999. All participants reported they had a college degree, with fifty percent of women who had a graduate degree (n = 6).

The majority reported having primary infertility (67% or n = 8) and unexplained infertility (67% or n = 8). The four participants who reported having secondary infertility all had only one child. The difficulties reported by women with secondary infertility resembled those reported by women with primary infertility. The only notable difference was that their personal desire to have a child was in order for their other child to have a sibling and not based on their own personal needs or want.

Table 2

Summary of Participant Demographic Information

<table>
<thead>
<tr>
<th>Name</th>
<th>Education</th>
<th>Religion</th>
<th>Marital Status</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lavender</td>
<td>Graduate degree</td>
<td>Shia</td>
<td>Remarried</td>
<td>&lt;15k</td>
</tr>
<tr>
<td>Daisy</td>
<td>Graduate degree</td>
<td>Sunni</td>
<td>Married</td>
<td>Declined</td>
</tr>
<tr>
<td>Lily</td>
<td>Bachelors</td>
<td>Shia</td>
<td>Married</td>
<td>&gt;/= 100k</td>
</tr>
<tr>
<td>Jasmine</td>
<td>Bachelors</td>
<td>Sunni</td>
<td>Married</td>
<td>75-99k</td>
</tr>
<tr>
<td>October</td>
<td>Bachelors</td>
<td>Muslim</td>
<td>married</td>
<td>&gt;100k</td>
</tr>
<tr>
<td>May</td>
<td>Graduate degree</td>
<td>Shia</td>
<td>married</td>
<td>75-99k</td>
</tr>
<tr>
<td>Rose</td>
<td>Bachelors</td>
<td>Sunni</td>
<td>married</td>
<td>25-50k</td>
</tr>
<tr>
<td>Poppy</td>
<td>Graduate degree</td>
<td>Sunni</td>
<td>married</td>
<td>&gt;100k</td>
</tr>
<tr>
<td>Iris</td>
<td>Bachelors</td>
<td>Shia</td>
<td>married</td>
<td>50-75k</td>
</tr>
<tr>
<td>Violet</td>
<td>Bachelors</td>
<td>Shia</td>
<td>divorced</td>
<td>25-50k</td>
</tr>
</tbody>
</table>
Discovering the difficulties of getting pregnant (Theme 1)

On the initiation of the interview the first question asked to all participants was “please begin the interview by telling me about your personal experience with being a Muslim woman with infertility.” As the women provided the backstory and glimpse of the beginning of their infertility journey, the majority (10 of 12) of the participants began by describing the moment they decided they were ready to start a family and discovered they were having difficulties, thus this theme emerged. Most of the participants began their story with “I got married in…we were ready to start trying…” The timeline of when they began trying to naturally conceive varied. Some of the women (3 of 12), such as Lavender, discussed trying to conceive immediately after marriage:

The most general form of the story is I got married…I was twenty-six when I got married and I don't know why now thinking back, I…tried to have a baby that quickly, but we immediately just started trying…I don't know, we just started trying really, really quickly…I can't remember the exact months, but I think it was a full three years and ironically, coincidentally, that was the length of our marriage. So, the whole time I was married, which was for three full years, I was trying to get pregnant.

Poppy also recalled she was ready to start a family after her wedding:

…so, we got married June 2016, I took birth control for about two months the month prior to my wedding date and through the honeymoon to prevent getting my period. So, my entire life, outside of using birth control for infertility treatment, I used it for 2 months. After that, we just started trying. Yeah, I was only 22 but I wanted to be a mother, I love kids and all I could think of is the next step to build a family is to have children. I just kept thinking I want at least four kids before 35.

Other participants (8 of 12) planned to wait at least a year after marriage before trying to conceive. The common reason to delay conception discussed was that they were simply not ready. May recalled waiting a year before trying as she was not ready to have kids right away:

…my husband and I got married, our three-year anniversary is going to be coming up soon. So, when we started trying, we started actively trying last year during the pandemic,
when the pandemic first hit…We…took our whole first year of marriage off…like we'll just try, we'll try later. We're not going to have kids right away.

Daisy also delayed conception as she was in graduate school and was hoping to complete her studies before having children. However, years into her studies she decided she was ready to be a mother:

So, I was in grad school at that time when I felt that I was ready to become a mother and my husband was ready... I had a certain plan in my head as far as to wanting to perhaps exit graduate school a little early and still have my degree, have my education, but it was not complete as I would have liked to but in order to have the opportunity to be a mother. I was willing to sacrifice my career for having a baby. So, this was a point in our marriage where we have been together for years now and where I felt I think this would be a good time to have a family.

Once the plan was made that they were ready to start a family or were ready to have another child, they began to discover the difficulties of conceiving. All of the women described the length of time trying to conceive before discovering they were having difficulties. The majority (9 of 12) of the participants discovered they were having difficulties conceiving after trying naturally for at least 12 months with no successful pregnancy. Jasmine, like many of the participants, tried for a year when she realized it was just not happening, she recalls:

...so, one year into the marriage, we started thinking about having a baby and we started that process and about six months into trying and nothing happening, I started growing you know worried and questioning whether things were going to work out or not, as my sister tried for years before having children and I am in my 30s. So, at that point, I started with ovulation kits and figured maybe that will help, as I'm not sure, maybe when I ovulate. So, I purchased those and then tried those for about four months. And then after four months of no luck, I grew even more worried and at that point began scheduling an appointment with the infertility specialist to get testing done for me and my husband.

A few of the women (3 of 12) discovered issues after experiencing a miscarriage. Iris had difficulties after the birth of her daughter, she was left shocked that she was struggling because she was able to achieve a successful pregnancy easily the first time:

So, when I first got married, we weren't thinking about having children for at least a year. And then once the one-year mark passed, we started talking about it and I quickly became pregnant and I was like, oh, wow, ok. I thought I was going to be like, a thing because I waited so long... it was a successful pregnancy and a normal delivery, normal baby, normal healthy baby. And then we weren't thinking about another child because we wanted to enjoy, like we didn't want two back-to-back, we wanted to enjoy her. And we waited until like she was about two to like maybe two and four months. And we started
trying again...we started trying in September of 2019. We got pregnant, but it didn't happen as fast as the first one and then we got pregnant...in January or February of 2020, so right before the pandemic...we couldn't find a heartbeat at seven or eight weeks...ended up with a miscarriage, never had one before. That happened in March 2020...so we took a break and started try again Fall 2020.

The women (2 of 3) who had miscarriages prior to discovering the challenges they were about to face discussed that when they had their miscarriage, they thought it was “normal” since they talked to others who have had miscarriages. They never saw the miscarriage as an indication of a problem. The realization that there might be more medical significance to the reason for the miscarriage did not occur to them until about six months after their miscarriage when they were still trying to achieve a pregnancy. After May had her first miscarriage she thought, “ok this happens”, however, it was not until after her second miscarriage she realized something might be wrong: “I've had two like early miscarriages, and that's when I was like, ok, there's something going on.”

October recalled:

…we got married in 2017, and within six months I got pregnant naturally. And then it ended in a miscarriage, 10 weeks along.... And long story short, I ended up having like a D&C (dilation and curettage). And then I didn't think anything of it...we were told it's so common for women to have miscarriages, and it's just something that a lot of women go through, basically, so they don't think anything of it. And then, me and my husband continued to try, and nothing happened... So, we just thought, you know, it's just something that's going to be a one and done type thing and we should be ok. But within about eight months of us just trying again, no results.

Life Decisions (Theme 2)

The life decision theme focused on what factors participants discussed that influenced their major life decisions. The subthemes 1) everyday life choices, 2) seeking answers, and 3) seeking fertility treatment emerged from the stories women used to describe the factors that contributed to decision making from education, marriage, to seeking or accepting medical treatment.
Everyday life choices (subtheme)

Upon the discussion of how participants make everyday life choices, most women discussed religion and family as the main contributing factors that influenced their decisions. The majority of the women (10 of 12) stated Islam played a significant role in the choices they made. June stated: “I always think what would God think, before I do anything that I feel like is not right or you know like how would...my mom look at me if I did this? That's my first thing.” Daisy also expressed religion as playing an important role in her life:

one of the things that I love the most about our religion is how lenient it is, how there is such a big grey area that a matter of fact, it's not black and white...but in any case, because of the leniency when I make decisions, I definitely first give a thought. Is this going to displease my Lord? But in what way would it displease such a merciful, kind and fair Lord, right?

The Islamic teachings were similarly important to October:

my whole life revolves around my religion. So, every decision I make, you know, is based on what is...okay or what's halal (allowed) and what's haram (prohibited) and what is moral and what my faith is ok with...I think it (religious beliefs) really impacts decisions I make, family, who I marry...definitely marrying somebody Muslim...was my number one thing, somebody who had the same beliefs as me, in regard to medical care.

Jasmine described the significance of religion in her life as:

Islam influences my daily life, and that's when I pray five times a day, it gives me the opportunity to kind of stop and just take a break, meditate. Remember that God is the one who creates and God's the one who takes and that everything's in his hands. And by praying five times a day, it's kind of a not just daily reminder, but multiple times a day, that He is in control. And to always go to Him for everything...so I when I make a decision like I start to think will this earn the anger or pleasure of God.

While very few (2 of 12) discussed that their parents and their own personal beliefs assisted them in decision making. May discussed having her own mind and opinion of things and the importance of making her own choices but still holds value to what her parents have taught her:

I was raised learning some Islamic teachings...like my mom...dating before marriage was...you shouldn't date before marriage...or you can't wear like a tank top...don't show this part of your body. So, I think that a lot of the things I was taught really that's how I make my decision based off of what my parents told me is right or wrong. But obviously, I still to this day...I have my opinions and views on things. I make my own choices at the end of the day, like every choice wasn't made by...my mom and dad.
All of the women discussed the acceptability of seeking medical care. None of the participants were concerned with receiving medical treatment as long as recommendations were not prohibited according to Islamic rulings. June stated: “like medical treatment is acceptable as God gave us the knowledge to help us.” Jasmine expressed a similar feeling:

…religion does teach us to do, to push our very hardest to get to a goal that we want to get to, for example, tie your camel and then trust in God. So, when it comes to medical treatments or trying to get treatment, you’re supposed to try to go as far as you can in treating yourself. And if things don’t resolve after that, you’ve done everything that you can.

A few of the participants (3 of 12) recollected times they questioned the acceptability of a recommended treatment. Violet described a time she was worried was religiously unacceptable:

…I became pregnant with quads and well, the doctors suggested that we do a fetal reduction in that pregnancy and that’s literally aborting babies in utero. And I told them, well, abortion is sinful in my religion, I would need to ask our sheikh (religious scholar, similar to a rabbi or priest), which I did. And I said to the sheikh…the doctors are telling us that we need to reduce the pregnancy, and this means aborting. And he said if this is something that will benefit your health and the doctors are suggesting it that it’s not haram (prohibited)…so I went from a quad to a twin pregnancy…

Iris recalled a time when she declined a specific test based on her personal and religious beliefs:

Yeah, for example…when we first got pregnant with my daughter, they asked if they wanted the blood work test to find out if there is anything abnormal and me and my husband, we were on the same page without blinking…we discussed it before, would we abort based on the result? No. And we’re like, no, we don’t want that test, because sometimes they give false…not accurate information…oh what the baby might have downs. And then it’s not true. And if it’s a possibility, no matter what comes from God. We’re going to take it, we’re never going to terminate this pregnancy. It’s what God wanted.

April also gave an example of a time she wanted to make sure the treatment she was receiving was acceptable, she stated:

I always read medicine labels to make sure they don’t have gelatin or alcohol (prohibited in Islam). For example, once I was getting ready to get the flu shot and saw online a post that it has gelatin in it, so I asked the RN before she gave it to me and she said no only the nasal or live flu vaccine has it, so I took it… if it had gelatin, would I have still said yes?...Well if it’s absolutely necessary then maybe but if it’s not needed then I would say no.
Only a few of the women (3 of 12) mentioned whether their community or cultural background had any significance in decisions they made. Lavender and Jasmine both had similar sentiments regarding their community involvement in decision making. Jasmine stated she did not allow her community or her family’s cultural beliefs on specific subjects to impact her everyday life choices:

…when I decided who I would marry…or to go to an event…I don’t let culture dictate its standards of what I as an Arab women should act or do…I do take into consideration my family’s opinions but in the end of the day it’s my choice and as long as it’s not haram (prohibited) then I know I am ok with that choice.

Lavender also discussed not allowing her community to dictate how she would lead her life:

…sick of society telling me what to do…I've never let, I never been one to let society dictate anything, to me, if anything, when people tell me something. Like, I actively don't do it, not because I'm trying to be a rebel, sometimes I do. I get mad…I don't color my hair anymore. My hair's all gray. It's grown out completely. And again I…I'm not trying to be something different. I really am not. When people ask me about why I don't color my hair, it's gray, I tell them like I just want to see who I am as God made me, so sick of being something I'm not.

Rose addressed the influence of her community on her decision making by stating:

…you know when I was ready to get married and how I went about it, I followed Islamic teachings, like no dating, you only get to know the person through family. But…I thought I was ready to get married at 18, why, not because I thought Islam told me I needed to but because the community conditions you to believe that if you don’t get married by 25 you are damaged goods. I ended up not following that logic because my parents encouraged me to go to college and I ended up getting married at 27…and I am thankful I did, I was not mentally prepared at 18.

Violet recalled a moment she thought about using her remaining embryos as a divorced woman and the concern if she decided to:

what's the community going to say? Where did she get this kid from? You know, she's been hiding out. No one sees her much. You know, she's living out in another city that's like 40 minutes away. Maybe she was pregnant. Maybe she did get impregnated by someone, and she chose surrogacy as an excuse. So, these are things that I think about our community and the limitations…right now at this time in my life I am content, but I have thought about it.

**Seeking answers (subtheme)**

After discovering the challenges with achieving a pregnancy, the majority of the women (11 of 12) made the decision to seek answers. The decision to seek care for most of the women
(9 of 12) was based on their desire to have children and to understand why they were having difficulties. Some of the women preferred to remain private about the decision to initiate and receive care. A few of the women discussed talking to specific family members or friends, mainly for guidance on where to start or who to see and to understand the process. Thus, for some women, family and friends played a role in advising them on the next best steps. Lavender talked to a close family member that previously struggled with infertility and it helped her during her fertility journey:

...when I was trying to get pregnant, I would go to her and it became a running joke that I was following her trajectory in life because very similar things were happening to us. Yeah, my aunt...had struggled with fertility and she had the same O.B. that I did and I was very close to her...she struggled with infertility for two years did IVF and got pregnant with twins...she was a driving force when I was struggling...she told me about Clomid, believe it or not, but that didn't work, and then from there the referral was from her, but she was a big part of that, the joking of like me following in her footsteps, which I think was just a little comforting. Maybe because she had a good ending. But at the moment, yeah, it was very comforting.

Jasmine similarly recalled talking to her sister and close friend before going to her first appointment with a physician:

I talked to a close friend and asked her for recommendations, I know they prefer you to wait exactly one year so I wanted to make sure they would still see me so I asked my very close friend, who is also trying, who she recommends I see and like what is the process, what does the first visit look like, what tests did she have to do...it was nice to have some information before walking in to that appointment....my sister also struggled with infertility so I remember her going through it...but that was like 8 years ago. I asked her a few questions about testing, but we kept it short...we just are very private about stuff like that.

Keeping things private about her fertility journey was also important to Rose. She approached her gynecologist after trying for a year:

...I just remember being 2 days late, and was like could this be it, I think at this point it was about a year of trying. I was excited but scared because I just knew I would be disappointed, but it was the first time I was late. All I could think about is getting a pregnancy test, but I was too scared, you know I was scared the moment I would pee on that stick it would be negative...I started to think should I wait another day, have another day of possibility...but I couldn't help myself I took that dang test and of course it was negative. At that point I said I am done...so I went to see my gynecologist...and she recommended some testing...you know, I am a very private person...I don't like talking to anyone about things in my life except a few close people in my life...and with this I really like I only like to talk to my husband and best friend...
The majority of the women (11 of 12) discussed that initiating care with a healthcare provider was to determine the cause of their fertility struggles. Only one participant hesitated to initiate care while all others described the importance of identifying the cause of their problem so they could achieve a successful pregnancy. Otherwise, a delay in seeking care would reduce the chances of becoming pregnant. Lily started to look for answers as she grew worried that she may never have another child:

...I didn't realize until recently I was having trouble getting pregnant because I did get pregnant with my son seven years ago, I thought if I have another it will happen when I am ready. It wasn't until recently I said you know it's time for me to have another child... I just thought ok, maybe you know, like it will happen when it happens. I didn't think anything of it...but then the fear, honestly, like fear of what if I really can't have kids anymore...I started seeing different doctors to see what is contributing to my infertility.

Poppy also looked for answers to her fertility struggle:

...I think it was like a year after trying I was talking to my husband and was like ok I think I should see someone like a specialist or a gynecologist to see why is this not working, we are both young and healthy so it doesn't make sense...so I made an appointment with a reproductive specialist...I just didn't want to keep trying if it wasn't going to work, you know. I had a coworker who tried for 4 years and ended up learning she had a blocked tube, so I was like let's not keep wasting time.

April recalled:

...honestly, I couldn't understand, like why is it taking so long for me to get pregnant when I know when I ovulate and we are like together at the right times, but nothing...so I went to my OB to see find out what the heck is going on...

However, one participant, Iris, stated she wasn't ready to see anyone as it would be admitting something was wrong:

I was like, ok, this never happens to me. There's something going on with me. And then everyone's like, why don't you try going to someone or seeing someone? Part of me didn't want to because it's like really admitting that something was wrong. And I didn't want to do that...

Instead, she would just continue trying and praying, Iris stated:

So, we've just been trying and trying, and I pray to Allah at night, to forgive me and my family, to protect us, and just thanking Allah, you know thanking him...for his blessings...during Ramadan I prayed a lot a night and just asked Allah for his blessings...and that's all I am doing praying and just trying.
Some of the women (7 of 12) briefly mentioned that while they were completing exams and tests to determine a possible cause of their infertility, their husbands were also completing testing (semen analysis). Three participants discussed their spouse’s hesitancy to test. Poppy soon learned that it would take some convincing for her husband to agree to complete a semen analysis:

He seemed open about getting checked out when I first said I wanted to see a specialist but when I discussed that they wanted him to get tested he kind of laughed, like are you serious, there is nothing wrong with me, I think it’s just a waste of time. So yeah, it was a struggle for a while…he ended up coming to one of my appointments and spoke to the specialist…thankfully he ended up agreeing to testing, otherwise we would have never known we had a problem.

Violet and Lily described their ordeal of having their spouses complete testing. Their spouses were opened to testing at first but became hesitant due to their mother’s influence. Violet recalled:

There was a point before doing my first round of medication that the doctor suggested my husband get tested. And I recall my mother-in-law being like my son, no nothing is wrong with my son. And I told her that they want to test us both, it's normal. My ex-husband didn't have an issue with it, but at the same time, I think there was an insult. Yeah, they were, they felt insulted…like, how dare you? This isn't from us. You know, this isn't from us, how dare you say that…my son needs to get tested and even my ex-husband was like me. Not me. You think it's me? Ok, yeah, I'll get tested...What did the doctor say? I'm good, oh ok, I am good, the problem is from you. So, yeah, that happened.

Lily also shared a similar experience, she stated:

There was a point where my doctor told me that there's really nothing wrong with you and your husband should get his sperm checked. And when I did say that to my husband, he agreed to get his sperm checked, but when he said it to his family, that's when things started getting really ugly because his family thinks that there's nothing wrong with him, that, it's, you know, it's me…there has to be something wrong with me. There can't be something wrong with their son. So, it kind of like just, it created a bit of tension.

Lily decided to continue working with her physician despite her husband's declination for testing:

“So right now, I'm trying, I'm trying to work with my doctor to see what more I can do. Like, what the next step is just, you know, just to see what more I can do.”
Seeking fertility treatment (subtheme)

Participants now had a choice to make, to continue trying naturally or accept fertility treatment. The subtheme seeking fertility treatment emerged from women’s description of what or who influenced their decision to seek fertility treatment. The majority of participants (10 of 12) accepted some form of fertility treatment. The decision to accept treatment was easy for many of the women (7 of 12). However, what treatment modality was acceptable left some women (5 of 12 participants) with difficult choices to make. There were two main factors that played a role in accepting or declining treatment modalities: intrapersonal and interpersonal factors.

**Intrapersonal factors.** Three intrapersonal factors, personal desire, emotional/physical ability, and religious conviction were described by of the participants as factors that impacted the decision to accept fertility treatment. Ten of twelve participants accepted fertility treatment. Of those ten participants five accepted and five declined the use of IVF (in vitro fertilization). The reason for acceptance of infertility treatment in general that was given by the participants was that they did not feel it was going against their faith.

**Personal desire.** A few participants (3 of 12) discussed their innate desire and commitment to be a mother, thus they stated they would do whatever it took to achieve a pregnancy. October discussed her commitment to continue trying to become a mother:

> ... You know, that's all I ever wanted was to be a mom...I know that this is my goal at the end of the day, like, I'm going to try everything I can to do that. And there's I just I don't know what...I just feel like I have to keep trying and trusting in God and no matter what I just have to keep pushing forward.

May also said she would continue with pursuing medicated cycles:

> Honestly, I love kids like I love them...and I work specifically with children. I just have everyone knows me as the girl who literally loves kids...I want to carry a baby inside of me, I want to bring that baby into this world...I want to carry the baby, I want to be its mother, I want to be able to breastfeed the baby. And like to carry them in me for nine months and just like feel that attachment to them... right now, just trying. We're going to keep trying everything until something magically happens like a miracle.

**Emotional/physical ability.** The thought and process of fertility treatment was described by some as emotionally and physically draining. A few of the participants (3 of 12) discussed that
just the mere thought of going through fertility treatments was exhausting. Iris had not initiated reproductive care yet. She discussed that if after trying naturally she was not successful in achieving a pregnancy she would go talk to her OB. Iris stated “we’re open to different things” but is hesitant about fertility treatment because of the financial and emotional burden:

…I just don't know. Like that's the first thing that pops into your mind is like IVF. And like I don't know if I'm like ready for that either financially or the emotional toll of it, too, plus it's a lot of dedication. I don't know if we are there.

Lavender tried medicated cycles in her first marriage. She recalled how she felt with the medications before and now does not want to do IVF: “I just don't want to put hormones in my body again…it's emotionally draining.” Jasmine also discussed the concern she had prior to accepting IVF: “…it was hard for me to say ok let’s do IVF…like it's not only financially but emotionally and physically hard…but basically knowing that the last resort is IVF, which is a big one, we accepted it”. April discussed needing to take a break from treatment before starting again due to the emotional and physical burden of infertility treatment:

I have tried clomid for 4 months and we did like two IUI cycles with injections and I did not like how it made me feel...we are on a break right now...mentally I don’t know how much I can take. It's hard I struggle every day with possibly not having another baby...but...do I want to keep pumping hormones? I just don’t like how I feel. It has taken everything out of me...waiting until I feel mentally and physical ready.

October also recalled the difficulty of accepting IVF:

I think the hardest part for me was, you know, (was) not doing the medicated cycles or IUIs (intrauterine insemination), I think the hardest thing for me was knowing that I have to do IVF because you think that, ok, just you know, you'll need a little bit of help here and there and these medications should do the trick and you have everybody around you, your family telling you, oh, it's going to be fine...just trust in God. And like, I never thought that I was going to need IVF. So, after the multiple failed IUIs when it hit me that you know you need, we need to do IVF...like this is the only thing that's going to really help in this situation right now. It was devastating for me. I felt like my world was crashing down. I felt like, you know, all the tests had come back negative and...I had no answer...why do I need to do IVF? I'm young, you know, all my tests, my husband's test, everything is negative. So, look, why is this happening? Why is it not working like I'm a woman? I'm supposed to be able to do this.

Religious conviction. Most of the participants (9 of 12) justified accepting assisted reproductive technology (ART) including IVF based on their religious beliefs. They discussed not
needing to investigate Islamic teaching or rulings, as their religious beliefs and understanding was that infertility treatment included the use of IVF was not prohibited in Islam. A few of the women (3 of 12) discussed they would seek counsel with a family member or religious figure if they had to make a decision about third party donation or surrogacy, otherwise they did not feel like the use of IVF was religiously unacceptable. Daisy discussed her decision to accept infertility treatment:

when it came to treatment…it was easy to say, but my Lord has made me this way. I would tamper with what my Lord would have me be as a body or whatnot to go seek intervention or whatnot…that is completely nonsense because we are supposed to use medicine to help ourselves.

Similarly, Iris discussed:

I honestly believe that everything from God that comes or things we learn, like God provided us with tools to care for ourselves. For example, like the vaccine God made it possible through Him, and if there's a way to help you help yourself, this is how you help yourself. He made it available to you for a reason. Things don't just happen. And like even if I was to do IVF or any other treatment if it wasn't for His will, it wouldn't happen it's just help along the way.

Lily also discussed acceptance of treatment:

…I'm not 100 percent sure about this, but I've heard that surrogacy was not allowed. I don't know, but I think it's the only thing that I won't do. I think the most I will do is IVF. Because I know, like I know that's not something that's an issue with Islam, but other than that, I think I will seek a religious counsel for anything else other than IVF and see if it's right or wrong.

The use of third-party donation was discussed with two participants by their infertility specialist. May was unsure if she would be opened to use donor eggs: “I have talked to my mom about it and she talked to the sheikh and if I feel like it’s right for me you know, I may decide to do it, I don't know.” Donor embryos were also a topic October’s infertility specialist discussed, leaving her with the question of religious acceptability:

I feel like IVF is acceptable, I mean, it's my eggs and my husband's sperm at the end of the day. So, I didn't really look into it. And I know other family like people who are Muslim who...who've done IVF...after the second cycle...when donor embryos started kind of being thrown out there that I would need that. You know, it's in the back of my mind, but I have not done any research or anything like that just because it's like mentally, I'm not even close to that….using donor embryos for me. I don't know really what the details are for it, and I'm not even sure if it is like, ok or not. I really haven't looked into it, but. Just by
knowing that and knowing that this child, like if we ever go down that route, you know...what, if my religion says that this is not ok for me to do? What am I going to do then...am I just like, s*** out of luck and not being able to have any embryos, you know, or not ever being able to have a family...plus, that child is not really mine. I don't want to say that it's not really mine. But yeah. So, I think religion definitely affects that aspect of this whole reproductive process.

A few of the participants (3 of 12) did not accept IVF but were open to less invasive fertility treatment. June discussed her family and spouse do not find it impermissible religiously to accept IVF, but her personal beliefs have shadowed her decision to accept IVF:

Honestly, I am scared ...IUI I feel like it's more normal than the IVF. IVF I feel like I ever did it, I don't know. I feel like I'd be going behind Gods back, as weird as that sounds... I feel like...I'm forcing something. I have one of my husband's cousins. She did IVF and she's with her son. She's had, I want to say, over 30 different operations. And that set me back because I was like...no, I don't think I want to try it honestly. Like medical treatment is acceptable as God gave us the knowledge to help, but I also wonder are we going against God's decree. So that's another reason why I don't think I would ever do IVF. Maybe not written for me. God forbid. Something can happen.

The other two participants asked or searched online to determine acceptability of IVF and are still deciding if they will accept IVF as an option: Poppy discussed:

I still haven't decided, I felt like medication is ok as it regulates your hormone. God gave man the knowledge to use medicine...I know the doctor thinks the best option is IVF because my husband's sperm but right now I am undecided...my husband asked the local sheikh and he said he did not agree with IVF and we asked another sheikh at a different masjid (mosque) I used to go to and he said it was ok if it's our egg and sperm...so yea not sure about it...I feel like how can I go against God, like somehow I am going against his decree...and the other thing that terrifies me...what do I do if they put the wrong egg or sperm? What does that mean for that child...just the whole thing scares me, and I just don't want to face God with making such a huge mistake.

Rose also discussed her concerns with IVF:

I have tried medication and IUI with no luck. I have contemplated IVF; I mean I definitely have but I worry about it. I have asked a few people about it and looked online on a few websites for some guidance and answers, and it is very mixed. Some scholars say yes and others no...is it going against God's will...but how can it if in the end if He wants something to be it will...so right now I will keep trying the medication and IUIs and keep praying. I don't know what else to say.

Interpersonal factors. Interpersonal factors such as family, friends, socioeconomic status, and community played a smaller role in decision to accept fertility treatment. The desire to seek care and accept fertility treatment by most of the women was already established prior to
talking to their friends and family. The majority of the participants who were open with their fertility struggles discussed that their family, in-laws, and friends mainly advised them to seek care or complete infertility treatment, but their advice did not impact their decision. Two participants discussed the pressure they received to pursue fertility treatment from their in-laws. Lily recently decided to start trying again, she was nervous about having another child because of her history of postpartum depression. However, the pressure from her in-laws to have another child led her to start thinking about seeking care with her OB. She eventually decided to seek assistance because of the fear that she could never have another child. Violet also felt pressured by her in-laws to initiate reproductive care: “…with my father-in-law being sick, there's a lot of pressure for me to get pregnant so he can see his oldest son's child before he passes away…My mother-in-law referred me to…infertility specialist.” She ended up having a miscarriage after her first medicated cycle at the age of 17 and decided it was too emotionally and physically draining to proceed with another cycle and eventually waited five years before going back to the infertility specialist: “I stopped infertility treatment. I said, Listen, I'm not ready…all I said. I'm not ready.”

Most of the women discussed their spouse as being supportive and did not pressure them to seek, accept, or decline treatment. The decision to complete fertility treatment was left for her to decide. May stated her husband was fine with trying fertility treatments but was also content without children if they could not have any: “He is optimistic and more hopeful, than I am. He says like no matter how many times we have to try, like, we won't give up…he has said we could try adoption if it doesn’t work…I am not there yet.” Poppy also discussed her husband supporting her decisions: “…when we first found out the recommendation was for IVF…he said it will be ok, we can try that or keep trying naturally…he is like whatever I want and if it doesn’t work out…he is always telling me he is happy with just us.” June found her husband to also support her decisions but was hoping to try fertility treatment:

Like my husbands for it and he says, just you know try it. And there's nothing wrong with getting medical help. I don't know. I just feel like I'm doing something wrong. He is pushing for IUI…right now I have not decided if I want to try that again so just trying naturally.
The community did not play a significant role in the majority of the participants' decision to seek or accept fertility treatment. Most of the discussions participants had about the community was in relation to fertility expectations and lack of support (further discussed in the following themes). Participants struggled to disclose their infertility with members in their community, therefore discussions on fertility treatment were limited. A few of the participants (3 of 12) have heard about women in their community that may have undergone fertility treatment, but they never approached them. Violet discussed she felt some pressure from the community to have children but that did not solely impact her decision to pursue fertility treatment rather she needed to prove to herself and “show them she can get pregnant”.

The financial burden of infertility treatment was discussed by some of the participants (5 of 12). Only one participant stated she would not accept IVF treatment because of the financial cost. Lily stated: “if it came down to IVF, I am going to say no, it’s too expensive.” Iris said she was open to fertility treatment if necessary but has delayed seeking treatment because: “I don't know if I’m like ready for that either financially or the emotional toll of it.” Violet recalled the financial burden of fertility treatment: “…everything was so expensive, the meds, tests, driving back and forth, the procedures and you are doing everything you can…it is emotionally draining.” All other participants that sought fertility treatment did not discuss any concerns or barriers to accept treatment based on the financial aspect of fertility treatment.

The majority of the participants (8 of 12) sought out a provider based on recommendations from others. Two participants disclosed their infertility specialist was Muslim but the reason they selected him was based on his skill level. Only two participants discussed their preference was to find a female and Muslim provider. Both participants searched for a female Muslim provider and were unable to find one. They ended up finding a female provider locally. Rose discussed: “normally it is not a big deal if I have a male doctor but for gynecological exams, I prefer having a female doctor.” Poppy also preferred a female provider:
honestly, I tried to find a Muslimah (Muslim woman) fertility specialist…I am not comfortable with a male OB who will do sensitive exams…and having a Muslim care for me, I wouldn’t have to worry about explaining like I can't remove my hijab or shake your hand…or don’t open the door wide open while I am sitting on the exam table...

**Fertility expectations (Theme 3)**

The desire to be a mother or have children may be emphasized in many of the areas in a woman’s life. Many of the participants discussed the emphasis their communities (Muslim and Middle Eastern) place on having children. They described feeling pressured to have children not only from their own internal desires to be a mother but from cultural expectations. The majority (10 of 12) of the participants discussed culture as being a leading factor in the pressure to conceive. This theme emerged as participants discussed the role their personal, culture, religion, and family play on fertility expectations.

**Personal Expectations (subtheme)**

Many of the participants (7 of 12) described their internal desire to become a mother. For some women being a mother was a lifelong dream, something they thought about at a young age. October stated: “I always grew up knowing that like that’s my number one priority is being a mom like I always used to say that. You know, that's all I ever wanted was to be a mom.” Poppy echoed the desire to be a mother:

My parents both come from big families, and I always loved being around my little cousins and my cousins’ kids. I would always babysit them and at that moment I knew I couldn’t wait to have my own…I just want to have that bond, have someone call me mom.

May 30, also discussed the importance of being a mother: “I always thought like I'd get married I'll start my family, I'd have five kids…I always wanted a big family like my mom and siblings.” She continued to discuss the internal desires a woman has to be a mother:

I feel like in general, every woman…maybe not every woman, but like we all in our heart longed to be mothers, we all want that, we all just feel like this need to…mother a child you know, take care of kids…raise them and just having a little mini us, like, a mini me in our in our life.

The strength of one’s desire may change throughout a person’s life, but it may never disappear. Lavender discussed when she initially tried to get pregnant in her first marriage at the
age of 26, “it was always in my head”, she then described that: “having a baby, having a family was the only way I would ever have normal. The only way I would ever be happy…”. Lavender questioned if her desire was innate or was she being socialized by her community to want to have children: “So now in hindsight, I see how it's socialized.” Over the years she found herself in a new and healthier marriage and that desire and focus has slightly shifted:

I don’t think God expects us to let go of that desire. Like, I think I’m just coming to, like, understanding that there are certain things in this world that you're going to be gifted with like money, knowledge, you know, kids, family.

Violet went from a “yearning and wanting to fill the void” and now that she is divorced, she stated she would be content without another one, not because she wouldn't want another one, but because she is “exhausted” and was “traumatized” by her previous loss and fertility experiences over the last 16 years. She stated:

…Anyone that knew me knew how badly I wanted children. And I struggled with that, I really did. But I kept it to myself…What do I do at this point? How do I silence this yearning, this natural yearning for a mother that I think God sends the mother, but after losing another set of twins…I was traumatized and knowing my marriage was ending…I tried to silence that yearning…now I’m 40 years old, but I think I'm young enough and vibrant enough that maybe I can have one more or whatever…And I always said to myself, if I ever get pregnant again, that man has to be truly deserving…for me to do that all again.

Women (4 of 12) with secondary infertility discussed that the desire to have more children did not stem from an internal need to have more children or a large family. The purpose to have another child, discussed by three of the participants, was so that their only child would not be alone. Iris stated: “Why do I want two or, you know, whatever, because I don't want her to be alone. I don't want her to be worried about me and her dad”. June similarly discussed her desire to have another child: “Yeah, it's very challenging because…just, like, one child and then you just feel like I don't know…you start thinking they are going to be alone”. Lily had mixed emotions:

For me personally, what I really think about it. I mean, I do want another child but sometimes I just I don't know, like, I just I'm not…over the moon about it…I feel bad for my son that he's always by himself. I'm ok with just my one son. I just feel bad for him. That's all it is. I really, really feel bad for him and it instills a lot of guilt in me.
Cultural expectations (subtheme)

Motherhood or having large families is emphasized in the Muslim and Middle Eastern societies. All of the participants discussed the cultural pressure or expectations placed on them to have children. Women discussed that the cultural expectation for them to have children only adds to the emotional burden of infertility. After a failed IVF cycle and miscarriage, Daisy described how she was scared and anxious:

I had to come to terms that I may never be able to have my own kids and what I would do in case it didn't work out. But it was very frightening and especially being an Arab Muslim. On top of it all, we have that extra pressure of oh you know, basically breed, breed, breed. That's all we exist for kind of thing… I would say the majority of culture, the Arab culture, that (were) expected to have children. And if you don't… you become discussion of the city that you live in, like ah this person.

Poppy also discussed the community around her also placed expectations of women to have children:

They want you to have a litter box… everywhere you go, they come up to you. If you are at a wedding, a party, masjid, wherever… you have anything hidden? When are you going to have kids…it’s one thing when it’s a close relative but if it’s just some random woman that knows your mother or aunt or whoever… if it’s not asking when you’re having kids, it’s when (are) you getting married, when (are) you having the next one…I am happy to see a shift with the next generation, most of my younger cousins, who are like 18, 19 are in college and their parents are pushing them to finish school… maybe the culture will get out of this this old school way of thinking.

After feeling pressured to receive infertility treatment from her in-laws initially, Violet described how the community she lived in made her feel:

...the pressure to have children was from outside the family… when I was struggling to get pregnant, I was embarrassed. I really was. I was embarrassed for my in-laws. I was embarrassed from the community, especially, you know, because I was so young and my in-laws constantly had people in and out of their house because my in-laws are very, very well known in the community… these prominent individuals… asking me, you know, in Arabic, are you hiding something… meaning are you pregnant… and when your asked that over and over and over a span of five years, it begins to really, really affect you emotionally and mentally… and then the pressure was real. It really was.

Lavender also recalled a very difficult time in her life that she has been dealing with for over 10 years. After getting pregnant and miscarrying she discussed:

(becoming emotional/tearful) it took me years to realize that I had to get pregnant for him not to hold it against me, I do believe that God got me pregnant truly. That God had me
get pregnant because he knew, that they were going to hold that against me, because I know this community, we live in…I'm ashamed of it as well, because f*** this community. If somebody was going to look at me and see me as less then because I can't have babies…it's not like somebody is in your face saying that. But you know that's true…having a child is deeply ingrained and it's the cultural expectation for a woman.

Women with secondary infertility (4 of 12) also were pressured from their community to have more children. While all four participants had only one child, all four discussed the pressure they have received to have another child. Lily had been questioned many times on why she doesn't have more children:

the people around us, they make it seem like you have to have kids, like, why aren't you having kids at a certain, you know? Why don't you have your kids right after each other? Why don't you, you know, why don't you want more kids? And I just I get this constant reminder that I'm not able to have kids by the people around me.

June and April also received questions by people from their community asking: “what’s wrong? Why don’t you have another one? What are you waiting on?”.

Religious expectations (subtheme)

Religion for the majority of the women (9 of 12) was used as a form of self-help and as a coping mechanism. They described reading verses from the Qur'an that provided evidence that infertility was not something abnormal or going against their faith rather fertility and the ability to conceive comes from God's decree. The majority of the women discussed that while there are some verses in the Qur'an that discuss children and parenthood, they felt religious teachings reduced the burden their communities placed on parenthood. A few of the participants (4 of 12) discussed religion helped reduce the stigma of infertility that society places on a woman. October discussed the pressure from community as the contributing factor of the stigma of infertility: “I think our religion…Islam helps decrease the stigma of infertility that our community pushes us to feel…our culture…makes the stigma of infertility worse.” Lavender discussed:

religion really just served to…it’s biggest purpose was to help me from the stigma of it all. But from a collective social standpoint, you need to understand why your life was chosen in this way, like why God selected you not to have this. And it forced me to see the idea that children are perceived in religion as a worldly desire. I forget her name…Rachel…it took her years, years, and years until her 50s. That's how I see religion like this is supposed to happen to some of us.
Lily discussed how the culture places pressure on women to have children:

I feel like it's just a stigma within mainly in our culture, that you have to have so many kids and at a certain time, like you know, have them right after each other, stuff like that. But I mean, I think that's the biggest topic when it comes to Islam and infertility. Is that... others have this idea that you have to... have kids and you have to have so many of them... but I think it's mostly cultural... God knows everybody's intentions, everybody's struggles... And it's not like I read the Qur'an and I say oh my God, I'm going against my religion because I don't have any more kids... I don't feel that way at all.

Most of the participants (7 of 12) drew stories from the Qur'an of prophets with previous fertility struggles to better understand their own fertility journey. Iris discussed specific stories provided evidence for her to be more patient:

didn't one of the Prophets, Prophet Ibrahim, didn't he long for a child for so long. And like there's so many examples of infertility in the Quran. And so it just shows you that even... thousand years ago they were dealing with this... just shows you patience and God loves you and, you know... He loves all children... but it's not all about the kid. It's almost like he's testing you in your faith, in your patience.

Daisy also drew a lesson from the stories of the prophets:

Prophet Zacharia, you know, is one of the prophets that kind of hits home when it comes to infertility. He said he was worried about, you know, the continuation of the message, of Allah (God) he wanted to be a dad... for the sake of religion... know that the religion has so much leeway, Islam itself, couldn't care less if you couldn't have a kid because you're trying to get it... How do I? How do you get punished for trying it's ridiculous... so I began to see this as a test of my patience.

Rose marveled in the lessons people in the community drew from religious teachings:

you hear people talk about sayings in the hadiths (religious sayings from the Prophet), you know heavens under the feet of the mother or when you pass away if you have righteous children they will intercede for you to go to heaven... so how about if I can't be a mother... I know God gives us His blessings and miracles at the right time... just hard not knowing... I am trying to be patient.

A few of the participants (2 of 12) discussed how religion influences culture. They discuss how religion and cultural beliefs get blended and how some may misinterpret specific religious teachings. Violet discussed how religion and culture are blurred together:

You know, I personally believe that religion does influence culture... religion doesn't say that the woman has to stay home and reproduce all day. That's more so culturally. Some people get those two confused. And you know, with my studies, obviously we're able to differentiate between the both of them, but within the community and lack of education... people do mix the two and say religiously, you know, this is haram
(prohibited), or they give the credit more so towards the man and say, this is your right (having a child). And it's his right to have a second wife to be able to give him children. This is a personal choice, I think. I don't think the religion says that or forces the man or gives him the go ahead. This is given for emergency cases, you know.

Lily also discussed:

Never once did I ever think to myself that, I'm not fulfilling a part of my religion...throughout my whole journey I felt the pressure is more of a cultural thing because it's always, you know, people telling you, Oh, it's better to have your kids back to back. It's better, you know, have a whole bunch of kids now and it's I don't know, you don't want to grow old by yourself...they never bring up religion like you are doing something against it or God. But they do...I'll hear things from others you know, like some women will say if you have like three girls, that you're automatically go to heaven or like girls are the gateway to heaven and I think that's where that's where they try to add religion...but it's not written in the Qur'an that you have to have kids but they try to tell you oh the Qur'an talks about this or that but it's the culture that is pushing having so many kids.

**Family/Friends expectations (subtheme)**

Discussion on fertility expectations from family and friends was mainly as advice such as to be patient or to seek fertility care. The majority of the participants (9 of 12) did not describe feeling pressure from their family and friends to have children. Iris recalled: “my cousins, they were just telling me it's going to happen when it's supposed to happen, and they don't want to push it more than that...that's all they would say. Don't worry. Don't think about it...like just like the reassuring stuff.” Similarly, October stated: “you have everybody around you, your family telling you, Oh, it's going to be fine, you know, just trust in God...they really don't talk about it more than that.” Lavender's friends encouraged her to see a specialist: “My friends, people my age, they just encourage me to go see a doctor. They just...tell me, it's going to happen.” Violet discussed her family never placed pressure on her to conceived however, in the beginning of her marriage her mother-in-law placed pressure on her to conceive:

there's a lot of pressure for me to get pregnant so he can see his oldest son's child before he passes away [father-in-law] ...and after the miscarriage and I said I am taking a break...I recall my mother-in-law telling me...I don't know...can you translate it if I say in Arabic, (next sentence translated in to English) if we knew you had this problem we would have never took you (asked for you to marry my son). And those words I will never forget.

She also discussed her upbringing as placing an expectation of being a mother:
we're going to involve culture in this, you know, growing up, I saw my mom and my aunts and all of the females of the family they were like the backbone of the family, and I found that children and family is the core of a household. And so obviously, you're influenced by that and you're told indirectly. For me it was indirectly…but some females, they're directly told that when you grow up, this is what you're going to be doing. But for me, indirectly, I gather(ed) that this was going to be my duties, as well as when I got married at an early age. Although I was told when I was still like, I was like a little girl in my family's home that I was not going to get married early and I was going to be given the opportunity to go to college. But when I saw that that plan flew out the window and all of a sudden that I am married at the age of 16, I kind of put two and two together, and I said, it seems like I'm on the same track as my mom to get married early and have children.

Lily similarly experienced the expectations to have more children from her in-laws:

it's really just my husband's family and I feel like if they knew that, like if I wasn't really able to have any more kids…I don't know…I feel like I would be…devalued in their eyes in a way…And I remember when my husband first told them that he was going to go get his sperm checked. They just started really getting into my business more, and then that's when they really just kept asking me practically on a daily basis…when I'm going to have another child and what I'm doing to make it happen…

June had an unexpected person in her life who has asked her about having another child:

it's killing me that he keeps asking [talking about her son]. So that's what hurts the most. He's always questioning why, like why does this person have brothers and why does this person have sisters? Why don't I? And sometimes I just brush it off because I don't know what to say.

**Spousal expectations (subtheme)**

Most of the participants discussed their partner as being supportive and did not discuss receiving pressure or an expectation of having children. Seven of the women stated their husbands were fine with whatever the outcomes were. Daisy stated: “My husband feels like we don't need kids. I am like well, I'd like kids like…but my husband is super flexible. He's like, Daisy, we could always adopt one.” Similarly, Lavender discussed her spouses’ expectations:

he doesn't care if we ever have kids, truly does not care, he would have them, but didn't necessarily want it, never thought he would even marry...He was ok with the idea of fostering, is ok with the idea of just retiring and traveling, is just like ok with everything.

However, two participants discussed their spouses wanted another child. June stated her husband was “pushing” for another child and recommended they try IUI. Lily discussed her husband was: “always commenting that, oh, I wish there was a baby in the house…our son is getting old…just these little comments”.
Rationalizing Fertility Status (Theme 3)

The theme rationalizing fertility status emerged from the story's women discussed as they were trying to make sense of their infertility. The majority of the participants (9 of 12) began to rationalize or justify their fertility struggles. Some of the women rationalized their infertility as God’s way of giving them a new purpose or sending them on a path they never thought of before their infertility, such as being an advocate for other infertile women in the community or to help a child through fostering. October discussed she would be open to talk to other women from the community about her infertility journey and wondered if that was her purpose in this life:

I'm trying to understand really why God is putting me through this. You know, all of this has to be for some type of reason, and I'm starting to get to the conclusion that like, you know, maybe it's for me to help other people because I feel like in this community, especially in the Dearborn community, it's so lacking like people do not want to talk about it at all.

Lavender has talked to her family about maybe adopting or fostering:

I have told my family...I've expressed my interest in seeking motherhood a different way. And I don't think my mom understands that. So, I've never really had the conversation fully with her. But I have like considered fostering or adopting... and my mom...I just haven’t had that conversation with them. But my siblings are very supportive of that. They think that that's just like an amazing thing. You know, and it may be just they...they believe me when I say I think I could be just as fulfilled. Like, I think if that were to occur, that is like...God...my reason, especially coming from the background I come from, like I understand. I understand when somebody tells me a foster kid that's terrified just wants privacy, you know, so I could see that. If I have one, I'm going to be a great mom and if I don't have a baby, I'm going to go out and save a kid. I'm going to go help a kid that's struggling whose parents can't get it together....motherhood would be great. I also have a sister who's getting a divorce and she has two daughters. Like, that's purpose to me. I'm not going to let my nieces...they have a father that isn't as present, so I'm like a second mom to them...

Other participants wondered if they did something “wrong” in the past and were being punished or tested and had begun to ask “why me?”. Poppy wondered if her infertility was a way in which God is punishing or forgiving her for mistakes she has done in the past:

...I have made of the bad choices and done things that I regret and are considered sinful in Islam, some days I wonder if God is punishing me in this world so that he grants me Heaven in the afterlife...or am I just being punished for my mistakes...I know God is the most merciful and puts you through trial so then think is God testing me to see will I return to him and pray to him...
Lavender similarly wondered if she was being punished: “I was so broken that I literally thought that God was punishing me and I would just pray, just literally beg him…to have a baby…or take the pain away”. June also questioned if she did something wrong: “I always question myself, like, did I do something wrong…is there something wrong with my life or that I ever hurt somebody unintentionally. Is this like, is it a test?”. October recalled:

like I'm being punished for not praying before or, you know, for not being a good Muslim or, you know that I wasn't deserving of being a mom. Other people are more deserving than me. I just like, there's a lot of things that you think about, but. I think the longer I'm in this process, the more I realize that it's just a test that I'm going through and there's a reason for it.

May questioned God on her infertility status:

I do tend to like…I find myself, like, questioning, like, why did this happen to me, like, if I'm such a good person and like, I'm doing all the right things, I don't smoke, I don't drink. I don't, I never did anything, like, bad in my life prior, like…You just say…why me? Sometimes I do say that, like, why me? Why is this my diagnosis, like, why did you choose me, sis. Why me, like I ask that every single day, even when I pray, I know it's bad I just ask God, like, why was I chosen? Like, is there a reason? Why? Why was I picked why was, I picked?

Iris began to question her parenting:

And you're, like, oh my God, maybe it's me. Maybe God doesn't want me to have another kid. Maybe I’m not a good mom, maybe I am not doing a good job. He's like, I'm not going to give you another kid so you can mess up all these things...you think about it...I really did. I almost started to believe that last thing, like maybe because I asked my mom for help and I put her in daycare because, you know, I work nights so I can sleep during the day while she's there...maybe be asab alaha (get angry with her)...I don't like the tantrums. I don't know who does...And I just felt like maybe God was like, you don't have kilak (ability/capability) for two. So that's where I was.

A few of the women (4 of 12) rationalized their infertility struggles as a way to improve their religious or spiritual connection with God or a form of protection. Rose described working on her connection with God:

I always prayed, I wear the hijab, I fast. But I feel like I started to work harder on praying on time, praying at night…talking to Him…learning more about my religion, how to be a better Muslim…I have times when I am down but subhanallah (God is perfect) I will go on Instagram and see a clip on sabr (patience) or a quote that puts things in perspective.

Lily wondered if her infertility was a form of protection:
...it's almost like, you know, God knows more than me...And I do say that a lot that, like, ok, I didn't get pregnant this time, but God knows better...what if...either me or my husband are going to get in a car accident, I have this newborn...God forbid we both die and the newborn is left without parents...I always tell myself God knows more than I do know.

**Emotional toll (Theme 4)**

The emotional toll infertility placed on a woman may range from feelings of shock and disbelief to anger and sadness. The majority of the participants (10 of 12) described their infertility journey as emotionally and physically exhausting. The theme emotional toll emerged from the stories women told when discovering they were having difficulties conceiving, searching for answers, and living with infertility. Some women (5 of 12) also described traumatic life experiences that compounded their infertility experiences.

**Discovering fertility issues (subtheme)**

The majority of women (11 of 12) described what it was like to discover they were having difficulties becoming pregnant. A few participants (3 of 12) discussed they had concerns something may be wrong prior to realizing they were going to struggle to conceive. Suffering from painful and irregular periods since she was 12 years old had Poppy question if she had “issues from the very beginning”. Poppy discussed talking to her mother and aunt about it and was told “it’s normal”. Lavender described feeling like she knew she would struggle with infertility. She remembered a moment as a teenager, when she met a neighbor’s aunt that was traveling from Egypt who “turned out...was infertile” and that made her wonder, “could that be me one day?”. Iris recalled as she began to try for another child: “I would have breakthrough bleeding in between periods, which made me a little concerned because I was like, ok, this never happens to me. There’s something going on with me”.

The disappointment and disbelief of having difficulties conceiving was echoed by many of the women (10 of 12). Trying to start a family and being unable to left Daisy feeling frustrated: “Getting prepared to try to have a family, and then it's it was just disappointment after disappointment, especially when you think it shouldn't take that long, right...frustrating.” Iris,
similarly, discussed her frustrations with the process: “It's just a disappointment. Every single month, the pee stick and nothing's there. It's just so, so frustrating.” Iris continued to describe her experience as: “So this was like a whole new feeling for me. And I wasn't used to feeling this way, like now I felt like categorized in a group of people that have a hard time getting pregnant”.

May couldn’t believe this was happening to her:

I never, ever thought that I'd be the person or a person with infertility, I always thought, like, I'd get …have, like, five kids and I'd never have to struggle with this…I thought it's not going to be that difficult…I thought once we saw an infertility specialist we're just going to like, you know, get an answer, we're going to get over this hurdle and things are just going to…we're going to get pregnant…having to deal with that and just having to, like, pretend to be myself and pretend to be happy, pretend to be excited about getting up in the morning, going to work and then in the back of my mind thinking like. I'm really not truly like myself.

October still trying to understand “why is this happening...why is it not working”, discussed her feelings of disappointment:

…not knowing if the next cycle is going to work…it’s hard, especially when you don’t know what the cause is…I think being this far in this journey. And, like, everything I've been going through. Sorry. (emotional/tearful) I am ok. Just, like, how much it's taken from me (emotional/tearful).

Searching for answers (subtheme)

The amount of testing, appointments, and unexplained answers also left some women (8 of 12) frustrated, disappointed, and devastated. Only four of the participants had an answer to the cause of their infertility, while the majority of the women had unexplained infertility. Many of the women went to their provider hopeful they would receive an answer to why they were having difficulties. Instead, they left their appointments with more questions than answers. Rose discussed her frustrations with trying to find an answer:

You go through all those tests and to have no answer. You are just like dumbfounded. I had ultrasounds, blood work and nothing, nothing, the doctor is, like, everything is normal…Like, how can it be normal if I have been trying for so long and nothing. At one point, like, I know I want to know what's wrong, but you just, you feel like a lab rat…now they want to use a camera to see what's going on inside my uterus…it’s just tiring.

Daisy echoed Roses frustration:
They have no idea, which makes it even more challenging, so they have no idea why we are not able to conceive. Yeah, we both were healthy in all the ways. I mean, the only thing they could think of is some sort of physical obstruction that would not allow the egg to travel successfully into the uterus. But they have no idea. They’re not sure…it makes it even more frustrating, right. Like, Oh, we did these tests that checks out and that checks out and we could try different things, but they don’t know.

June continued to search for answers and discussed her experiences:

I went back and forth to infertility specialists, and it was always inconclusive. They never directly told me that anything was wrong with me or my husband… it’s hard. It’s so hard, you kill yourself thinking about it. Like, what are you doing something wrong? Are you eating something wrong or are you smelling something wrong? I’ve read multiple articles. I’ve seen multiple people. I’ve seen holistic doctors…they just don’t know…there’s nothing wrong. I mean, at one point, like, I thought I had PCOS (polycystic ovarian syndrome) and I got tested and they said no. So, I mean, he’s done his sperm count. Everything came back normal. I’ve done all my testing. Everything came back normal. So, at this point, what do you do?

**Difficult experiences.** The physician’s lack of empathy, poor communication, rushed appointments and limited explanations contributed to some women (4 to 12) having a very difficult experience. Jasmine was disappointed with the first infertility specialist she spoke to, she “felt like there was something that the doctor missed…they barely have time to listen to you…they just run tests and like well sorry we don’t know what’s wrong…here’s your options”. She also had labs that were “lost” and had to have them redrawn, she eventually switched to another specialist and is currently having a better experience. October also was not happy with her fertility specialist and questioned their diagnosis:

We didn't get an answer, so we were just basically told, like, after doing the IVF cycles you have poor egg quality, which I feel, like, they kind of just throw at everybody when they do not have an answer or know what's really going on.

Violet described her experience of having to research the diagnosis her gynecologist gave her:

I didn't know that I had issues with my fertility. I just thought I was a late bloomer in regard to my menstrual cycle. But then I was referred to another gynecologist in Dearborn, and he diagnosed me with polycystic ovaries. Told me that's something that you'll always have. I was never told that I'm going to have a hard time getting pregnant. He never told me what it meant. I was 17 when he told me this and I had no idea what that diagnosis meant for me. I kind of figured that out on my own after reading about it on my own.

Violet continued to describe a bad experience with a local reproductive endocrinologist:
My mother-in-law referred me to this elite infertility specialist that was in Dearborn… and he started pumping me with medication that ripened the follicles...And there was one day where he just kept upping the medication, and I recall going to the pharmacist and I kept ordering more and more because that's what he was ordering. And my cousin was the pharmacist and he was like, Violet, this is a lot of medication. And I said, well, this is what was prescribed. So, I continued to take the medication again...I was 17, I was young, I didn't question it...And I woke up one day with the most excruciating pain of my life...my ex-husband had to rush me to the doctor's office where they told me that your ovaries are hyperstimulating...why did he give me so much...until this day I still feel pain on the left side.

Receiving difficult recommendations

A few women (3 of 12) discussed how devastated and shattered they felt after receiving fertility recommendations. Poppy recalls the exact moment that she felt her world came crashing down:

I was sitting there alone in the office, I just remember, like, the room was cold and I was waiting for, like, an hour for her to return with some answers...I just kept praying please, please let it be something simple, like, a medication I can take. I am even ok with IUI, please don't say IVF...she finally comes in...sitting at her computer typing...she goes your best chance is IVF...we can try IUI but it probably will not work...I was in shock...she handed me some paper work and I just remember crying my drive home.

May discussed the moment she received her diagnosis:

...my results came out, my husband's results came out...we ended up going actually to a IVF specialists because, we did, like, an analysis for my husband and that showed something...abnormal things...and then it showed that I also have something called...it's low AMH (anti-mullerian hormone)... it's just that was a shock for me...it was really hard just coping with it and dealing with it...they told us...we will try, we will see...with IVF it's a chance...with my low AMH. The doctor also...brought up donor egg and I was just, like, no, like, that's when my body just shut down and I was just, like, I don't even want to think about that right now...I just entered the IVF world, you know, I haven't even tried yet...I was, like, what are our chances? He's like...with your eggs or with a donor egg. And then when he said that, I just was, like, with mine, obviously, like, I'm not talking about I didn't even mention that. And, you know, just the fact that he brought it up was, like, I don't know, like, so upsetting and sad. And I was just...broke my heart, but I just was, like with, mine, obviously. But he said, like, the chances are low. But we'll try...

October was also disappointed by the infertility specialists’ recommendations:

So, after my second, IVF cycle failed, you know, my doctor who was Muslim, discussed ...using donor embryos for me. You know, I don't know really what the details are for it, and I'm not even sure if it is, like, ok or not. I really haven't looked into it, but just by knowing that and knowing that this child, like, if we ever go down that route, you know what, if my religion says that this is not ok for me to do? What am I going to do then? You know, am I just like, sh** out of luck and not being able to have any embryos, you know, or not ever
being able to have a family. And plus, that child is not really mine. I don't want to say that it's not really mine. But yeah…

What if… (subtheme)

After realizing they were having difficulties conceiving some women began to wonder if they would have done things differently, would the outcome be different. If they didn’t focus on their career or got married when they were younger or tried sooner would that have made a difference. The possibility of delaying a pregnancy causing her infertility has been in the back of April's mind: "It's always in the back of my mind, should I have waited three years before trying again...you know, maybe I should have tried a few months after she was born...I don't know, none of this makes sense.” June similarly wondered if her taking birth control for a few years after the birth of her son would have changed the outcome. Rose began to question the timing of her marriage:

Sometimes I think...I should have gotten married at like 18 instead of 26...or started immediately after we got married...who knows...I keep thinking if I get married first like my friends and then went to school maybe I would have a child by now...I am happy that I have my career but did that cost me being a mother...I really don't know...I can't change God's plan so I don't know if anything would have changed.

May recalled:

...if I knew that I was going to suffer with infertility, I wouldn't have waited one day, you know, like, that whole year. I always reflect back...we waited a whole year, you know, like, I wasted a whole year of not trying to have a kid. What if that could have been the year that happened for us...And I go back in my mind and I'm just...I told my husband, remember how we were, like, using protection. We we're trying not to get pregnant. So, now we're literally dying to have a baby. I'm just, like, if we could all look to the future, I knew this was happening, we would have made decisions differently...I always say, like, if I can go back, like, I would have got married at, like, eighteen, you know, maybe my circumstances would be different.

Living with it (subtheme)

Living with infertility was challenging for all of the participants. Participants experiences varied on the impact of living with infertility, but many of the participants discussed the difficulty of failed cycles (natural or medicated) and cancelled or delayed travel plans due to a scheduled fertility cycle. The numerous appointments, constant “pokes” from injections, and side effects from
medications were emotionally and physically draining. October described the emotional toll of all the appointments, side effects from the medications, and how infertility has consumed her life:

...That's literally the only reason I stay in this job is because it allows me to be able to go to those monitoring appointments to be able to take specific time, you know, to see those doctors that I need to see to go get all that blood test and all those appointments. I feel, like, it's, you know, it's robbed me of my career...I could be doing something that I really, really enjoy, you know I went through all that schooling and I worked hard for my degrees and I'm just, like, I feel like I'm stuck right now (emotional)... I personally feel, like...it consumes my life, really at this point. And I hate that...I'm on these hormones all the freaking time...all these shots and you know, all these medications our body goes through so much. I lose my hair like everything is just terrible. And that just adds a lot more stress...it's unfair.

Violet discussed the burden of trying to manage fertility treatment and “outside life”:

...It was an hour drive to go see her, mind you, infertility work almost daily. Come in for an ultrasound, come pick up this form, come pick up the medication driving, driving, driving... take Lovenox, estrogen, progesterone...I'm moody now all the time...that also takes a toll on you. Driving emotionally distraught in traffic, rushing back...cook, clean, whatever, you have, outside of fertility treatment. It's not just infertility you're managing, it's just, like, one part of your life

Living with infertility was also described by women as living their lives in “two-week blocks”.

Some women (5 of 12) told stories of having to delay or cancel travel plans, skip family functions, or working around their work schedule to complete their fertility treatment plan. Women discussed that timing was everything, from timing intercourse to ultrasounds, blood work, and egg retrieval.

Jasmine remembers a time she had made plans to visit her family:

I was planning on visiting my family in another state and I was just about to start a IVF cycle, I did not want to cancel my plans but I didn’t want to delay my appointment...it took forever to get scheduled in the first place...so I called around and found a clinic that was willing to keep my ultrasound and blood work and the specialist ok’d it...like who would have thought it was that complicated.

Rose recalled how important timing intercourse is to achieve a pregnancy, but that task was impacting her marriage:

...it became a chore...like there is no longer any spontaneity. We...would get frustrated if he couldn’t perform under pressure. Like how can I command him to be ready...we would just be upset at each other and he would feel bad...so I was, like, we can’t keep doing this...if we want to be happy...we just can’t. So, now I just don’t even tell him where I am in my cycle and just try to set the mood and if he is too tired or just can’t then I just say ok we can try the next month.
Lavender echoed those sentiments:

I just don't want to put hormones in my body again like it's emotionally draining. I don't want to tell my husband we have to go have sex...it's having an awareness of that two week and two weeks out that you're, like...I don't want to do that, man, I don't want sex to become a chore at 40, sex is tiring. Let's just be real. You know, we're struggling to survive. You know, it's annoying...(laughing) like, I know we're both tired. He's, like, but we are. And I'm, like, no, I know we are. But you're putting it all on me. And it's becoming all about the...all about that. And it can't...I tell him I can't. I'm telling you right now you don't want it to be. It's a mess. So, like, I know sex is hard. We have to work at it. So just be more regular. We try to strategize in the morning, maybe, you know.

Throughout their journey women found that no one ever prepared them for the difficulties they would be facing and the devastating possibility of never being a mother. Daisy described the moment of when she felt like she hit rock bottom after she failed her first IVF cycle: “...there isn't enough to prepare you...it's just I lost it for a moment. I screamed. And I went into a dark, like, I plunged into darkness as to say, and I think this is the first time ever I felt that way.” May also discussed being unprepared:

...no one tells you what to expect. No one tells you how hard it is... we just, we didn't know what to expect. We thought, like, ok, we're going to do this and it's going to work and we're not going to have to worry...it's just so exhausting and so tiring constantly, like, thinking that it's never going to happen or thinking, like, worst case scenario, which when my IVF cycle failed, that was, like, devastating.

Having a medical background prepared October for the infertility process but it didn't prepare her for the possibility of failed cycles and the emotional toll of it:

I think because I'm a nurse, I understand, like, the medical aspect of it. I think if I wasn't in the medical field or my husband wasn't, I think it would be a little bit harder on us to kind of deal with everything...I think when the first year, you know, even two years of doing just, like, medications and IUIs, even when I did my first IVF cycle I was so hopeful, you know, I thought this was it. You know, this is it IVF will work...wasn't prepared for it not to work...but after that and then especially after my second IVF cycle failed...I don't want to say my hope has gone down the drain because, I mean, I believe in God. I have faith, but realistically in my mind and knowing science and knowing the percentages and the odds of everything, it's, it's just like it's gone way downhill, like, at this point I think that (if it) happens, it's going to be a miracle. Even with IVF. I think if I didn't have faith and I don't have my religion, I would say the anxiety, the depression, I think, would literally take over everything.
Traumatic life events (subtheme)

The experience of infertility may be traumatizing. Trauma may be experienced after failed cycles, fertility treatment, or a miscarriage. One participant described the loss of two twin pregnancies, the loss of her brother and learning her husband was being unfaithful. Those experiences led her to cancel her last embryo transfer. Violet recalled:

…throughout that twin pregnancy, my brother had just passed away. My oldest brother passed away and I found out my ex-husband was cheating on me. It was extremely traumatic for our family. I was in a very broken state…I just kind of used the excuse of my marriage not being good for me not to pursue future treatment, but I was also scared. I was traumatized, really traumatized, losing pregnancy after pregnancy.

Specific life events may also compound a woman’s fertility experience. Six of twelve participants had a miscarriage or preterm loss. Two participants had traumatic events that compounded the way in which they experienced their miscarriage. Lavender had many significant events in her life from abuse as a child to a toxic marriage. After her one and only pregnancy and subsequent loss she was never able to grieve. Lavender described not being able to grieve over the last 10 years. Discussing her miscarriage in the interview was the first time she was able to talk about it. She recalled:

So, it was just...you're going to miscarry...I was, like, pretty much prepared for it. And then I think a couple of days later it happened...I just started bleeding. Four days later, my ex-husband walked out. Yeah, it's really weird telling the story because that affects me...it's really interesting because when he left, I used to think, well, I'm never going to have a chance to grieve for the miscarriage...So, this is actually the first time, you get so caught up in that divorce that you don't have the opportunity.

She continued to discuss how her miscarriage and divorce impacted her:

…it was just a very volatile, toxic relationship. It shouldn't have happened. When he left…I was at rock bottom and infertility was just feeding that. It was like perpetuating my failures. It was really bad. It is literally the darkest phase of my life and I was abused…I was also assaulted when I was nine and I don't want to talk about it…I often tell people that my divorce and that experience of losing a child after trying for so long, even though I was just four weeks, the expectation was so strong that six months after that happened, I disclosed my abuse to my therapist that the divorce was so triggering (emotional). That event was so triggering that it led to a response that was very similar to when I was 10.

Iris recalled when she miscarried not being able to grieve because her close family member suddenly passed away. She felt like she had “no time for me to mourn me”. Iris
questioned herself, how could she mourn for her recent miscarriage: “I felt stupid for mourning me because there wasn't even a heartbeat compared to the still living, breathing person…she was 29 years old.” The loss of her cousin was very difficult, and she does not know if the fact that she also had a miscarriage made it harder:

When my cousin passed…it affected me, it still does, but that in that time…it was horrible…I'm not saying I was suicidal. No, no, no, no, but…I wanted to disappear. Does that make sense? I didn’t want anyone to talk to me. I just wanted to be myself under the covers…I was down, but not suicidal. I just wanted to disappear, especially when it’s your younger cousin… the D&C (dilation and curettage) happened right before everything…I was still dealing with the grief of that, everything was fresh. And then there was guilt, what do I deal with first, my issue or the fact that my cousin passed away, there was so much, I didn’t know how to deal with that anymore. I didn’t know if I was trying to grieve for my loss or my cousin. You know, like, when we were at her funeral, which was outside the mosque in the parking lot because of COVID. So, imagine that was just us. I was still bleeding from the D&C. I was like, what do you do?

Shortly after the loss of her cousin her father-in-law passed away and at that moment, she felt she couldn’t ask God for another child: “who am I to ask to have another”. It wasn’t until recently that she felt she had time to grieve their losses and move on to try again.

Dynamic Relationships (Theme 5)

Relationships throughout a person’s life are ever changing. Participants living with infertility have found their relationships changing throughout their infertility journey. Some relationships grew stronger while others remain unchanged or deteriorated. Many of the women described their relationships with their family, friends, community, and religion. For almost all (9 of 12) participants, their journey with infertility strengthened their faith and relationship with God. Majority of the woman (11 of 12) described themselves as “moderate” Muslims, completing at least the “basic” requirements of Islam, such as praying, fasting, and giving to charity. While they may see themselves as “moderate”, religion seemed to play a central role in decisions they made, how they accepted their journey, and assisted in improving their psychological well-being.

Many of the participants described their infertility journey shaping their religious practices and connection to God. Women described the importance of having their faith in such a vulnerable time. They found a sense of solace or understanding of the importance of “patience”. All
participants described that their faith either remained the same or strengthened during their infertility journey. During very tough times, infertility related or not, they would go to God and pray for some ease. Lily stated she used verses from the Qur'an to guide her through tough times:

> there is a quote that I keep saved in my phone, that something along the lines...You cannot change what has already been written...I think about that all the time. That's what really just helps me...with any tough situation that I'm dealing with...also the verse in the Qur'an that says with every hardship comes ease...I live by these statements.

Iris discussed a time after the death of two family members and struggling with infertility were, she became more devoted and started to “really get into my religion”. When she first started to improve her connection with God she said it was at first:

> praying you want to have a baby or you want this or you want that from God...it kind of started out that way, I'm not going to lie to you...It kind of started out that way, but then you learn more, then you become more devoted for its own devotion, not because of that.

Lavender described the difficult moments of her life and how she struggled with her faith. She began to feel that her prayers and the connection she developed were out of desperation verses sincerity. She described growing and now having a stronger understanding and connection to God:

> ...that time around, everything was in desperation, even my prayers to God to have a baby or get pregnant, it was in pure desperation even to take away the pain. It was just begging God, I never had a relationship with God outside of me, begging him just to, like, stop it all...And I prayed a lot that year...when you're at rock bottom, it's almost, like, you have to rebuild everything, including your relationship with God...even my abuse when I was young, like, I can't deny the closeness, like, how I started writing, you know, the closeness of God and shaping everything I went through because I don't know how I survived half the stuff I survived. Religion is the only thing that could put me into pure discipline because I get it...So, that's where I am now. It's, like, I am finding God in other areas, too. I read the Quran daily.

There were a few women who described their faith as being stronger, but they had their days of doubt and anger with God because of their infertility struggles. October discussed having those moments:

> I mean, at times there are times where I've doubted my faith because of everything that's going on with me. And there's times where it made me feel like I was closer to my faith...we've (October and her husband) definitely gotten closer to our religion because of it. We started praying, we never used to pray, so it definitely brought us closer to Allah and making sure that we, you know, are being the best that we can...my prayers, my five
daily prayers, I mean, I struggled with so much anxiety because of this (infertility) that has helped me so much, just knowing that I can sit there and talk to God regardless of what's going on. It helps my anxiety so much.

May shared similar sentiments:

Honestly, like, infertility has brought me so much closer to God...like, I first, I never used to pray...ever since I got my diagnosis...ever since I started...actively trying and, like, it just wasn't working, I started praying, I used to fast and everything before, but it just brought me so much closer to God...I do question you know...why is this my diagnosis, like, why did you choose me, God, like, and I know it's so bad to think that way, it's so bad to think that way...but I still feel...it's brought me closer to my religion, closer to God.

The infertility journey that the women experienced has also shaped their relationship with their partner. Most women (7 of 12) described their relationship with their spouse as becoming stronger. Women typically described their relationship as "stronger" based on the partners encouragement, support, and presence. The infertility journey strengthened June and her husband's relationship:

Honestly, I feel like it made us stronger, just because it's, I don't know, it's hard to explain. Like, I know a lot of people when I read stories that people have a lot of problems and issues and divorce rates are higher when they can't have a baby or you know, they don't know what the cause is...thank God me and my husband, we built a stronger relationship because of it.

Daisy also described her husband as being supportive:

He is super supportive, tells me not to put pressure on myself...we had a strong marriage before infertility...not that anything is perfect...but we have a stronger bond...he always tells me I am ok without kids...I mean I really want them but I am happy that, that pressure is somewhat removed.

While many of the women stated they had a “stronger bond” and felt “closer” with their partner, some discussed that their partners were not always emotionally or physically present. May stated she felt like her marriage has “changed” because of the constant desire to have a child but finds that her husband is supportive. She just wishes he had more time to talk: “I try to talk to my husband...he is in school...most of the time he's not here...it's his last year, so hopefully it will get easier when he's done”. Iris similarly describes her partner as supportive and wished he would open up more: “…my husband, like, he gets it, but I feel, like, he loves me so much and does not want to upset me, that he doesn't talk about it...he is not a sharer...so I keep trying to
talk with him”. Poppy discussed having to go to most of her appointments alone because of her husband’s schedule: “I am thankful I can go to him…this brought us closer I just wish he could ask for an hour off…for the appointments”.

A few participants (4 of 12) discussed strained relationships with their partners. Lily did not believe her relationship changed because of the infertility but she does say he has made some hurtful comments: “he’s always commenting that…I wish there was a baby in the house…our son is getting old…he's trying to put it in my face I can't have kids…like it's my fault”. The change in the relationship was not always related to having fertility issues. Lavender described her first marriage as “toxic and volatile”. She stated: “infertility didn’t help it…added a whole ton of stress to a whole set of problems”. In her second marriage her husband has taught her to love in ways she “never knew were conceivable”. Lavender described her husband as compassionate and willing to listen and talk to her but she has noticed some tension recently in trying to get pregnant: “there's been some tension, but it's been about like hey, like focus…I'm ok if we don't have a kid…not totally ok of us not giving it any attempts.” Violet recalled her husband always putting her down while she was pregnant:

…there was always like this mental and emotional abuse, he always put me down when I was pregnant. You know, why do your feet look so big? Or he would talk to me about other girls…I was in a very, very vulnerable position…I'm doing it alone. I'm going to the doctors alone. I'm going for blood tests…all this, I'm doing it alone. There was no support.

Family and friends’ relationships for the majority of participants (10 of 12) remained consistent. Participants rarely mentioned being socially alienated or excluded from any events. All participants selectively chose to whom they would discuss their infertility. Some women (7 of 12) were comfortable in disclosing some aspect of their fertility journey to their family, specifically their mother or sister. They discussed receiving words of encouragement and support. Jasmine opened up to her mother and sister and has not felt any of her relationships change: “with my close friend we talk about it…I don't talk to anyone outside of my circle, so I haven’t noticed any differences in family and friends’ relationships”. Daisy similarly agrees:
My sister, brother, and mother are my rock...they always have been...especially after my father died years ago...I don't think anything has changed in going out with certain people or family being different towards me...I definitely had family members that I turned to and who told me of the very good religious texts and Qur'anic verses, and that was tremendously helpful.

While the majority of participants family and friend relationships remained the same, October distanced herself from “a lot of my friends who have kids”. Lavender similarly dissolved a few relationships after watching her friends get pregnant:

I was one of the first of my friends to get married...when I got divorced...it is when they started getting pregnant. And it was hard. But I was so broken at the time that I just I left. I disappeared. So that was very, very hard...I just literally, just didn't see anybody. It's sad because those old friendships, like I didn't see their kids grow up, but it's just the path that I was taken on. I would cry every time one of my friends got married...I would cry every time one of them got pregnant. And now I no longer do that every time one of my friends gets pregnant.

Outside of their friends and family participants did not talk to or disclose their fertility struggles with anyone in their community. Some women discussed their community as being closed off, having a lack of understanding on how to address a woman's infertility, and were concerned they would be judged or pitied. May: “…if I open up about it, I just feel like people might just judge me or look at me differently”. October shared similar feelings; “… if I talk to people who don't know the infertility world...tell them that it's there's no reason why it's not happening...they don't understand or believe it...so there will definitely be judgment”. The “older generation” was another reason given by October on why she preferred not to discuss her fertility within the community: “People don't want to admit that more people than we think go through this, especially the older generation. No, no, no. Don't talk about it. The worse it's going to get…”.

Iris was uncomfortable discussing her infertility with anyone from her community because “it’s harder” to talk to the “older generation and grandparents” because of their lack of understanding and “it’s rarely talked about”. She also did not want to be pitied: “I don't want people feeling sorry for me. See, I just don't want to…I just don't like…talking about it”. A few participants (4 of 12) were concerned that disclosing their infertility to those within their communities would lead to them being talked about. May feared: “that people will go back and say, like, oh, do you
know that girl? Do you know that she's struggling to have kids? Do you know that she might never have kids?”. Other participants were also concerned they would be the “gossip” of the town/city. Daisy preferred to remain private as she was concerned, she would be the “gossip of the village”: “It's my private rough journey to go through. Not for you to gossip about. That's the last thing I need from my Muslim community, while you’re hurting”.

**Managing environments (subtheme)**

The majority of participants (10 of 12) discussed avoiding certain people or events. Keeping her social circle small with a few close friends and specific family members was important for Daisy. She discussed that through the years of trying to have a child she didn’t want the “questions or unsolicited advice”: “I didn’t want much socialization because they would ask, when are you going to have a child…I would leave crying”. Many of the women echoed Daisy’s sentiment of socially isolating when possible because of the questions, specifically, the question when are going to have a child. Social events were also triggering for them. Rose preferred to avoid social events, specifically baby showers as it was: “triggering for me…reminded me of how I am failing…failing at being a mother”.

May avoided baby showers and weddings: “going to those used to bring me joy, now I just don't want to be a part of things that make my life more difficult or remind me what I don’t have.” May continued:

I just, like, don't want to visit people who have kids, I don't want to see people who are pregnant…I don't like hearing about pregnancy announcements, which I'm surrounded by all the time because you can't escape it…when my friends are all gathered and they're all pregnant or they have kids, it's just…I just feel so anxious, I just feel like I want to not be there.

October preferred to avoid baby showers or social gatherings but was unable due to concern people would start questioning why she was not in attendance:

…even though I don't want to go to those baby showers or, you know, certain gatherings or anything, I mean, I still have to go because nobody knows that I’m dealing with what I'm dealing…using excuses to not go…it makes more suspicious sometimes.
Participants said they were happy for friends and family who were pregnant or had children, but they also desired the same blessings. October stated: "I feel like I've just become so bitter. Like, whenever I see anybody else announce anything or, you know, I'm genuinely happy for people but at the same time, like, I'm sad for myself".

June shared the same feeling:

It's hard. It's very hard. It's very emotional. My sister thought she was pregnant about a month ago and she just got married and I just broke down and cried...I'm always happy for people, even though it hurts...And when I see somebody pregnant like, oh, I wish that was me and stuff, but honestly I stopped doing that.

Pursuing support (Theme 7)

A support structure during a stressful life event provides some form of healing and improves a person’s ability to cope. All of the participants discussed the importance of having some type of support whether it was through online infertility groups, family, friends, spouse, community, their faith or a therapist. Participants described their faith as providing them with healing and sustenance. For most of the women (8 of 12), reading verses in the Qur'an, praying, and making supplications allowed them to cope with their fertility struggles. Some of the women expressed that without their faith they don’t know where they would be. May felt praying to God allowed her to feel more “balanced” and “helped” her “mentally”. The ability to survive the traumatic events in Lavender's life including infertility was shaped by her relationship with God:

I learned to see God in the most various ways that helped me cope. So, I do see God a lot...the closeness of God and shaping everything I went through because I don't know how I survived half the stuff I survived.

Similarly, October found solace with being able to talk to God:

just knowing that I can sit there and talk to God regardless of what's going on. It helps my anxiety so much...I think if I didn't have faith and I don't have my religion, I would say the anxiety, the depression, I think, would literally take over everything.

Poppy also sought support from God:

...it's so hard, it's hard not knowing if you will ever be a mother or ever get to feel like what it’s like to be pregnant...I just remember He has a better plan, I may not understand it now, maybe this is not the best time...I just try to remember the verses in the Qur'an that remind me it’s His decree and I can’t change it...so when I am at my weakest point...I sit on my
carpet and just pray and read the Qur'an and pray…I keep busy in the day but at night I am left with my thoughts so I just keep praying to God…He is the only one that can bring me back to focus.

Throughout the interviews participants discussed who they talked to when they first discovered difficulties, prior to starting treatment, during treatment, and after failed cycles. Some of the participants (7 of 12) were comfortable disclosing the challenges of their fertility journey only with specific family members or close friends, thus the support received varied. The majority of the women (10 of 12) received support in forms of encouragement and prayer from family and friends. Iris discussed talking to a few people in her family and a close friend about her fertility struggles. She described their support consisting mainly of encouraging words: “It's going to happen. when it's going to happen? Don't worry. Don't think about it... the reassuring stuff”. She also discussed that the support from her mother came in the form of prayer: “my mom tells me day and night, I'm praying for you every day. I made supplication for you. What more can I ask for you know?”. April also described that the support she received from her mother and sister was usually in the form of prayers and supplications to God to give her a child. Lily confided in her best friend: “I only have my one best friend that I do speak to about it. And she's just the most supportive person that I have in my life”. Lily's mother passed away years ago and her siblings are young, so she doesn't really feel like it is appropriate to talk to them about infertility. June received support from her family through words of encouragement and prefers not to talk to anyone about it:

My husband, mom, and sisters have supported me but it's not really talking. It's more like they're praying… So, like, my mom will be, like, I prayed for you today…I prefer to keep to myself…I don’t even like talking to my husband about it…I just pray and talk to God and that's enough for me.

Two participants discussed that they found support through meaningful and in-depth conversations with specific family members and a close friend. Daisy recalled a time where she had a failed IVF cycle:

…I remember calling a close friend of mine and said, I'm in a really dark place…I don't exactly remember what she said but it really helped…being able to talk to her helped, it
pulled me out of that dark place…having someone to really talk to that can help put things in perspective is helpful…between my close friend, my family and the religion, never even thought about using a therapist.

Jasmine similarly shared a story of support:

my one friend is also going through infertility, so I just go to her…we talk about everything…our failed cycles, frustrations…we encourage each other, we try to see the positives…I always tell her I thank God she is in my life.

Participants were appreciative of the support they received from their family and friends but for a few of the women (3 of 12) turning to a therapist helped them with coping through life struggles. Iris found a therapist to help her with the grief of the death of her cousin:

…the person I went to. I wanted her to be Arabic, I didn't want her to be not Arabic because I didn't want to have to explain all the things, we go through…but she moved to Canada. I swear she was the best; she would give me metaphors to use…to help with coping…I really loved her. I was so sad when she left because, like, you get used to someone and finally open up.

May started to see a therapist when she first received her infertility diagnosis:

It just…it helped me, it helped me a lot, honestly, like I'd feel so much relief like and I feel happier after talking to her and after her, just like letting me know that, like, all my feelings, like they are…you're feeling these things for a reason.

Online infertility groups were also used as a support tool by two participants. October joined a IVF support group to interact with other women with similar struggles and to feel less alone. She ended up finding one of her high school friends online:

recently I found an old high school friend…we just accidentally met because we are in the same IVF Facebook groups…I would have never known that they're going through that and they would have never known that I'm going through it because everything is so hush hush, which I really hate.

Online support groups provided May with hope:

…I just go on so I can see, like, what are people like me going through? What are people like me like dealing with? How are they going about things? I see so many of the people in my group that have my diagnosis and they are blessed…miracles do happen. I literally saved those posts, and when I'm having a bad day, I go back and I read them over and over like, look this person had this, they had x, y, z, and look, they have a baby…and it's just like it gives me hope…it really helps to just read people's stories and read what they're going through.
Only one participant felt she did not need any further support outside of the prayers she receives from her family and relationship she has with God. June “I don't like see myself talking to somebody, I don't think it's necessary…I'm content with whatever God wants…always had that mentality”.

**Desired support (subtheme)**

Some of the women (5 of 12) discussed that while family and friends were physically and emotionally present, the extent to which they assisted women in coping was through encouragement such as “everything will be ok”, “be patient it will happen”, “I will keep praying for you”. Some of the women continued to feel alone as they wanted to “talk to someone like me” because “they don't understand”. May frequently discussed the importance of “talking to people like me” and would find it difficult to talk to her family:

…even talking to my mom or like friends who've never suffered with infertility, it's just, like, they don't understand how difficult it is…even if I tell people, it's not like they're going to, like, sympathize or understand the true struggle…it's just really difficult, like no matter what, they'll try to, like, understand but they don't.

Similarly, October 30, found it challenging to always have to explain to friends and family her journey:

…for example, the medications, like, my friends don't get it. They'll be, like, why are you on so many things? Do you need to be on this? Why can't you just try naturally? I'm like, you guys literally don't understand, like, if I could try and it actually work, trust me, that's what I would be doing…you just get so sick of explaining and trying to teach people what you are going through. It gets to a point where you just rather shut up and not say anything.

A few of the participants (3 of 12) additionally preferred to find an online group or therapist that were Muslim or Middle Eastern. Poppy already found it difficult to open up to her family and friends and continued to search online for a Muslim infertility group or a Muslim therapist:

I love my family and know they are here for me but it is easier to talk to someone who is going through it…someone who has the same beliefs or culture…it just makes it easier to find ways to help you cope when it follows your beliefs…I looked online for a Muslim therapist who works with infertility…I am unable to find any locally…I found a few out of state.

October also preferred to find more support for Muslim women going through infertility:
I just wish that there was more support for Muslim women going through this, even Muslim therapists who, you know, understand our religion or understand our culture or even have a history with, you know, infertility themselves or even just study them. I think that would make a big difference.

Many of the women (8 of 12) discussed the importance of community involvement which was evident throughout the interviews. The Muslim and Middle Eastern community was frequently discussed as closed off and lacking support for women with infertility. Women expressed their frustrations with the community and the need for the community to change and be more inclusive of women reproductive and mental health issues. “There needs to be more support in the community, and it needs to be talked about more” (October). May would like to see more women within her community talk about infertility:

Honestly, I don't feel like anyone speaks of it. I feel like I'm the only one going through it and my friend who I know from our community, like, that's it. That's how I feel. I just feel like there is little to no support. No one wants to speak of it. No one wants to do anything about it… I wish we had more support in our community…I feel like as far as like a Muslim community, we really need to, like, I don't know, like come together and just let each other know that you're not the only one, I also went through this. I'm also struggling. I need help, you know.

Lily has searched for local support groups online: “I didn't find anything and nothing really helped… I don't feel like there is enough… support groups in the community”. She also has noticed that the community is starting to address other issues and is hopeful that infertility will also be addressed:

I feel like even for right now, it wasn't until recently where the community… is starting to open their eyes to stuff like drug addiction and mental health issues. But something like infertility we are just waiting on that.

Three participants also discussed the need for mosque leaders to support women with infertility. Lavender believes that “mosque leaders have completely denied that women have issues in this community”. Daisy also discussed the need for religious leaders to discuss women’s health:

we have a lot more growing to do in our Muslim community… these conversations on health or infertility need to be had more… All I'm saying is the mosques only has so much capacity. We are a minority. But what's pretty clear is that when it comes to things, such as family issues, not enough is being talked about. There is no expertise in fusing together
religion and application to family situations. You just end up gathering from what some scholars know and try to learn how to apply it to different family situations on your own….and forget about infertility. Who the heck talks about infertility? Never have I heard a Friday sermon about infertility. I don't think I have...It's a big part of a family’s life. It just doesn't get talked about.

October discussed the difficulties of speaking to a religious leader about a woman’s issue:

I feel like at the mosques, the only person that really can help is the sheikh (religious leader). But he is a male and for you to go and open up to him talk about infertility…it's just, there's no way that they would ever understand anything like this...you can go talk to him about religion…there's men who use the sheikh as a therapist, but there's no way that we, as women who are dealing with this could ever do anything like that. It's just. I feel like our feelings would never be validated.

While most of the participants (8 of 12) reported supportive spouses, who were concerned about their happiness, some of the women desired more physical or psychological presence from their spouse. Violet described being alone during her appointments and pregnancy losses. She stated she appreciated that her ex-husband did not pressure to have children but wished he was physically and psychologically present. She recalled:

I'm doing it alone. I'm going to the doctors alone. I'm doing blood tests...all this, I'm doing it alone. There is no support. It was always like, okay, she's just doing what she has to do to bear children. There was never that support...I always wanted him to be there supporting me, holding my hand and being there...talking to me. And I didn't get that.

Poppy also discussed wishing her husband was present to of the of her appointments:

...I know he has to work but it would be nice to not have to go alone to those appointments...you sit there and see other couples waiting for their appointment and you are alone...if it was seeing any other doctor I would not care.

**Barriers of seeking support (subtheme)**

Participants discussed the barriers to seek support. A few of the participants (4 of 12) discussed the stigma of disclosing their infertility, miscarriage and seeking therapy as barriers to seeking support. Jasmine discussed her family as very private and they do not want her to discuss infertility with anyone. When she posted the PI’s research study flyer online (on her personal FB page) she had to immediately remove it because her family were concerned people would associate her with infertility. October also found that her family did not want her to disclose her infertility status:
...everything is so hush hush, which I really hate...I don't think that my family or my husband's family would be ok with me, just kind of going out in the public and just talking about our experiences or what's going on and all the issues that we're having...

October, also discussed wanting to see a therapist and stated: “when I told my husband I was thinking about finding a therapist...he asked me why I wanted to talk to someone...you would think being a medical professional he would support it”.

May discussed she was not personally comfortable disclosing her fertility status and still prefers to remain private regarding her journey: “I'm not comfortable going out there and talking about my infertility journey or how I'm going to get my child or if I'll ever get my child”. She joined an infertility Facebook group and created a fake profile: “I ended up...like, my Facebook page was a fake page because I really didn't even want to go out and put my name out there and be in the support group. So, I just made a separate page”. May continued to discuss the stigma of seeking therapy and disclosing a miscarriage:

...in our community...seeing a therapist...people will say what's wrong with you? They're going to put you on like medications....that's not true...so I don't tell anyone...also I feel like...I don't know how to explain it, maybe because it's not talked about in our community, like, I just shouldn't tell people that I had a miscarriage because I don't know, maybe it's just not something we talk about in our community.

Identity (Theme 8)

Many of the participants (8 of 12) discussed a change in their identity due to the difficulties conceiving. Throughout the interview, some of the participants discussed the importance of being a mother, how they were longing to be a mother, and the psychological toll of being unable to become a mother. Rose discussed she always knew she wanted to be a mother:

all I ever wanted was to be a mom, for a child to call me mommy...how can others have it easily. A blink of an eye they are pregnant...I would take every pain they talk about...the nausea or vomiting, whatever it is I would do it all to be a mother...it's hard not to know if I will ever be one.

May shared similar sentiments:

...until this day, it's just hard accepting that (diagnosis). I just felt like...I don't know, like, there's no hope, like I'm never going to get through this...constantly, thinking that it's never going to happen or thinking worst case scenario...I love kids, like, I love them...I work specifically with children...everyone knows me as the girl who...loves kids and I've worked
with kids… I feel like in general, like every woman…maybe not every woman, but, like, we all in our heart long to be mothers, we all want that…we all just feel like this need to mother a child, you know…raise them and just having a little mini us like a mini me like in our life.

October also discussed the importance of being a mother:

I mean, I always grew up knowing that, like, that's my number one priority is being a mom, like, I always used to say that. You know, that's all I ever wanted was to be a mom. I think being this far in this journey and everything I've been going through…Sorry. (emotional/tearful), just like how much is taken from me.

Many of the women (7 of 12) also described feelings of being incomplete, of being a failure, and of questioning their womanhood. May discussed the importance of role of a woman: “being a Muslim…woman…I know we have to, like, there's a lot of things expected of us and one of them is becoming mothers and raising a family, being a good wife”. Lily discussed the failure of the body as: “as a woman, it kind of takes away from your womanhood, so to speak…you were given this…the reproductive system and you can't even use it”. October also found that her body failing to conceive was a sense of loss of womanhood: “I'm young, all my tests…everything is negative…why is this happening? Why is it not working, like, I'm a woman? I'm supposed to be able to do this”. Lavender discussed in her first marriage she was in a panic state trying to become pregnant: “first time around when I was younger, in my mid 20s, I was in such a panic state…conformity was all I wanted, and that included conformity to womanhood and motherhood, and I was failing at miserably”. She discussed things are different this time around: “I don't need to do that, and I don't need to prove to people of my womanhood.

A few of the women (3 of 12) discussed how infertility has changed them as a person, such as they were once carefree and optimistic and now they have to pretend to be happy or excited. Poppy discussed her husband was the one to notice she has changed: “He told me before the infertility, he was like you always were happy, you smiled, joked, and I just see it always in your face…always disappointed.”

May also discussed how she changed as a person:

I feel like, yeah, it's affected me. Like, tremendously I feel like I've changed as a person…I'm not as happy as I used to be, like, ever since I got the diagnosis, it's just like,
I'll have a happy days, but most of them are not...when is this going to end...how can I go back to the old me? When will I go back to the old me? And I just think that, like, it's not going to happen until I have a kid or a baby...you feel like you changed a lot as a person.

Rebuilding one’s identity (subtheme)

Increasing their religious practices and finding new purpose in their lives were ways participants reshaped or rebuilt their identities. The majority of women (10 of 12) discussed an increase in worship such as in their religious practices. Many of the participants discussed that prior to infertility they did not pray but after their struggles they started to pray regularly and two of the participants began wearing the hijab. May described coming back to her daily prayers:

Infertility has brought me so much closer to God, like, I first I never used to pray, like, ever since I got my diagnosis. Ever since I started trying, actively trying and it just wasn't working, like, I started praying, I used to fast and everything before, but, like, it just brought me so much closer to God and I just believe more and I'm always asking God, like help me, like, I need any sign, like, give me any sign, tell me that everything's going to be ok, you know, and my husband...I always tell him, like, we have to be better Muslims.

October discussed increasing her religious practices:

We've definitely gotten closer to our religion because of it. I started wearing the scarf. We started praying, we never used to pray, so it definitely brought us closer to Allah and making sure that we, you know, are being the best that we can.

Participants also described that acts of worship were used to help them cope and draw strength through their infertility experience. May discussed: “I feel like it's helped me like mentally. It's really like prayer really it helps you just I don't know, like it balances, it balances me”. Similarly, October found praying reduced her anxiety:

My prayers, my five daily prayers, I mean, I struggled with so much anxiety because of this (infertility) that has helped me so much, just knowing that I can sit there and talk to God regardless of what's going on. It helps my anxiety so much... I think if I didn't have faith and I don't have my religion, I would say the anxiety, the depression, I think, would literally take over everything.

Finding new purpose of other ways to fulfill their identity as woman or motherhood was described by a few of the participants (4 of 12). Lily discussed she planned on focusing on her career and going back to school, while she is trying to conceive. June also discussed going back to complete her education degree helped keep her busy and reduced the constant reminder of
the difficulty of having another child. Lavender discussed defining motherhood and womanhood in a different way, if she is unable to have her own biological child, she discussed caring for her nieces as her new purpose.

**van Manen’s Lifeworld Reflection**

van Manen (1997) described four existentials that help guide the researcher in reflecting on the study’s findings and augmenting textual data that emerged. Through researching a participants lifeworld existentials researchers are better equipped to explore and understand the world of the lived experience (van Manen, 1997). The four existential are: lived body (corporeality), lived time (temporality), lived human relation (communality) and lived spaced (spatiality). It is through spatiality, temporality, corporeality, and communality the researcher is able to connect the Muslim woman’s experience(s) of her lifeworld as she perceives and gives meaning to it. Below is a brief description of each reflection.

Lived body or corporeality refers to one’s body “being in the world and meeting others through their physical body” (van Manen, 1997). Participants went through physical and emotional changes as they attempted to conceive. They had difficulties making sense and adapting to changes in their body from their fertility treatments to the failure to become pregnant. Some of the participants concealed the failure of their body to naturally conceive. They discussed feeling as if their body has failed them as a woman.

Lived time is defined as subjective time that includes the past, present, and future, it is the way of being in the world (van Manen, 1997). All participants previous life experiences shaped how they come to the expectation of motherhood. Their childhood and early adulthood experiences have impacted how they see the world. Time for many of the women seems to be defined by their fertility treatment and cycles. Some of the participants discussed living life in two-week periods as they completed a cycle or tried naturally and then hopefully waited for a positive pregnancy test. The participants availability and time always revolved around treatment plans as no vacation or events could be schedule in a specific time frame. For of the participants time
seemed to slow as they wait for a next treatment plan, medicated cycle, answers, or a pregnancy test.

Lived human relation refers to the way in which “we maintain relationships with others in the interpersonal space that we share with them” (van Manen, 1997). The participants had varying levels of relationships. Some of the women discussed having a support system they could rely on and others desired further support as they felt alone. Some of the participants discussed isolating themselves from social events or people that were triggering. One participant discussed dissolving relationships because it was difficult to be around those that would remind her of her “failures”.

Lived space is described as space that is felt and is needed around them to feel comfortable (van Manen, 1990). Some of the participants found solace in prayer so they retreated to their prayer mat to find some sense of peace with the struggles they were enduring. A few of the participants found a safe place in talking to a therapist, which helped them to find some sense of emotional wellness. One participant discussed her work allowed her to feel at ease and helped reduce the constant reminder of her difficulties to conceive.

**Chapter summary**

The purpose of this study was to describe and capture the meaning of the lived experiences of Muslim American women with infertility and to understand what factors assist or hinder Muslim women from seeking infertility treatment. Through thematic analysis using van Manen’s method this study identified the meanings of the lived experience of Muslim women and recognized how the socio-cultural and religious context shaped those experiences. Eight themes emerged from the narratives of the women in the study; which provided a deeper understanding of the lived experiences of Muslim American women with infertility, how they make sense of their experience, and what factors impact the decision to seek infertility treatment. The following chapter will reflect on the findings and extant literature related to Muslim women with infertility
experiences. Following the interpretations of the findings, implications, limitations, and recommendations for future research will be discussed.
CHAPTER 5 DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

Discussion

There is knowledge gap in the understanding the role society and religion play on the experiences of Muslim American women with infertility. The purpose of this study was to describe and capture the meaning of the lived experiences of Muslim American women with infertility and to understand what factors assist or hinder Muslim American women from seeking infertility treatment. The research questions asked in this study were 1) what is the lived experience of Muslim American women with infertility? and 2) to what extent do sociocultural and religious factors impinge on the decision to seek infertility treatment? Twelve Muslim American women were interviewed about living with infertility. Their narratives about their experiences allowed the PI to answer these research questions. Eight major themes with supporting subthemes emerged through the exploration of the lived experiences of Muslim American women with infertility: 1) discovering difficulties of conceiving 2) seeking reproductive care 3) fertility expectations 4) rationalizing fertility status 5) emotional toll 6) dynamic relationships 7) pursuing support and 8) identity. This chapter reflects on these findings and the extant literature related to Muslim women with infertility experiences. The next section provides a brief summary of the findings. Followed by the interpretations of the findings, theory, implications, limitations, and recommendations for future research will be discussed.

Summary of Findings

Max van Manen’s phenomenological methods were used to investigate the phenomenon of interest. The findings of this study provided a deeper understanding and meaning of how Muslim women experienced the affairs of their day-to-day existence, their physical or bodily presence, their temporal landscape, and the lived relationships they maintained with others in the interpersonal space that they shared with them (van Manen, 1997). Identification of these meanings through hearing the voices of twelve Muslim American women with infertility allowed the researcher to recognize how socio-cultural and religious context shaped their experiences.
The most frequent discussions that were prevalent throughout the interviews were about religion and their community. All of the women narrated that living in a culturally pronatalist society led to a difficult infertility journey.

**Religion**

Religion played three main roles according to Muslim American women: 1) everyday life choices including reproductive care decisions, 2) the desire to improve their relationship with God to reduce psychological burden and for support, and 3) the desire to pray to God and rely on God as a form of submission in hopes that would in turn lead to a successful pregnancy. Through listening to the lived worlds of Muslim American women with infertility the PI identified factors that impacted their decisions to seek and accept fertility treatment. Muslim American women followed Islamic ethico-legal traditions in decision making. They based their decisions on their own knowledge and interpretation of Islamic text. Intrapersonal factors such as religious conviction/beliefs, personal desire, and emotional and physical ability were ultimately the deciding factors for the initiation and acceptance of infertility treatment. Interpersonal factors such as gender presence of provider, cultural expectations and family/friend/spouse expectations played a smaller role in the decision to initiate and accept fertility treatment. Muslim American woman also used their religious beliefs to make sense of and justify their fertility status. This allowed themselves to find a sense of understanding about why they were going through their infertility journey. At times the journey to understand their fertility struggle led them to go through a cycle of anger, guilt, and patience. Muslim American women also discussed the use of religion as a coping mechanism. The use of prayer, talking to God, and reading the Qur'an were ways women reduced the stress and anxiety of their fertility struggles. The women in this study also discussed that religion was a protective factor from the stigma of infertility. Throughout their journey, Muslim women began improving their relationship with God by returning to their daily prayers, wearing hijab, and completing other acts of worship thus shaping their religious identity.
**Socio-Cultural**

The emphasis placed on motherhood by their community was evident as the women discussed how infertility has impacted them. Most of the women blamed society for pressuring them to conceive and having a gender expectation or cultural norm of “breeding” and having large families. While many women discussed that the community expectation of motherhood was prevalent their innate desire to be a mother was also a factor in the desire of motherhood. The stigma the community placed on women with infertility led to social isolation, psychological burden, and stigma of disclosure. Muslim American women in this study preferred to limit disclosure of their fertility status due to the judgement they would receive from their community. They also discussed limiting disclosure of fertility status with others due to the community’s inability to understand and provide adequate support. A recurrent theme discussed by many of the women in this study was the lack of support they received from their community and the community’s lack of understanding of the fertility process. Muslim American women discussed their desire for support from the community, to be able to talk to other women that shared many commonalities, and the need for religious leaders to discuss infertility. Societal expectation or pressure to conceive did not impact the Muslim American woman’s decision to initiate or accept fertility treatment. The next section further reflects on the findings and the extant literature related to Muslim American women’s experiences with infertility.

**Interpretations of the Findings**

The next section provides a discussion on the eight major themes discovered through the interviews. The eight themes as stated above answered the first research question: what is the lived experience of Muslim American women with infertility. The theme life decisions and fertility expectations answered the second research question: to what extent do sociocultural and religious factors impinge on the decision to seek infertility treatment. The majority of the themes are discussed in the next section, however, some themes are combined as the some of the findings were similar and intertwined with each other such as dynamic relationships, rationalizing
fertility status, and pursuing support. Religion and sociocultural factors were heavily discussed within those three themes thus they were blended under one section for discussion.

**Discovering difficulties with conceiving**

Participants began their stories with the moment they discovered they were having difficulties conceiving. As their stories unfolded the importance of marriage and procreation placed by society became evident. Many of the women discussed the importance of following a specific life trajectory which appeared to be dictated by society. Muslim and Middle Eastern cultures are highly pronatalist thus the importance of marriage and family is embedded within these communities (Inhorn, 1996). Some of the women of this study discussed learning of the importance of marriage and having children from watching their own family members follow that path. Others discussed it was “necessary” as a form of life fulfillment as a Muslim woman to marry and have children. The expectation for marriage and reproduction was also discussed by many African American women as the need to fulfill their role as Black wives and mothers (Ceballo et al., 2015). One of the women in this study wondered if her desire to marry and have children was conforming to society’s expectations or arose from her own innate desire. The gender expectations of marriage and motherhood is prevalent in many societies and has been found to play a large role in racial and ethnic minorities (Greil et al., 2011).

**Seeking Reproductive Care**

There remains a paucity of literature that identifies which factors promote or hinder Muslim women’s decision to seek infertility care. This study offers a glimpse into understanding which factors assist women in decision making regarding reproductive care. The acceptability of seeking medical care was discussed by all participants as necessary. “God provided us with the knowledge to help us” as long as the medical treatment was not prohibited according to Islamic rulings. Consistent with the literature, Muslims in this study were more likely to seek and accept western treatment as long as it does not go against their faith (Padela & Curlin, 2013). Most Muslims use the Qur’an, Islamic jurisprudence, and Islamic scholars for guidance when
determining the acceptability of medical advancements and technology (Inhorn & Serour, 2011; Padela & Curlin, 2013). This was evident as some of the participants described times, they sought religious counsel through a family member or religious leader to confirm acceptability of a medical treatment. The participants of this study discussed looking to religious rulings if there was a question of acceptability or if they did not know if it was “halal” (religiously acceptable) or “haram” (prohibited). This was similar to a recent study completed to determine the factors that promote or impede access to reproductive care in Muslim women in the southern part of the U.S (Eksheir & Bowling, 2020). Eksheir & Bowling (2020) found that only some women used religious education or religious texts to assist them in deciding when it was acceptable to seek reproductive care. However, the majority of the participants in this study did not feel the need to consult family or religious texts to determine acceptability of seeking reproductive care.

Regarding the acceptance of infertility treatment, the majority of participants in this study (11 of 12) initiated reproductive fertility care. All participants that initiated care accepted some form of fertility treatment. Some of the participants accepted most options infertility treatment presented such as IVF (invitro fertilization) and others declined the use of IVF. The participants that accepted infertility treatment justified their decision by discussing the permissibility to receive medical treatment based on religious beliefs. Some participants stated they did not have difficulties with accepting specific treatment modalities because “God gave us the knowledge” to seek and accept care. This statement resonated with women of other faiths. Assisted reproductive technology (ART) was found to be permissible by women of other religious backgrounds as they stated it is “what God intended” (Klitzman, 2018). Klitzman (2018) also found that while many women “wrestled qualms or possible objections” many ultimately accepted fertility treatment. However, Galic et al. (2021) found that ethnic and racial minority, specifically Latinx and Asian participants, were extremely worried about violating religious beliefs through the use of fertility treatment. Similarly, they found Catholics were extremely worried about using science and technology to conceive (Galic et al., 2021). Muslim American women in this study did not find the
decision to initiate infertility treatment as a difficult choice or a concern they were violating their beliefs.

While more studies are being conducted to determine factors that promote or hinder women seeking infertility treatment in other groups, literature on religious perception and attitude and how it translates into decision making remains limited. The majority of the participants in this study accepted some form of fertility treatment. However, five participants did not accept IVF. The reason participants declined IVF were due to: (1) religious conviction ($n = 3$) (2) emotional and physical toll ($n = 2$) and (3) cost ($n = 1$). Muslim women in this study interpretation and perception of religious teachings may have led them to be concerned or fear that the use of IVF was somehow going behind God’s back or playing God. Similarly, Egyptians also found it difficult to accept infertility treatment due to concern of going against God’s will, believing infertility was a form of a test in this life, and desire to observe patience and accept God’s decree (Inhorn, 1996).

Klitzman (2018) found women with stronger religious objections to ART or specific infertility treatment were concerned with messing with Gods plans and preordainment.

Only one of the participants in this study declined the use of IVF due to the financial burden of treatment. Unlike findings in the literature, cost was not a common topic of discussion or concern. In one study, fertility cost led to ethnic and racial minorities to delay seeking infertility treatment (Quinn & Fujimoto, 2016). Cost and a husband’s perception played a larger role in acceptance of infertility treatment in Nigeria compared to religion, culture, and ethics (Olorunfemi et al., 2021). In contrast, a few studies on racial and ethnic minorities in the U.S. discussed that women delayed seeking reproductive care because of the religious and ethical concerns (Gallic et al., 2021) and stigma of an infertility diagnosis (Missmer et al., 2011; Quinn & Fujimoto, 2016; Smith et al., 2011). These findings are similar to this study’s finding that those who declined infertility treatment were most likely to decline it because of religious concerns compared to concern of cost of treatment.
The stigma of an infertility diagnosis or concern of the community being aware of their diagnosis did not delay women in this study from seeking care. The majority of the women discussed the importance of being a mother thus they wanted to find answers. The community played a larger role in disclosure of infertility status and social relationships. The Muslim community did not impact the participants decision to seek infertility treatment. However, two participants discussed that their community may prevent them in seeking other alternatives such as adoption or using their embryo as a divorced woman. Their main concern was the stigma that is placed on those options in Muslim women as they were concerned of the community’s judgement and questioning. Muslim women in Nepal also discussed fear of stigmatization accessing family planning services due to the fear of being judged by the culturally acceptability in accessing reproductive health services (Adhikari & Bajarcharya, 2016).

Previous literature has discussed the role of a provider’s gender in determination of accepting care. Hammoud et al. (2005) and Yosef (2008) discussed gender preference as a significant determination for Muslim patients’ willingness to seek and accept medical care. Similarly, Muslim immigrant women in Canada emphasized the preference of a health care providers gender as playing a major role in accepting or accessing service (George et al., 2014). Other studies have found that Muslim women selected a provider based on his/her competence rather than gender. Eksheir and Bowling (2020) found that most participants preferred a female provider, but the providers gender did not impede care unless it was a sensitive or invasive exam or procedure. This was similar to findings in this dissertation. The majority of participants disclosed they selected an infertility specialist based on recommendation/referral and their skill level. Only a few participants preferred a Muslim and female provider due to the sensitivity of exams and the providers understanding of Islamic teaching. However, they accepted care from non-Muslim or male providers if a Muslim female provider was not available.
Fertility Expectations

A recurring theme in the majority of the literature, as well as in this study, is the societal pressure of parenthood. Researchers have discussed how socio-cultural factors such as gender ideology, family structure, class, religion, ethnic identity, and patriarchy shapes women’s experiences of infertility (Greil et al., 2011; Inhorn, 1996). Motherhood is culturally mandatory in Muslim and Middle Eastern societies (Inhorn & Gurtin, 2012). Religious expectation is less explored and at times blurred with cultural expectations of parenthood in many societies. The major discussion regarding fertility expectations for many of the women in this study was the pressure from their community to have a child. Women often discussed the emphasis placed on Muslim women was to “breed” and have large families. A few of the participants also discussed the expectation to have children was observed by women in their family and communities. This is similar to Muslim women in other countries who reported that there was a socio-cultural expectation to procreate (Behboodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2015; Karaca & Unsal, 2015; Mumtaz et al., 2013; Obeidat et al., 2014; Obeisat et al., 2012; Sadati et al., 2017; Tahiri et al., 2015). The cultural expectation of parenthood was also consistent with a finding in a study in the U.S. that interviewed women who described themselves as “religious” and following some form of Christianity (majority identified as Latter-Day Saints) (Gezenski et al., 2021). Participants in that study discussed feeling pressure to fulfill their cultural duty of being a mother (Gezenski et al. 2021). Their desire for motherhood stemmed from childhood through their religious teachings and witnessing performances of gender roles in the family (Gezenski et al. 2021). The expectation or pressure to have children by their family, spouse, or friends were less prevalent in this study. Only a few participants described moments when their in-laws or spouse placed pressure on them to have a child. This is contrast with women in Muslim majority countries who discussed that family and spousal expectations of procreation was high (Dierckx et al., 2018; Inhorn, 1996; Mumtaz et al., 2013; Obeidat et al., 2014). Arab Americans and African Americans
also discussed parenthood, specifically motherhood, as highly valued in their culture (Inhorn & Fakih, 2006).

The difficulty remains to determine if the desire women have is socially constructed through their upbringing in a highly pronatalist society or due to religious beliefs. The participants in this study discussed how the community led them to feel stigmatized. They discussed the concern to disclose their fertility status was due to the judgement, pity, and gossip they would receive from those within their community. There continues to be a misrepresentation of cultural practices that have little to no relevance to Islam but are discussed as “Islamic”. Many of the women found that people in the community would blur culture and religion and try to explain the importance of becoming a mother based on their interpretations of Islamic scripture, such as the Islamic teaching that heaven is under the mothers feet or if you raise righteous daughters they will intercede for you. These similar statements were provided to Egyptian women in their community (Inhorn, 1996). The majority of participants stated they did not feel that religion or Islamic teaching pressured them to become mothers or they were doing something against their religion because they did not have a child or more children. Rather the majority of participants used religious scriptures as a form of making sense or justifying their infertility. Egyptian Muslim woman discussed Islamic teachings provided “powerful and convenient” rationales for their infertility, such as God’s will and destiny and the stories of prophets and their wives who had difficult conceiving (Inhorn, 1996). Similarly, women in this dissertation described using Islamic teachings of God’s will and the stories of prophets that had difficulty conceiving as a way to reduce feeling stigmatized. Arab American and African American Muslim and Christians also turned to their religion to better explain and justify their infertility (Ceballo et al., 2015; Inhorn & Fakih, 2006).

**Dynamic Relationships, Pursing Support, and Rationalizing Fertility Status**

Many of the participants discussed their relationships with their family, spouse, and community. For many of the women in this study family, friend, and spousal relationships either remained the same or were stronger. This is consistent with previous research. Turkish women
described their husbands as their most important source of support (Karaca & Unsal, 2015) and Jordanian women found support through their spouse, friends, and family (Obeidat et al., 2014). American women from Utah also discussed receiving support from their family and spouse, which brought them closer together (Gezinski, 2021). Women in this dissertation discussed the support they received from their family and friends was mainly through prayer and words of encouragement. Only one participant felt it was necessary for her to dissolve some friendships as it was too difficult to continue watching them have children after her divorce. While their friendships and family relationship remained the same, participants discussed that it was difficult to disclose their fertility status as they felt like their friends and family wouldn’t understand or were tired of having to explain things. This was similar in African American women who preferred to remain “silent” as others would not understand (Ceballo et al., 2015).

Spousal relationships improved for many of the participants. Some women discussed their spouse was supportive, specifically they did not pressure them to conceive. However, others discussed that while their partner was supportive, and their relationships were stronger, their partner was not always physically or psychologically present as they preferred. There are many studies that provide evidence of the change in partners relationship and lack of support. German couples found that their overall relationship satisfaction decreased over time (Shanz et al., 2011). Similarly, couples from many Muslim majority countries discussed marital instability and dissatisfaction among women with infertility (Behboodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2013; Mumtaz et al., 2013; Obeidat et al., 2014; Obeisat et al., 2012; Tahiri et al. 2015; Vizeh et al., 2015).

A review of the literature uncovered a stark revelation of the physical and emotional abuse women endured due to infertility. In this study, a few of the participants (4 of 12) discussed emotional abuse they received from their spouse and/or in-laws mainly due to infertility issues. In one instance a participant discussed her mother-in-law saying: “if I knew you were going to have issues, we would not have married you” (Violet). This statement has haunted her for almost 20
years. Muslim women in other countries discussed verbal abuse and humiliation they encountered by their sister and mother-in-law (Hasanpoor-Azghdy et al., 2013; Obeidat et al., 2014; Tahiri et al., 2015; Mumtaz et al., 2013) and husband (Dierickx et al., 2018; Behboodi-Moghadam et al., 2013; Hasanpoor et al., 2013; Obeisat et al., 2012; Mumtaz et al., 2013). Concern for divorce was also mentioned in previous research (Dierickx et al., 2018; Hasanpoor-Azghdy et al., 2013; Obeisat et al., 2012; Tahiri et al. 2015). In this study, none of the women discussed the concern for divorce because of their inability to conceive. In contrast to the previous studies, many of the women discussed that their spouses were accepting of life without children and even suggested other options such as fostering or adoption.

Many of the participants frequently discussed the lack of support they received from their community. The concern of being the “talk of the town” or pitied were frequently discussed throughout the interviews. Participants were concerned that disclosing their fertility status would lead to further scrutiny and judgement. Thus, their parents, spouse, and in-laws preferred they did not disclose their fertility struggles. Two participants planned on posting the PI’s research flyer and had concerns that those within their families and communities would associate infertility to them. One of the participants removed the post due to her family’s request as to not draw any questions or suspicions of her fertility status. Another participant discussed she was open to talk to other women in the community about her fertility journey but was advised by her family to limit disclosing her journey as well her use of IVF. The concern with judgement, questioning, and spreading of their information provides evidence of the stigma an infertility diagnosis has in the Muslim and Middle Eastern communities. The stigma of social information or inability to disclose infertility within the community has also been discussed in other studies (Gezenski et al. 2021; Inhorn, 1996). The stigmatization of infertility only increases the psychological burden on women experiencing infertility.

Women with infertility from the U.S. and Muslim majority countries discussed being socially excluded or alienated from specific social or religious ceremonies (Gezenski et al. 2021;
Hasanpoor-Moghadam et al., 2013; Inhorn, 1996; Karaca & Unsal, 2015). None of the participants in this study described being excluded or alienated rather than they continued to receive invitations to events such as gender reveal, baby showers, and weddings. Many of the women discussed socially isolating themselves from specific friends, co-workers, family members, and events as it was triggering. The social questioning and unsolicited advice at many social events such as baby showers and weddings left many women distraught, thus some participants avoided those situations. Women in this study described social isolation as a way to reduce the likelihood of being questioned or reminded of their infertility. The need to social isolate is similar to Muslim women experiencing infertility in other countries, they preferred to be alone, avoided certain people or social events, and self-imposed isolation to limit social interactions with family and friends (Behboodi-Moghadam et al., 2013; Hasanpoor-Azghdy et al., 2013; Sadati et al., 2017; Tahiri et al., 2015). Similarly, American women also limited or avoided specific family and religious social events as they would feel sad, bitter, angry or upset with themselves for the inability to become pregnant (Gezenski et al., 2021). Muslim women in Turkey reported that they were unable to avoid certain social events or interactions due to fear of scrutiny if they refrained from participation in an event (Hasanpoor-Azghdy et al., 2013). This concern was similar to one of the participants in this study. One participant preferred to avoid social events but was concerned she would draw suspicion of her avoidance of the event, particularly that she is infertile.

Hearing the stories of women in this study provided evidence of the role religion played in their lives. Religion was a major factor in decision making and facilitated seeking medical care. Religion played a role in three areas: 1) everyday life choices including reproductive care decisions 2) the desire to improve their relationship with God to reduce psychological burden/support and 3) the desire to pray to God and rely on God as a form of submission in hopes that would in turn lead to a successful pregnancy. Many participants described their infertility journey shaping their religious practices and connection to God. Women in this study often described the importance of having their faith during vulnerable times. They found a sense of
solace or understanding of the importance of “patience”. All participants described their faith either remained the same or strengthened during their infertility journey. During very tough times, infertility-related or not, they would go to God and pray for some ease. Thus, Muslim women in the study utilized religion as a coping mechanism. This finding is consistent with other studies that found women used religious coping, passive avoidance, and meaning-based coping (Batool et al., 2016; Gezenski et al., 2021). Methods used by women in Turkey and Jordan of intensifying religious practices such as prayer, attending religious rituals, turning to God, and reading the Qur'an (Karaca & Unsal, 2015; Obeidat et al., 2014) were similar to practices many of the women in this study utilized. African American women also turned to their faith, through prayer and church involvement, to reduce the psychological burden of infertility (Ceballo et al., 2015; Taylor, 2018).

Women in this study would also discussed times they would be angry with God because of a failed cycle or negative pregnancy test and would ask “why me?”. However, shortly after being angry, the women discussed they would feel guilty for being angry and would then talk to and pray to God and after some time would start to work on their patience. This seemed to be a cyclic pattern they went through during their journey and would recur during difficult times. This form of questioning was similar in women of other faiths experiencing infertility (Gezenski et al. 2021; Klitzman, 2018). This cyclic pattern has not been well studied in the literature regarding among religious women with infertility.

The desire for support from their community and local mosque were discussed frequently by the participants of this study. They discussed the need for education within the community about infertility, the need for local support groups, and the need for religious leaders to discuss infertility during sermons. The importance of support from the community was also discussed by Christian American women (Gezenski et al. 2021). The literature is limited on religious leaders’ involvement in infertility education and support. However, one study that was conducted discussed that pastors or members of the clergy in New York only discussed permissibility of IVF when questioned on the subject, otherwise it was not a topic that was addressed in sermons
Women in this study also disclosed the importance of talking to someone that “was like me”, referring to their religious and cultural background. They discussed they would feel less “alone” and better understood if other Muslim women with infertility were open to discuss their fertility journey. Unlike, Christian American women who accessed social support groups with women in similar situations (Gezenski, et al., 2021). Only two participants in this study accessed local online support groups. The desire to limit use of online support groups were due preference of remaining private to reduce the likelihood of people in their community discovering their infertility.

**Emotional Toll**

The emotional consequences of infertility may be heightened by the societal and cultural expectations of procreation. Many of the participants in this study discussed the emotional burden of living with a stigmatized diagnosis such as infertility. They discussed that the inability to be a mother, fit into society, conform to societal expectations of being a mother has led them to feel emotionally drained, angry, depressed, frustrated and hopeless. Women in this study described the shock, disappointment, and disbelief they felt when the first realized they were having difficulties conceiving. This is consistent with the literature, women experiencing infertility also described having an identity crisis, difficulty finding a place in their world, feeling numb, lack of control, worthless, envious of other mothers, anxious, and having lower life satisfaction (Karaca et al., 2015; Syme, 1997; Williams, 1997). The psychological consequences of infertility in women included a feeling of loss, despair, grief, and inadequacy due to their bodies letting them down (Inhorn, 1996; Syme, 1997). The constant struggle of infertility in their everyday lives was also described by the women in this study as physically and emotionally exhausting. Based on the narrated stories of women in this study it is evident that for many women their infertility journey was traumatizing. They discussed the many failed cycles, numerous appointments, fertility medications/injections, miscarriages, unanticipated difficulties, shattering infertility diagnoses and apathetic fertility specialists. A few of this study’s participants discussed traumatizing events in
their lives they may have impacted the way they experienced their infertility journey. One participant discussed the death of her preterm infants, preterm loss of another set of twins, death of her brother, cheating spouse and failed marriage led her to feel traumatized. As she recalled her infertility experiences including appointments and testing, she described the entire experience as traumatizing. Similarly, two other participants had miscarriages and other life events that happened during their miscarriage that impacted their experience with infertility. There are a limited number of studies that have examined traumatic life events and emotional toll they exact in compounding a women’s experiences with infertility. Similarly, there is limited literature on the use of the word trauma in describing women’s infertility experiences. One study conducted by Taylor (2018) used the term trauma when she discussed the traumatic infertility experiences African American men and women disclosed. African American women described infertility as a traumatizing event as they continued to face challenges in coping and functioning normally (Taylor, 2018).

**Identity**

The recurring theme among many of the participants in this study was a change in their identity due to challenges conceiving. The centrality of a women’s identity may be placed on the ability to be a mother, and failure to reproduce is seen as a loss of womanhood (Greil et al., 2011; Luk & Loke, 2015). Some of the participants in this study discussed throughout the interview the importance of being a mother, how they were longing to be a mother, and the psychological toll of being unable to become a mother. Women in this study described feelings of being incomplete, a failure, and questioned their womanhood. A few of the women in this study discussed how infertility has changed them as the person, such they were once carefree and optimistic and now they have to pretend to be happy or excited. This is similar to the literature on the experiences of women with infertility. Feelings of being incomplete (Obeisat et al., 2012), loss of womanhood (Behboudi-Moghadam et al., 2013), and loss of motherhood (Karaca & Unsal, 2015; Obeidat et al., 2014) were feelings described by Jordanian, Iranian, and Turkish women with infertility.
Similarly, African American women described the cultural mandating of motherhood which has led them to have an impaired sense of self and sense of being a woman (Ceballo et al., 2015).

Another finding in this study is the way infertility has shaped women’s religious identity. The majority of women in this study discussed an increase in worship. An increase in religious practice such as prayer, wearing the hijab, and reading the Qur'an were discussed as ways women developed a closer connection to their faith and God. A few of the participants discussed that prior to infertility they did not pray or observe the hijab but after their struggles they started to pray regularly and two of the participants began to wear the hijab. They described these acts as necessary to connect with God and that they provided them with some level of comfort. These acts of worship were also used to help cope and draw strength through their infertility experience. The increase in religious practices have been discussed in other studies. The majority of researchers have discussed the use of religious practices as a form of coping mechanism. Muslim women in Turkey and Jordan intensified religious practices such as prayer, attending religious rituals, turning to God, and reading the Qur'an to reduce stress from infertility (Karaca & Unsal, 2015; Obeidat et al., 2014). African American women relied on their faith through their beliefs in God’s will and through prayer to provide relief from their experiences with infertility (Taylor, 2018). However, the findings in this study on how infertility shapes a woman’s religious identity and practices remains to be explored in other racial, ethnic, and religious groups.

**Theory**

Theory of stigma and the cultural construction of reality share commonalities with the philosophical underpinnings of hermeneutic phenomenology (methodology used in this research). All three provide an understanding on the impact of society and language on the individuals perception, consciousness, and lived experience. The theory of stigma and the cultural construction of clinical reality framework allowed the researcher to construct and make meaning of a Muslim American woman’s behavior, actions, intentions, and experiences of their lifeworld.
Kleinman’s cultural construction of reality was utilized to understand how religion influences health and health seeking behavior. Kleinman et al. (1978) discussed three structural domains of health care in society: (1) professional (2) popular and (3) folk. According to Kleinman et al. (1978), decisions on seeking care and healthcare in general mainly take place in the popular domain (family, social network and community). The illness or disease experience of an individual is shaped by their cultural beliefs, religious values, and social role, which influences his/her perception of their clinical reality, their health behavior, and decision making (Kleinman et al., 1978). Clinical realities are culturally constituted and vary across culture and domains of health (Kleinman et al., 1978).

Islam shaped the way Muslim women with infertility in this study evaluated their infertility and guided their decisions on which structural domains of health care they would seek care. The majority of the participants sought care through the professional domain of health. How they experienced an infertility diagnosis and what influenced their decision to seek infertility treatment was discovered through hearing their stories of their lifeworld. Throughout the interviews, participants discussed their decision to initiate and accept fertility treatment. There were two main factors that played a role in accepting or declining treatment modalities: intrapersonal and interpersonal factors. Three intrapersonal factors were described by many participants as factors that impacted the decision to accept fertility treatment: personal desire, emotional/physical ability, and religious conviction. Religious beliefs and their interpretations of the religious text held the most weight regarding reproductive care decisions for women in this study. This is consistent with the Islamic ethico-legal guidelines of using religious verses to attain knowledge that would lead to declination or acceptance of treatment (Padela et al., 2020).
Many of the participants discussed that they made specific life decisions including infertility treatment based on the way in which they interpreted specific teachings. Muslim women in this study also rationalized their infertility status by interpreting their infertility in a few ways, seeing it as God’s decree, as God’s way of giving them a new purpose, a way to improve their religious or spiritual connection with God or a form of punishment in order for past “bad deeds” to be forgiven. Interpersonal factors such as family, friends, spouse, socioeconomic status, and community played a smaller role on the decision to accept fertility treatment.

All participants described themselves as “moderate” Muslims, performing the minimal requirements of the basic tenets of Islam (fasting, praying, giving to charity, abstaining from prohibited rulings). None of the participants discussed being at a high level of religiosity. What was discovered in this study, was that all women described themselves similarly regarding the importance of their faith in their daily lives and completing similar acts of worship. The majority of participants accepted infertility treatment, specifically IVF as they did not believe it went against Islam, however there were three participants that were hesitant and declined use of IVF due to Islamic ethico-legal concerns. Thus, based on the way participants define their level of religiosity, one may ponder if levels of religiosity impacts acceptance of fertility treatment. This was underdeveloped as there was no formal tool to measure religiosity and many participants discussed difficulties in delving deep into religious discussions.

Stigma

Stigma is a socially constructed process that is shaped by the individual's sociocultural environment (Goffman, 1963; Yang et al., 2007). The socialization process of stigma goes through two phases: (1) "the stigmatized person learns and incorporates the standpoint of the normal, acquiring thereby the identity beliefs of the wider society…" and (2) “the individual learns he possesses a particular stigma, and this time in detail, the consequences of possessing it” (p.31). Examining an individual’s moral experience allows the researcher to better understand the behavior of those who are stigmatized, what matters most to them, and how stigma affects them
(Yang et al., 2007). Listening to the stories of Muslim women in this study provided a better understanding on how their social world shaped their lived experience of stigma. The societal pressure of motherhood from their community led many of the women in this study to feel stigmatized. Becoming a mother or having multiple children in a high pronatalist society left participants in this study to feel like a failure, as they were unable to be a mother and fulfill their role in society. They described the constant questioning of when they were having a child, unsolicited advice, and lack of support within their community. The concern of being stigmatized specifically from their local social world led them to withdraw and limit disclosure of infertility status. Women also discussed the concern of disclosing their fertility status. Disclosure was limited to social networks that would provide understanding and support. Women in this study preferred to remain silent about their infertility journey with those outside of the close social circle due to the concern of being judged, pitied, or labeled by others. To reduce being stigmatized or labeled as a deviant many of the participants avoided social events and people that would provide unsolicited advice and questioning. They avoided specific people or events to reduce the likelihood of being questioned about their fertility status as it made them feel upset, sad, alone, and devalued. Many of the women in this study sought support from their spouse, specific family members, close friend, or a therapist to assist in the emotional burden stigma had caused them.

The literature on stigma in the experiences of infertility in religious communities and racial and ethnic minorities is limited. There were similar findings in the literature that discussed the impact of stigma on women. African American women with infertility also described the cultural ideologies placed on them from their community led them to feel stigmatized (Ceballo et al., 2015). Thus, they preferred to remain “silent” and socially isolate themselves from others (Ceballo et al., 2015). Christian American women shared commonalities with women in this study as they also discussed experiencing stigma due to the inability of being unable to fulfil their cultural role. They also discussed they further felt isolated and stigmatized from their community because of the “quiet nature of infertility” (Gezinski, 2021).
Implications

The findings of this study provide a glimpse into the lived experiences of Muslim American women with infertility. In this study religion, community, and need for support were discussed often. The lived worlds of Muslim American women provided evidence of the importance of following Islamic ethico-legal traditions in decision making. Educational programs or training should be developed for healthcare providers to better understand the role of religion in a specific religious group as well as best ways to communicate recommendations that may be sensitive. Similarly, discussing their experiences, asking about their mental health, and providing counseling may reduce the emotional burden women experience. Educational training should be provided to Muslim therapist on infertility and religious style coping methods; which may improve the utilization of counseling and reduce the psychological toll of their experiences.

Religion was a source of support and coping in many of the Muslim women in this study. While many women described their spouses as supportive, some women discussed the lack of psychological and physical presence of their spouse. Creating an intervention using religious and mind-body practices may reduce anxiety and depression, improve quality of life, and improve spousal relationships. Mardiyono et al. (2011) found that Islamic psychotherapy reduced anxiety while prayer improved physical health, alleviated anxiety, and depression among Muslim participants. Islamic prayer or listening to the Qur'an was also found to reduce anxiety (Fitri Hamidiyanti & Pratiwi, 2019) and depression (Aslami, Alipour, Najib, & Aghayosefi, 2017) among pregnant women.

Lastly, desire for support from the community was frequently discussed by women in this study. Community outreach with religious leaders to discuss creating monthly or quarterly sermons to address infertility may reduce the stigma of infertility from the community or at least provide the community with some knowledge on the infertility process. Local online support groups would also help reduce the emotional burden of the stigma of infertility. Talking to women with share commonalities may allow a woman to feel less burdened by her diagnosis. Creating a
platform that allows for women to disclose or withhold their identity would increase participation among women who may be concerned of the stigma of disclosure.

**Strengths/Limitations**

There were a few factors that may have contributed to the limitations of this study. This study utilized a qualitative semi-structured interview method, which may reduce the ability of capturing the essence of the lived experience of a phenomenon. However, strong and well thought out interview questions were elicited to draw out a detailed story of the lived experience of Muslim women which may strengthen the data collected from the interview. A small sample size and the use of purposive sampling may be concerning for selection bias as well as creating a sample with participants with similar characteristics, which makes results less generalizable. However, the intent of qualitative research is not to be generalizable to all but to provide a gateway in understanding what it is like to experience a phenomenon in a small subset or group.

The sensitive nature of the topic was also a limitation of this study. Infertility is a difficult topic for many women to discuss especially those from a community that stigmatizes an infertility diagnosis. This led to a difficult recruitment and limited the number of women willing to disclose their experiences of infertility. Similarly, the sensitive nature of infertility may also lead to women limiting disclosing specific aspects of their infertility journey due to the triggering nature of the discussion or concern of confidentiality. Levels of religiosity was not well explored in this study as many participants discussed difficulties delving deep into religious discussions and a lack of a formal tool to measure religiosity. Many of the participants discussed completing the “basic requirements” of the tenants of Islam. Further research is needed to determine if the level of religiosity shapes a person’s experience with infertility and/or impacts their decisions to seek reproductive care. Lastly, the COVID-19 pandemic also limited this study. The ability to develop rapport by recruiting in the offices or completing face-to-face interviews using a more natural dialogue may have reduced the ability to achieve rapport with participants. Also, the inability to
recruit at offices and limitations of visit of patients in the office most likely hindered the number of participants that may have participated in this study.

Despite the limitations discussed above, this study also had some strengths. All findings from the participants interviewed were reviewed with them on their second interview to confirm that findings represented their story. This also allowed women to expand on their feelings as needed. The use of these measures allowed for an unbiased conclusion and to allow the data to truly represent the participant. The PI also used a journal during the research and analysis phase to allow her to identify any biases that may have developed. This allowed the PI to confirm that her personal experiences, feelings, and preconceptions did not bias any of the findings.

**Recommendations for Future Research**

This study was unique in that it was one of the first studies that explored the lived experience of second-generation Muslim women as well as the decision-making factors in acceptance of infertility treatment. Religion and their community impacted the way Muslim women in this study experienced infertility. There is limited knowledge on the role of religion in many racial, ethnic, and religious minorities. Thus, the need for further research exploring the role of religion on the experiences of infertility in men and women is needed. There are a limited number of studies that have examined traumatic life events in compounding a women’s experiences with infertility. This study provided a glimpse of women who disclosed traumatic experiences during their infertility journey. Researching the use of and developing interventions utilizing the traditional Arabic and Islamic medicine model using mind-body practices and Qur’anic texts to reduce stress in infertility couples is needed. Future studies should explore whether traumatic life events or the trauma of the infertility journey itself impacts their journey, psychological well-being, and decision making to accept or continue fertility treatment.

**Conclusion**

The lived experience was studied using van Manen’s method which employed hermeneutic phenomenology. This is the first study to explore the lived experiences of second
generation Muslim American women’s experiences with infertility and decision-making factors. Through narration of their lived world, Muslim women in this study described the emotional toll of living with infertility, the stigmatizing nature of infertility, stigma of disclosure, lack of social support, effects of religion and community on the experiences of infertility. The findings of this study provide insight on the connection of religious beliefs to all aspects of a Muslim woman’s journey with infertility. Religion provides ways to cope with infertility, facilitated the decision to obtain medical treatment, shaped a woman’s identity, and reduced social stigma. The fertility expectations placed by Muslim women’s social world increased psychological turmoil, social isolation, and stigma. Further research is needed to explore the level of religiosity to determine the impact it has on reproductive care decision making and experiences of women with infertility. Development of an intervention using religious and mind-body practices may improve a woman’s psychosocial well-being.
APPENDIX A
INTERVIEW GUIDE

Introduction:
Interviewer: "My name is Samia, I am the primary researcher of this study. My goal is to understand the experiences of Muslim women with infertility. I am conducting research about infertility, because of my personal experiences with becoming pregnant. Before we begin the interview, I will tell you a little bit about myself. At the conclusion of the interview, if you have any questions about my experiences, I can share them. Are there any questions I can answer for you now? Is it alright for me to begin?"

Pseudonym of Interviewee: Date:
Start time: End Time:

The Story:
Initial Broad Question: “I would like to learn more about your experience with infertility. Please begin the interview/conversation by telling me about your personal experience with being a Muslim woman with infertility”

Probes

1. Infertility is usually not a known issue until one tries to start a family. What was it like to discover that you were having difficulties becoming pregnant"
   a. Probing question: Can you tell me more about that?
   b. In as much detail as possible, could you describe how your experience with infertility has affected you?
   c. Tell me about your relationship with family, friends, and spouse.
      i. Have these relationships changed since you discovered having fertility issues?
      ii. How has infertility affected your marriage?
      iii. What people or areas of your life has helped you deal with your infertility?
2. What do you think others’ attitudes would be toward you if they knew you were having difficulty with becoming pregnant? Have you discussed your fertility challenges with anyone?
   a. Do you think telling someone about having difficulty becoming pregnant would affect how they will treat you? In what ways?
   b. Tell me what it is like at social gatherings with family or friends who have children or are pregnant?
3. What does being a Muslim women (or just Muslim) mean to you? Or What does Islam mean to you?
   a. What religious practices do you include in your life that is important to you? Or How does Islam influence your daily life?
   b. How does your faith or religious beliefs impact decisions you make in your daily life such as family life, including marriage, education, work, medical treatments? Also with reproductive care?
i. If treatment is mentioned, what has led you to seek out medical advice or guidance?
ii. If treatment is not discussed as an option: did you ever think about pursuing treatment?

**Conclusion:**

“Thank you for your time in speaking with me today. Before I conclude…”

1. These are the things you have described about infertility, is this an accurate reflection of how you feel?
2. Is there anything you would like to add or would like to share with me about living with infertility?
3. Is there anything you would like to say about your experience?
4. Can I answer any questions for you?
5. What has it been like to talk to me today?
6. Thank you for your time.
APPENDIX B

DEMOGRAPHIC DATA

1. Date of interview _________________________

2. Participant self-selected name ______________________________

3. Age (in years) ______________________

4. What is your highest level of education?
   - □ Less than High School
   - □ Technical/vocational training
   - □ Graduated High School or GED
   - □ Some college
   - □ Associate degree
   - □ Bachelor degree
   - □ Graduate degree or higher

5. Religious preference
   - □ Muslim Sunni
   - □ Muslim Shia
   - □ Only Identify as Muslim
   - □ Other ______________________

6. Marital status
   - □ Single
   - □ Married
   - □ Divorced
   - □ Widowed
   - □ Separated
   - □ Other ______________________

7. Annual Income (check one):
   - □ Prefer not to answer
   - □ Less than $15,000
   - □ $15,000 to $24,999
   - □ $25,000 to $49,999
   - □ $50,000 to $74,999
   - □ $75,000 to $99,999
   - □ $100,000 or more

8. Were you born in the United States?
   - □ Yes
   - □ No
9. Have you lived in the United States for most of your adult life?
   - Yes
   - No

10. Was your mother born in the United States?
   - Yes
   - No. If no what is her country of origin_______________________

11. Was your father born in the United States?
   - Yes
   - No. If no what is his country of origin_______________________

12. What is your ethnicity?
   - Jordanian
   - Lebanese
   - Palestinian
   - Syrian
   - Other_____________________

13. How long have you struggled with getting pregnant?
    __________(years) __________(months)

14. Were you diagnosed with infertility by a healthcare provider (physician, midwife)?
   - No
   - Yes
     - If yes is infertility due to
       - Male factor (example low sperm count)
       - Female factor (example PCOS, endometriosis)
       - Both male and female factor
       - Unknown factor
       - Other ______________________
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THE LIVED EXPERIENCES OF MUSLIM WOMEN WITH INFERTILITY

by

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May 2022

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Major: Nursing

Degree: Doctor of Philosophy

Background: Infertility, ranked as the 5th highest global disability, is estimated to impact 180 million couples worldwide. Muslim couples associate parenthood or the ability to have children as an accomplishment in their marriage, adulthood, social status, and security in later life. A failure to conceive in Muslim societies may lead to stigma, social isolation, grief, and despair. There is a gap in the literature on how Muslim women perceive, understand, and cope with infertility in the U.S. This knowledge gap limits the ability in to understand how social, religious, and cultural practices impact a diagnosis of infertility on Muslim American women.

Purpose: The purpose of this study is to describe and capture the meaning of the lived experiences of Muslim women with infertility. Two research questions were employed to obtain this knowledge: 1) What is the lived experience of second-generation infertility Muslim American women with infertility? and 2) To what extent do sociocultural and religious factors impinge on the decision to seek treatment in reproductive health?

Methods: This qualitative study used van Manen’s phenomenological method to examine the lived experience of Muslim American women with infertility. Twelve participants were recruited through social media post on Facebook and through snowball sampling. Data were collected through demographic data sheet and interviews. All interviews were informal semi-structured in-depth responsive interviewing style. Two interviews were conducted. Opened ended and informal conversation allowed the investigator to gain the participants trust and allowed them to move the
The interview began with the following open-ended questions or grand tour questions, "what was it like to discover that you were having difficulties becoming pregnant". The second interview was used as a follow-up to ask additional questions that remained unanswered from the first interview, to clarify some answers that were provided and to confirm accuracy of findings.

Thematic analysis using van Manen’s method was utilized to uncover themes and experiential structures that embodied evolving meanings of the work. Data collected were organized, read and reread, coded, and entered into NVivo12 to identify themes and patterns after each interview. The PI continued to return to the field in an iterative process of coding and collecting data until there were recurrences of a theme identified, and no new themes emerging, thus the interview process was completed after 12 interviews. All interviews were audio recorded and took place from April 2021-November 2021. All interviews were transcribed by NVivo transcription services and uploaded into NVivo 12 for the PI to code and analyze data. Codes were created inductively after listening and reading transcriptions.

Results: Eight themes emerged through the exploration of the lived experiences of Muslim women with infertility: 1) discovering difficulties of conceiving, 2) seeking reproductive care, 3) fertility expectations, 4) rationalizing fertility status, 5) emotional toll, 6) dynamic relationships, 7) pursuing support, and 8) identity.

Implications: This study was unique in that it was one of the first studies that explored the lived experience of second-generation Muslim women as well as decision making factors in acceptance of infertility treatment. The findings of this study provide a glimpse in understanding the lived experiences of Muslim American women with infertility. In this study religion, community, and need for support were discussed often. The lived worlds of Muslim American women provided evidence of the importance of following Islamic ethico-legal traditions in decision making. Educational programs or training should be developed for healthcare providers to better understand the role of religion in a specific religious group as well as best ways to communicate recommendations that may be sensitive. Similarly, discussing their experiences, asking about
their mental health, and providing counseling may reduce the emotional burden women experience. Educational training should be provided to Muslim therapists on infertility and religious style coping methods; which may improve the utilization of counseling and reduce the psychological toll of their experiences.
AUTOBIOGRAPHICAL STATEMENT

EDUCATION:

2022—Doctor of Philosophy in Nursing, Wayne State University, Detroit, MI
2015—Post-Master’s Certificate Family Nurse Practitioner, South University, Novi, MI
2009—Master’s of Science, Nurse Midwifery, Wayne State University, Detroit, MI
2007—Bachelor of Science in Nursing, Wayne State University, Detroit, MI

PROFESSIONAL EXPERIENCE:

2007- 2008 Staff Nurse, Cardiac Step Down, Oakwood Hospital
2008 - 2010 Staff Nurse, Labor and Delivery, Oakwood Hospital
2009 - 2014 Nurse Midwife, Hutzel Hospital
2015 - 2018 Nurse Midwife, Beaumont- Oakwood
2012 - current Nurse Midwife, St. Joseph Mercy Hospital
2014 - 2015 Adjunct Faculty, South University Novi
2017 - current Nurse Midwife, University of Michigan
2018 - 2018 Clinical Instructor, Chamberlain University

SCHOLARSHIP AND AWARDS:

2002 Wayne State University Presidential Scholarship
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