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Perceptions of Infertility among Arab Women in the U.S

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Abstract

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MS, American University of Beirut, 2005

BS, University of Balamand, 2003

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Abstract

Infertility is a serious public health issue. Infertile couples may perceive infertility differently based on their own cultural background. There is a paucity of literature about how infertility is perceived among Arab women living in the United States. The purpose of this study was to be able to understand how Arab women who live in Dearborn, Michigan feel about infertility and to understand their concerns and worries about their health status. The primary research questions asked Arab women how they perceive infertility and how infertility may impact their future. This qualitative case study was guided by the social support theory and the choice theory. The social support theory is mainly used in health promotion to describe unmet social, emotional, and informational needs for a certain community or population. The choice theory helped understand the way women perceive their health issue and the way to overcome it. The case study approach was used to interview 10 participants who self-identified as Arab American women with infertility problems. The qualitative data gathered were analyzed for thematic content, using open, axial, and selective coding. Results showed that for these participants, cultural beliefs regarding infertility had affected their well-being, causing feelings of shame and incompleteness. In addition, the study's findings indicated a need for more extensive psychological services and medical resources to be available for infertile couples. Positive social change may be seen in understanding the specific issues faced by Arab American women struggling with infertility and through translating this knowledge into public health programs.

Perception of Infertility among Arab Women in Michigan

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Dedication

This dissertation is dedicated to Hicham Fawaz, for without his support and continuous inspiration, none of this could have happen. I would also like to dedicate my work to my lovely parents for their immortal love and enthusiasm to complete this dissertation.

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Chapter 1: Introduction to the Study

Introduction

Infertility, the inability of a couple to conceive within a period of 1 year or more of regular unprotected sex, is a worldwide health issue (Ali et al., 2011; Boivin, Bunting, and Gameiro, 2013; Carter et al., 2011; Gurunath, Pandian, Anderson, & Bhattacharya, 2011; Inhorn, 1996; Montazeri, 2008; Ziegler, Borghese, & Chapron, 2010). On a macro level, some parts of the world struggle with overpopulation (Cousineau & Domar, 2007; Ombelet, 2011; Pennings, 2012). However, on a more micro level, many women struggle with the inability to conceive a child (Balen, 2014; Berger, Paul, & Henshaw, 2013; Inhorn, 1996; Kebede et al., 2007). In some countries, infertility has been identified as a solution to overpopulation (Cousineau & Domar, 2007; Inhorn, 1996; Ombelet, 2011; Pennings, 2012). However, the focus of this study was infertility experienced specifically by women.

Nonetheless, infertility is a serious public health concern to many other countries and communities. Researchers have identified infertility as a global health issue that affects approximately 60 to 168 million individuals worldwide; this number suggests that an estimated 1 in 10 couples suffer from primary or secondary infertility (Ali et al., 2011; American Society for Reproductive Medicine [ASRM], 2016; Cousineau & Domar, 2007; Rustein & Shah, 2004). Nearly 30% of infertility issues occur in developing countries (Cousineau & Domar; Vayena, Rowe, Griffin, Van Look, & Turman). The

burden of this health issue targets both females and males equally (Inhorn & Van Balen, 2002). However, in different societies, cultures, and communities, people blame the woman at first as the main cause of infertility problems (Inhorn, 1996; Kimani & Olenja, 2001; Peterson, Newton, Rosen, & Skaggs, 2006).

According to the Center for Disease Control (CDC; 2013), in the United States, approximately 1.5 million married women are diagnosed with infertility, accounting for 6.0% of the total number of married women. Being infertile is one of the most stressful conditions a woman can experience (Lykeridou et al., 2010; Martins et al., 2011; Peterson et al., 2006). For this reason, evaluating the status of infertility as a common health issue is very complicated, and many factors influence a woman's decision to receive treatment. Public health can benefit from studying each population separately by taking into account different cultural backgrounds in order to understand how women perceive their infertility.

The role of culture also affects the ability of a woman to cope with the diagnosis of infertility (Bell, 2013; Greil, McQuillan, & Slauson-Blevins, 2010; Schmidt et al., 2004). This is particularly true of Arab-American women, who are highly influenced by their cultures, norms, and traditions. According to the United States Census (2003), 1.2 million Arabs reside in the United States; this population accounts for approximately 0.42% of the total population of the United States. This percentage indicates that Arab women may not be recognized as having different health care needs than other ethnic or religious groups that make up the majority of the United States population. Most of the

decisions these women make are based on what their culture frames as right and as wrong (Greil et al., 2010; Steuber & Solomon, 2011; Tabong & Adongo, 2013). For this reason, it is important to understand how these women think and behave in order to fully understand their attitudes when decision-making. Understanding the lived experiences and perspectives of Arab-American women who experience infertility is important and addresses a gap in the literature relating to culture, beliefs, and infertility for this ethnic minority in the United States.

Background of the Study

Many studies have been conducted to study infertility (Ragni, 2003; Schmidt et al.; 2004, Sudha et al., 2011). Most of these studies were large quantitative surveys that addressed the issue of infertility to evaluate the incidence and occurrence of both types of infertility, assess the causes of infertility, and evaluate treatments (Chiafarrino, Baldini, & Scarduelli, 2011; Hickman & Gordon, 2011; Kuha-Yli et al., 2012; Volgsten, Svanberg, & Ekselius, 2010). The outcomes of these reviewed studies are somehow identical with respect to causes and treatment. In many studies that have been conducted in African regions, the perception of infertility was found to be due to a nonmedical health issue (Alene & Worku, 2008; Dyer, Abrahams, Hoffiman, & Van der Spuy, 2002; Dyer, Abrahams, Mokoena, & Van der Spuy, 2004; Dyer, Lombard, & Van der Spuy, 2009; Mekdes, 2008; Ragunathan & Solomon, 2009; Tinsae, 2009). In African culture, women perceive infertility as an evil, supernatural power affecting their health (Alene & Worku, 2008; Dyer et al., 2002; Dyer et al., 2004; Dyer et al., 2009; Mekdes, 2008; Ragunathan

& Solomon, 2009; Tinsae, 2009). As with the African countries, Middle Eastern countries (representing a section of the Arab world) have been also reported to have their own ways to perceive infertility, as well as different strategies for seeking treatments (Hickman & Gordon, 2011). African countries and Middle Eastern countries perceive infertility differently.

African countries, China, and Middle Eastern countries are among the countries having the highest populations that depend on complementary and alternative medicine (Alwindi, 2004; Edime et al., 2010; Tan, Uzun, & Akcay, 2004). When addressing the Arab countries, it is critical to keep in mind that this region includes 22 countries: the Gulf area countries, Middle Eastern countries, and other countries that speak Arabic, such as Libya, Yemen, Tunisia, Egypt, and others . Though not all populations perceive infertility the same way, common mental and emotional problems are found in infertile individuals, such as depression, stress, feelings of insecurity, and many more . Most studies conducted to evaluate and assess infertility in the Arabic countries focused mainly in understanding causes, symptoms, and treatments. Other studies focused on the psychological influence of infertility on individuals (Abou-Rabia, 2013; Demirtas, Akinsal, & Ekmekcioglu, 2013; Moghaddam et al., 2011). Only a few studies explored the psychological effects of infertility on individuals.

According to many studies, infertility can result in stress, depression, and insecurity in infertile woman, as well as social issues and marital problems (Kim, 2006; Lykeridou et al., 2010; Martins et al., 2011; Peterson et al., 2006). Although many studies

have evaluated the causes of and treatments for infertility, few studies evaluate individual perceptions of infertility. Moreover, whereas a few existing studies highlight perceptions of infertility in developed countries, such perceptions in developing countries still need to be evaluated (Chiafarrino, Baldini, & Scarduelli, 2011; Hickman & Gordon, 2011; Kuha-Yli et al., 2012; Volgsten, Svanberg, & Ekselius, 2010). Overall, because of this gap in the literature, there is limited knowledge about the perceptions of individuals of infertility.

While many states (Michigan, California, New York, Florida, New Jersey, Illinois, Texas, and Ohio) have Arab populations, this research will focus on the issue of infertility in women who live in Michigan, specifically in Dearborn, the city with the largest Arab population (United States Census, 2010). Arab communities are among the fastest growing communities in the United States . They are also one of the most complex communities among foreign groups in the United States because they are so divergent in traditions, languages, religions, and beliefs (United States Census, 2010). In the past few years, studies have focused on African, Asian, and Hispanic communities, but few have looked at Arab communities. This could be due to the cultural complexity of Arabic communities. For this reason, studies addressing Arab populations mainly focused only on one specific health issue, such as mental health, children's health, and sexual health.

One of the concepts that may vary among different cultures and communities is the concept of a family. Family is very essential in the Arab communities as a unit of social institution . In Arab communities, the concept of family is highly respected and is

considered a vital part of life (Bratter & Heard, 2009; Henry, Stiles, Biran, & Hinkle, 2008). Pregnant women are always surrounded by attention and care and garner respect from both her family and society . On the other hand, infertility is considered a dishonor for any married couple . Infertility can cause stress and pressure on a married couple and can lead to divorce in many Arabic societies (Abou-Rabia, 2013; Demirtas et al., 2013; Moghaddam et al., 2011). Arabs emphasize the importance of a family in an individual's life and their relations with the surroundings (other family members, the public, and friends).

Religious beliefs play a vital role in determining individual behaviors. The majority of the Arab women who live in Dearborn, Michigan are Muslims as reported by the Arab American Institute (2014). Consequently, it is important to have an overview of what Islam says about health. According to the Qur'an (the Islam Holy Book), an individual's health is a priority, and it is the individual's duty to take care of his/her health through personal hygiene, good nutrition, and exercise. Nonetheless, many Arabic women find it difficult to take care of their health and to seek health care from male health providers.

Arab women are sensitive when it comes to exposing their bodies to a male physician or even discussing a sensitive health issue in front of male professionals (Aroian, Katz, & Kulwicki, 2006). Infertility is one of the most embarrassing health problems an Arabic woman can face (Aroian et al., 2006). This could be related to the fact that infertility causes feelings of shame or incompleteness or because she might be

blamed for the infertility. For this reason, this study will draw attention to Arab women as the target population to understand their perspectives toward infertility.

The rest of Chapter 1 will be organized beginning with the problem statement. I will then discuss the purpose of the study and the research questions. Next, I will present the theoretical foundation and the nature of the study. The chapter ends with a summary and a transition to the next chapter.

Problem Statement

Infertility is defined by many researchers as the failure to bear a child after a 1 year trial of unprotected intercourse (Ali et al., 2011; Boivin et al., 2013; Carter et al., 2011; Gurunath et al., 2011; Inhorn, 1996; Montazeri, 2008; Ziegler et al., 2010). Infertility is a serious public health issue. Infertile couples perceive infertility differently based on their ethnographical background (Bell, 2013; Greil et al., 2010; Schmidt et al., 2004). Beliefs, values, traditions, religions, relatives, and many other factors could affect the quality of life of infertile couples. A person's perception of infertility is merged with daily life functioning as a mix of physical, social, emotional, and cognitive activities (Bell, 2013; Greil et al., 2010; Schmidt et al., 2004).

Arab women, although a minority is the United States, are greatly influenced by cultural and social factors. In the Arab community, getting married is one of the most respected steps towards building a family and having children (Aroian et al., 2006). As a result, being infertile leads to shame (Aroian et al., 2006). There is a paucity of literature about how infertility is perceived among Arab women living in the United States.

Accordingly, this study is designed to understand how Arab women in Dearborn, Michigan perceive being infertile.

Purpose of the Study

The purpose of this study was to be able to understand how Arab women who live in Dearborn, Michigan feel about infertility. A further purpose was to understand their concerns and worries about their health status. With the results of this study, health care providers can have a more comprehensive understanding of the specific needs this minority population has.

Research Questions

This study sought to understand the issues and feelings of Arab women living in Dearborn, Michigan toward infertility. The overarching research questions (RQs) for this study were:

RQ1: What are the perspectives of Arab women toward infertility?

RQ2: How do Arab women see their infertility impacting their future?

Theoretical Foundations

For this study, the theory of social support was applied to evaluate how Arab women perceive infertility. The social support theory is mainly used in health promotion interferences to fulfill unmet social, emotional, and informational needs for a certain community or population (Sarason & Sarason, 1985). Through this framework, I could understand and learn how these individuals function in response to their cultural background, their ethnicity, and social relationships (Sarason & Sarason, 1985). The

social support theory has been applied widely in public health studies and interventions. Studies that applied this theory mainly focused on understanding and evaluating the pre- and postsocial change as a positive outcome (Baran, Shanock, & Miller, 2012; Kossek et al.; 2011; Lakey & Orehek, 2011;Orrick et al., 2011; Thoits; 2011, Westmaas et al., 2010).

In addition to the social support theory, understanding how Arab women in the United States feel toward their infertility was determined by using the choice theory (Glasser, 1998). Along with the social support theory, this theory helped determine individuals' responses and behaviors based on their different ethnological backgrounds. Glasser (1998) explained that the status of depression or distress is already predetermined by people around us. In other words, the effect of culture on us is the key determinant of what we feel. Most of the times we do what the culture wants us to do; this is known as the "I know what is right for you tradition" (Glasser, 1998, p. 20). Understanding how Arab women living in Dearborn, Michigan feel towards their infertility issue will allow health care professionals to know what to expect from patients and enable them to provide the best health care services.

Nature of the Research Design for the Study

This study employed a qualitative case study method to evaluate and understand how Arab women perceive their infertility status. Face-to-face interviews were used to collect their responses. The qualitative case study approach was used to illuminate the quality of life variables or measures that were linked to infertility. This approach is most

appropriate when the researcher wishes to understand a phenomenon that is related to the life experiences of a particular group of people and to explore those experiences in depth (Yin, 2013). Accordingly, this qualitative case study focused on explaining and describing a group of individuals who share the same cultural background, beliefs, and the same health issue experiences, in this case,, infertility. The case study approach has been used widely in qualitative research to assess how a given cultural, ethnic, or other demographic group experiences a phenomenon, undertakes a life event, or is affected by a significant life change (O'Reilly, 2012; Schensul & LeCompte, 2010; Yin, 2013).

Definition of Terms

Health disparity: This refers to differences of accessibility or availability of health facilities and services (NLM, 2015).

Infertility: This refers to the inability of sexually active couple who are not using contraceptives to become pregnant in 12 months (World Health Organization, 2015).

Public health: This refers to all organized measures (both private and public) to promote health and prevent diseases (WHO, 2015).

Assumptions

This study made a number of assumptions. In spite of the sensitivity of the study's population regarding their health status, it was assumed that the participants would be willing to participate in face-to-face interviews and answer questions honestly without any external or internal influence. It was also assumed that the participants would be transparent in expressing their opinions and true to their experiences. It was assumed that

the topic is significant to the female Arab community members. Through this study, I explored the cultural influences on their experiences in infertility.

Limitations

The following limitations were predicted for this study. The main limitation of the study was the population. Arab women are very sensitive to this topic, and the idea of addressing their infertility status could be unacceptable to their culture and religion. This is because they were raised in a culture where talking about a sensitive health issue such as infertility or sexuality is a taboo (Aroian et al., 2006). Another limitation was that face-to-face interviews were used to collect data. This method made it harder for the respondents to avoid the feeling of shame that could affect their input. It was, nonetheless, essential to the nature of the data necessary for case study research (Yin, 2013).

The validity of qualitative study was not easy to maintain, and this was a primary limitation in this case. Biases could unfortunately be part of the researcher's personality, such as projecting self-interpretation into the study results (Creswell, 2009; Maxwell, 2008). There was also the possibility that the researcher could not deduce the reactions of the participants without predispositions (Creswell, 2013; Yilmaz, 2013) Finding the right pool to collect data from was the most time consuming step. This was because in Dearborn, specialized infertility clinics with Arab patients are limited in number. In a qualitative study, it is always difficult to generalize. What is true and applicable in this

study's population is not necessarily true of other populations (Creswell, 2009; Yilmaz, 2013).

Delimitations

The following delimitations were present in this study. This study was delimited to Arab women living in Dearborn, Michigan, who self-reported as being infertile. Another delimitation was that I only interviewed women who have no children at all (primary infertility). This again could prevent bias in interpreting results because secondary infertile women could have completely different responses to the survey questions. It was important to keep in mind the controlling strategies that were followed in previous studies (triangulation) to assure validity of this study.

Significance of the Study

The impact of infertility and its treatment on women is of great concern to public health officials (Berghuis & Stanton, 2002; Burns, Covington, & Kempers, 2006; Peterson et al., 2006). Women are affected more compared to men, and infertility treatment is one of the most difficult experiences in a woman's life (Aroian et al., 2006; Ragni, 2003). As a result, public health staff and health care providers should be very familiar with the psychosocial factors surrounding their patients (Aboul-Enein, 2014; Ali et al., 2011). It is recommended that health care providers, when dealing with patients, have the skills and ability to understand their patients' different backgrounds (Aboul-Enein, 2014; Ali et al., 2011). Unfortunately, many health care professionals do not show familiarity with the patient's background (Aboul-Enein, 2014, Ali et al., 2011). In this

study, I evaluated Arab women's perceptions of infertility and thus could provide health care professionals with important information about a neglected population.

Summary and Organization of the Remainder of the Study

Chapter 1 of this study included an introduction to the study, a background section that briefly summarizes the literature related to the public health problem addressed in this study, the problem statement, the purpose of the study, the research questions, the theoretical framework, and the nature of the study. The assumptions, limitations, delimitations, and significance of the study conclude the chapter. In Chapter 2, I analyze the existing literature and provide a comprehensive support of the theoretical framework that I used to examine the topic. Chapter 2 is grounded in existing research analysis, which combines all of the piloted investigations of the respective variables or phenomenon of study contained within the study's scope. In Chapter 3, I describe the qualitative method used by the study. A qualitative case study approach was chosen to examine the various cultural attitudes towards infertility. Chapter 4 presents the results of the study. Chapter 5 presents a discussion and analysis of the study, along with recommendations for future research.

Chapter 2: Literature Review

Introduction

There is a paucity of literature about how infertility is perceived among Arab women living in the United States. Accordingly, I designed this study to understand how Arab women in the United States perceive being infertile. The purpose of this study was to understand how Arab women who live in Dearborn, Michigan feel about infertility and to understand their concerns and worries about their health status.

In this chapter, I review current literature and explore the research on infertility, culture, and how infertile women perceive their infertility. My focus in the literature review was on the ideas about infertility and culture specific to Arab women who live in Dearborn, Michigan. This chapter consists of seven different sections: literature search strategy, infertility as a public health issue, health disparity, theoretical foundation, literature review, and studies related to methodology. The chapter ends with a summary.

Even given the world's diverse set of cultures and differing health care perspectives, reproduction is a universal health issue. As a result, infertility is recognized as a global health issue that causes stress and affects an individuals' life (Berghuis & Stanton, 2002; Burns et al., 2006; Peterson et al., 2006). It was critical in this case to take

into consideration the different distress-causing factors surrounding an infertile individual.

A woman's choice to receive infertility treatment is affected by morals, traditions, cultures, and even religion (Bell, 2013; Greil et al., 2010; Menzel, 2014). These different factors shape an individuals' perception towards any health issue. Consequently, individual decisions will not be fully based on personal concerns; in fact, cultural and social factors will be major influences over decision-making (Bell, 2013; Greil et al., 2010; Menzel, 2014). Evaluating the cultural and social determinants in the life of an infertile woman will help explain a woman's behavior in regards to her infertility, as well as the reasons behind certain decisions taken to overcome the infertility (Carter et al., 2011; Montazeri, 2007; Rashidi, Sheikhahmadi, Rostamzadeh, & Shrestha, 2008).

Studies have revealed that the Arab community is highly affected by cultural, social, and religious beliefs. Health disparities in general and reproductive health disparities in particular have been identified in Arab-Americans and African-American women (Inhorn & Fakih, 2006). Abou-Enein (2010) pointed out that culture not only plays a role in infertility distress, but also religious beliefs. It is uncomfortable for an Arab woman to talk about sensitive health issues with a male doctor (Abou-Enein, 2010). Moreover, women are believed to suffer more than men in the case of infertile couples, as is the case in all cultures .

Taking into consideration the sensitivity of Arab women and the pressure and stress caused by infertility, it was important to assess and evaluate their perceptions

towards their infertility. There are also subsections under infertility as a public health issue: infertility status in some countries, infertility status in Arab countries, infertility status in the United States, and the Arab community in the United States. In this chapter, I present information about the current health disparity, especially in the health of women. There are four subsections under health disparities: health disparities related to women in the United States, health disparities for Arab communities in Michigan, women's health issues in Michigan, and Arab infertility issues in Michigan. In the theoretical section, I discuss the two theories employed in the study. In the section of studies related to methodology, I present studies that use a similar methodology to the one used in the current study.

Literature Search Strategy

I collected and organized relevant studies, research papers, and dissertations based on their concepts. For this study, I used research databases in Walden University's Library to collect scholarly articles using as well as published dissertations. The primary databases I used in search of peer-reviewed journal articles included EBSCOhost, Emerald, ProQuest, SAGE, and Science Direct. Studies in the field of health issues on infertility are identified in this section. The search strategy depended on searching articles in databases using the following key words: *infertility, infertility perception, Arab women infertility, Arab women health disparities,* and *Arab-American health disparities.* I combined some of these key search terms in order to generate sources that were specific to the current study.

Infertility as a Public Health Issue

Infertility is viewed as an agonizing condition that affects couples and individuals. Traditionally, the issue of infertility has been considered a private matter to be resolved among the couple or by the individual. Despite the recent prevalence of topics concerning reproduction, issues such as infertility are overlooked, as the discussion of the issue of infertility is limited, especially in the public health domain.

Van Balen and Inhorn (2002) have cited several reasons for why the issue of infertility is overlooked. First, the authors noted that infertility is considered a medical condition that is affecting individuals as opposed to an illness or disease affecting communities and societies. Moreover, research is limited about infertility because it remains a taboo subject in most societies, especially when it comes to male infertility . The feminist revolution also has an impact as to why infertility as an issue was neglected. The feminist revolution placed motherhood into question . Second, the lack of research and discourse about infertility is also because policy-makers and legislators focus more on addressing the issues of fertility and failed to put equal emphasis on infertility . The authors noted that individuals in the non-Western world are more affected by infertility primarily because of higher rates of infertility as well as social norms that encourage the notion that women should conceive children.

Lemoine and Ravitsky (2013) emphasized the significance of a public health approach in understanding infertility by contextualizing the health condition in a framework. Infertility should be considered a public health issue for several reasons

(Lemoine & Ravitsky, 2013). First, the high prevalence rates of infertility in the world make a significant case for treating infertility as a public health issue (Lemoine & Ravitsky, 2013). One in 10 women experience difficulty becoming pregnant (Lemoine & Ravitsky, 2013). Moreover, it is noted that the high prevalence might actually be higher because only a percentage of the women who experience infertility come forward, and there is no database that could be a source of data (Lemoine & Ravitsky, 2013).

The field of public health is about the protection of the people's health (Balen, 2014; Ombelet, 2011). Moreover, it also involves promoting and restoring the health of individuals in society. However, if health conditions cannot be treated or prevented, then the ability of public health agencies to help is limited. Some infertility cases cannot be prevented (Balen, 2014; Ombelet, 2011); however, the majority of cases of infertility, especially in developing countries, can be prevented. Public health agencies thus have a responsibility to educate the public about infertility and to lessen the experience of stigma experienced by individuals facing infertility, especially women (Ali et al., 2011).

Two types of infertility have been identified in the literature: primary and secondary infertility. Primary infertility is the inability to bear a child at all . Secondary infertility is the inability to bear a child after a previous pregnancy (Balen, 2014; Gurunath et al., 2011; Ombelet, 2011). Infertility, with all its different dimensions as a public health issue, should be evaluated and assessed in different communities. Public health officials may be able to develop new strategies to provide and deliver better health

care services based on the new knowledge that could be gained through understanding the impact of social differences on infertility perception (Ali et al., 2011).

Although the probability of being infertile is the same for men as for women, women are often held accountable for infertility (Inhorn, 1996; Ombelet, 2011). Consequently, women are placed in a corner where societal perceptions can exacerbate their personal, emotional, and social distress (Ali et al., 2011). In many countries, having a child is essential for success in life; moreover, the inability to conceive is perceived as a failure and leads to feelings of insecurity for not having children as a means of future support (Gerrits, 2002). Feeling worthless is one of the impacts of being infertile, and this could be a main source of stress and psychological problems (Kimani & Olinja, 2001).

Infertility Status in Other Countries

A study conducted by Moghaddam et al. (2011) reported that the impacts of infertility (depression, stress, and social insecurity) are higher in women than in men. Another study, conducted by Obeidat, Hamlan, and Callister (2014), evaluated the experience of Jordanian women with infertility. The results also indicated higher stress, depression, and social instability in Jordanian infertile women. Obeisat, Gharaibeh, Oweis, and Gharaibeh, (2012) also conducted a similar study to describe the fears of infertile Jordanian women. Outcomes revealed that women suffered from emotional, social, and marital insecurity (e.g., divorce). These studies bore similar results when examining the experiences of women with infertility, such as women having physical and emotional problems.

In New Zealand, a study was conducted by van Roode, Dickson, Righarts, and Gillett (2015) in regards to the cumulative incidence of infertility for both male and female individuals in a population-based sample. There were 1,037 male and female individuals born between 1972 and 1973 who participated in the study. All the participants were 38 years old. The results revealed that male participants experienced infertility from 14.4% to 21.8% while female participants revealed 15.2% to 26% experiencing infertility. Of those participants who experienced infertility, 59.8% of male participants and 71.8% of female participants eventually had a live birth.

In Ghana, Fledderjohann (2012) noted that children have a high value in sub-Saharan Africa. As such, infertility has a different impact on the marriage of a couple and on society. Infertility can cause marital dispute and psychological distress to both the husband and wife. This stressful situation in the marriage encourages risky sexual behavior. Infertility also denies individuals and couples the possession of important economic and social capital . The author conducted interviews with 107 women between 21 to 48 years old. These women were seeking treatment from clinics in Ghana. The focus of the author was on the impact of infertility involving mental health, marital conditions, social interaction, and experiences specific to their gender. Women reported that they experience severe social stigma because of their condition. Moreover, they also experience marital strain, as well as mental health difficulties due to the pressure to conceive. The female participants felt that they shoulder more of the blame of infertility compared to their husband. As a result, also the women experience greater social

consequences because of their difficulty to conceive. Female participants who did not have any difficulty in conceiving share this sentiment, stating that infertility as an issue has severe social consequences for the couple but is more severe in the case of women. It is important to note that infertility in Ghana is an important issue because it affects the couple's and the women's social interactions, mental health, and marital condition. These consequences are more severe to Ghanaian women rather than to Ghanaian men.

A study was also conducted in three counties of Xinjiang, China. In this study, Cai et al. (2011) explored the status and factors linked with female infertility in the Xinjiang Uygur Autonomous Region, as there was high prevalence rate of infertility in these three areas. Approximately 1,895 women of reproductive age were given questionnaire surveys and subjected to a pelvic examination. The minimum infertility prevalence rate was 7.5% while the highest infertility prevalence rate was 26.2% . The average infertility prevalence rate was 15.2% . The highest rate was found in Shan and was caused by its distinct geographical environment and the lifestyle of its people. The authors also found a relationship between education, income, and higher infertility prevalence. This revealed that the lower the levels of education and income, the higher the rates of infertility in that area. In addition to these factors, the authors also cited premarital sex, concurrent diseases, location of residence, and body mass index as contributing to infertility. The authors also noted that there are a high number of cases of abortion among the unmarried in the area, which might also contribute to high prevalence rate of infertility.

The increased interest in studying infertility has been noticed during the past few years. Many studies have been conducted in different countries to evaluate and assess infertility status in different populations. The value of having children varies with culture; however, the importance of having children is cross-cultural. In many countries, one of the main purposes of marriage is to have children. Children in a couple's life ensure complete emotional status, fulfillment of parenthood, marriage security, social satisfaction, and family support (Lancy, 2008).

As for marriage instability, it had been revealed that infertility in many different countries would result in marital insecurity. This includes separation, divorce, or simply remarriage (Orji, Kuti, & Fasubaa, 2002). In Nigeria, for example, out of 236 women who were involved in a study to evaluate infertility, approximately 39% reported being divorced for their inability to conceive (Orji et al., 2002). The fear of not having children is accompanied with the fear of not having support for old age. Childlessness is a major source of feeling insecure and not having anyone to help during senior years (Inhorn & Van Balen, 2002; Lancy, 2008). Again, the variation in cultures recognizes infertility differently. This could be the reason for social ignorance for infertile couples in many regions of the world. For example, in Africa, having children is a social requirement for achieving a certain social level. As a result, childlessness could be the main cause behind the lack of good social life (Lancy, 2008). Another essential value for having children is the sense of continuity of the family. This perception is common in many countries,

especially among the Arab populations (Henry et al., 2008; Bratter & Heard, 2009). This is due to the importance of inheritance of wealth among the family members.

The way women recognize and understand infertility is another factor that could impact their infertility perception. As mentioned before, many studies had been conducted which revealed the lack of knowledge women have regarding their fertility and reproductive health (Ali et al., 2011). This definitely will have its impact on how people perceive infertility and consequently affect their strategies for seeking treatments and solutions to their health problem. An international survey was conducted to evaluate women's perception and knowledge about their infertility. This survey included the following countries: Australia, Belgium, France, Germany, Italy, Sweden, United Kingdom, and United States. The survey reported that the individuals' knowledge about infertility is low in approximately 38% of the participants (Adachi et al., 2000). This is another factor that influences the individuals' perception about infertility. As a result, the way to seek treatment will differ according to their perception (Lampic, Svanberg, Karlström, & Tydén, 2006). Again, the means of solving this health issue will vary with the cultural and social factors surrounding the individuals. These treatment methods could be as simple as not seeking any medical help and waiting for a miracle to happen, or seeking natural solutions, or traditional and spiritual solutions rather than medical treatments (Aboul-Enein, 2014).

In many cases, adoption is the solution to infertility for many couples. Although biological children are sometimes not perceived as comparable to adopted children, yet

many couples found adoption to be a way to satisfy their parenthood need (Jenkins, 2002). This is not the case for many other couples who come from different cultural and social backgrounds (Inhorn, 1996). Moreover, in some religions, adoption is not accepted and is thus not only culturally rejected but also rejected religiously. This is seen in many countries in Africa, in the Gulf countries, as well as the Arab countries (Eltigani, 2001; Fido & Zahid, 2004). When describing any Arabic population, we automatically take into consideration its devoted relationships and links to their cultural and social factors, as well as its devout religious background. Thus, we have to take into account a people whose traditions, morals, ethics, culture, and religion directly influence their life decisions (Zurayk, 2005).

Seeking technological solutions to overcome infertility, such as in-vitro-fertilization (IVF), is a new concept in many countries. IVF is spreading all over the world, including to the Arab regions (Gupta, 2006; Inhorn &Van Balen, 2002). However, such technologies are expensive, and therefore not everyone can access IVF to overcome infertility. Thus, the socio-economic status of the individual can stand as a barrier to parenthood (Inhorn, 1996).

Infertility Status in Arabic Countries

In this subsection, the focus is evaluating how Arab women perceive infertility because women are frequently blamed when a couple experiences infertility. Although infertility occurs with almost equal frequency in men and women, still the blame is greater on the woman as the main cause of childlessness (Hollos & Larsen, 2008). In

Arab culture, motherhood is one of the major purposes of a woman's life and is very essential for determining her identity as a woman (Fido & Zahid, 2004). For this reason, it is important to understand women's experiences with infertility in order to evaluate their behavioral reactions. For instance, in Africa, infertile women reported high social distress, marriage instability, ostracism, and abuse (Fido & Zahid, 2004). Another study, conducted on Kuwaiti women, revealed the same outcomes in regards to neglect, social distress, and women being blamed for being unable to conceive (Fido & Zahid, 2004). Orji et al. (2002) reported that women in Nigeria suffered from neglect and that husbands threatened to take another wife when their first wives were infertile.

Another study was conducted in Kuwait in 2010 to evaluate the effect of infertility on the emotions of patients and how the health providers (nurses) cope with such situations . Similar results were reported in comparison to aforementioned studies; infertile women reported higher anxiety, stress, and depression. However, the role of nurses assessed in this study was the factor that determines the difference between this study and other studies. Results revealed that nurses were aware of the emotional status of their patients and consequently were of a great support to patients, helping infertile women through their encouraging and caring words (Omu & Omu, 2010).

In Saudi Arabia, women reported decreased knowledge of infertility, and again the image of external power being the cause or treatment of their infertility dominated their perception. Stress, depression, and social and marital instability were also reported (Abolfotouh et al., 2013). Hammoudeh, Hamayel, Abu-Rmeileh, and Giacaman (2013)

reported that in Palestine, fertility is a controversial issue. However, little is known about the effect of infertility on women. According to the authors, approximately 7–8% of Palestinian couples experience difficulty in conceiving. In half of those cases, it is the woman who is infertile. This study was a pilot study in which 34 women (ages 19 to 42 years old) participated. These women attended health care clinics and were interviewed by the researchers together with two research assistants. The women reported several physical symptoms that they associated with infertility: insomnia, fatigue, dizziness, palpitations, and breathing problems. The authors stated that the physical symptoms experienced by the women were due to the pressure they experienced because of their inability to fulfill the role of being a mother. The women also reported their feelings with their experiences with infertility as being "emotionally drained or overwhelmed, frustrated, hopeless, feelings of anxiety, sadness, and *hamm* (a combination of different feelings, including anger, distress, frustration, grief, incapacitation, worry, and sorrow)" (Hammoudeh et al., 2013, p. 20). The physical symptoms as well as emotional symptoms might also be due to the treatments they are receiving.

The majority of the women who participated in the study also stated that they feel a void in their lives (Hammoudeh et al., 2013). The participants stated that they feel incomplete as women and that they are unable to play the role of a mother. One of the most common fears of the participants was getting old without having any children. The women also reported that they cry excessively at home because of their infertility issues. One of the characteristics of the Palestinian society is the belief that once couples have

children they are financially secure for their old age. As such, the infertility of a couple is a long-term issue related to taking care of members of the family who are elderly. However, the authors noted that the burden lies more with the women than the men in these situations.

The social impact of infertility depends on the social support received by the participants. Some participants stated that their in-laws were more supportive and understanding compared to their own families (Hammoudeh et al., 2013). On the other hand, some participants reported being physically and verbally abused by their in-laws, who blamed the participant for her infertility. Communal gossip also had an impact on the experiences of the participants regarding infertility. The participants felt embarrassed, hurt, as well as stigmatized because of their condition. More than 90% of the participants stated that there was a significant economic burden in their condition.

Infertility Status in the United States

According to Rajeshuni (2013), nearly 6 million couples suffer from infertility in the United States. The majority of individuals think that infertility is just another medical condition, but the suffering of the victims goes beyond the biology and more often than not leaves scars. Moreover, 40% of cases of infertility are attributed to male individuals, 40% of cases of infertility are attributed to female individuals, and 20% of cases of infertility are attributed to a combination of the two .

Data from the Department of Health and Human Services (2010) stated that there are seven mental health issues that infertile women face: (a) anxiety, (b) depression, (c)

anger, (d) marital problems, (e) sexual dysfunction, (f) social isolation, and (g) low self-esteem. Statistical data also revealed that women report a higher level of distress than men. One Harvard study also likened the effects of the condition of infertility to negative emotions experienced by patients with heart disease or cancer (Tarkan, 2012).

One study explored the male perspective on infertility in the United States. Louis et al. (2013) stated that infertility is an impairment that is couple-based. The authors acknowledged that when it comes to the population level of research, most of the reports come from female partners. Only a few studies focused on the male partners. According to the authors, most of the studies focus on the use of infertility services rather than on exploring the experiences or efforts to determine the prevalence of infertility as reported by the male partners. The authors collected data from the male participants aged 15 to 44 years old who took part in the 2002 National Survey of Family Growth (NSFG). The authors used backward recurrence time parametric survival methods and estimated the time-to-pregnancy and time rations of the reports of the male partners. The prevalence of infertility was at 12%. The longer time-to-pregnancy was associated with older age as well as lack of health insurance. Based on the results of the study, the authors concluded that the prevalence of infertility based on the reports of the male partners are consistent with the research in infertility in the United States. The authors noted that male partners are also a reliable source of information when it comes to infertility health issues.

Religion also has an impact on the issue of infertility. Burdette, Haynes, Hill, and Bartkowski (2014) examined the relationship between perceived infertility, religiosity,

and inconsistent contraceptive use. The authors collected data from the National Survey of Reproductive and Contraceptive Knowledge (n = 1,695). The authors found that evangelical Protestant couples were more likely to draw the conclusion that they were infertile when the women had unprotected sex but did not become pregnant. Moreover, evangelical Protestants also reported inconsistent use of contraception compared to non-affiliates. The results suggest that evangelical Protestants were more likely to have misconceptions about their contraception use and beliefs about infertility.

The problem is the poor knowledge of individuals about infertility, which in turn stands as a barrier to seek medical help. In many countries, women's knowledge about infertility and their reproductive health is very limited. A large survey that was conducted in 10 countries (17,500 women) confirmed this hypothesis. Ali et al. (2011) also revealed in his study that the knowledge of infertile women interviewed about their reproductive health was poor. These experiences with infertility were reported in many studies highlighting stress, feelings of loneliness, feelings of worthlessness, marital insecurity, lack of social life, and unhappiness as the main outcomes of infertility (Berger et al., 2013; Kim, 2006).

Boivin et al. (2013) also tackled this issue as a reflection of the article about Cassandra's prophecy. The authors identified five ways to increase fertility knowledge and fertility health issues:

> (i) better sexual education for children; (ii) family planning for young adults that involves value and preference clarification about future parenthood goals; (iii)

> public health campaigns to increase awareness of the risk factors associated with reduced fertility; (iv) investigation of adherence to fertility guidelines within the medical profession; and (v) clearer information about the benefits and limitations of available fertility treatment. (Boivin et al., 2013, p. 13)

The Arab Community in the United States and Michigan

Dearborn is one of the largest cities in the state of Michigan (in the Detroit metropolitan area; CITE). It was first established as the village of Dearborn in 1786 and named after the patriot Henry Dearborn . It was first settled by the Europeans, and in the early 60s, the Arab population noticeably began to increase (CITE). After significant political events occurred in the Middle East, the number of immigrants increased . This population diverges according to different religions and according to the home country; however, we can still notice homogeneous cultural values dominating this population (Henry et al., 2008; Bratter & Heard, 2009). As for the economic status, statistical numbers indicate that approximately 20% of the Arab immigrants are below the poverty line . This status is considered a main barrier for the Arab population to access health services (CITE).

According to the 2000 census, the population in Dearborn reached 97,775 . However, the 2006 records reported a decline in the population to 92,382 (a 5.5 % decline; CITE). The Arab population represents more than a third of the total Dearborn population, and today there are approximately 30,000 Arabs in Dearborn mostly residing

in the eastern area . Among the Arab population, the majority are Lebanese, in addition to Iraqi, Yemeni, and Palestinians .

A new concept had been introduced to the definition of infertility among the Arab regions in the International Conference on Population and Development (ICDP) in 1994 in Cairo that helped to frame reproductive health in terms of both the macro and micro levels for individuals . However, this conference did not integrate *dignity*, which is believed to be a part of an individual's recognition and perception of infertility, into its definition (Kaddour, Hafez, & Zurayk, 2005). When highlighting culture as a main influence of infertility perception, we should take into consideration the culture's religious beliefs. In general, many cultures, specifically Arab culture (Arabs mainly being Muslim) value being fertile or having a child as a gift from God (Henry et al., 2008; Bratter & Heard, 2009). Varying cultures agree on the essential feeling of love and being loved among parents and children. This feeling would provide happiness to parents, and consequently this would explain why individuals seek to fulfill this happiness through having children (Henry et al., 2008; Bratter & Heard, 2009; Inhorn & Van Balen, 2002). Children are a source of emotional satisfaction, happiness, support, and life security, as the literature revealed. These positive feelings towards having children are common in different countries and different cultural backgrounds. Likewise, these feelings are found among Arabs here in the United States. For this reason, it is important to understand how the value of children impacts their infertility perception.

According to the U.S Census (2010), the state of Michigan has the largest and the fastest rising Arab- American population among other states. Approximately 403,445 people of Arabic ancestry live in Michigan . This number represents nearly 40% of the total Arab population living in the United States, which is approximately 1.7 million people as reported by the United States Census (2010). It is important to mention here that the Arab American Institute also reported their own numbers for the size of Arab population in the United States, which it estimates at 3.5 million . This difference in the size of Arab population depended on how Arabs were grouped (Arabs only, Arab-Americans, or other Arabs; United States Census, 2010). Whether it is 1.7 million or 3.5 million Arabs, the Arab population is a significant number of individuals who share a common ethnical, cultural, and linguistic identity very different from other cultural identities found in the United States. Moreover, according to an existing hypothesis, immigrants' behaviors change in accordance with their new culture (Dallo, Archer, & Misra, 2014). For this reason, it is highly vital to be familiar with Arab culture and beliefs in order to understand their health care behaviors and to provide good health services. This fact suggests that familiarity with Arab culture would increase as Arab population increases. However, this is unfortunately not true. In fact, health care providers often lack knowledge about different cultures. As a result, health care providers are not capable of understanding and comprehending differences in their patients' health behaviors.

Health Disparities

Health Disparities Related to Women in the United States

Women's health is a priority for the Agency for Healthcare Research and Quality (AHRQ). According to the National Healthcare Quality Report (NHQR), which concentrates on "national trends in the quality of health care provided to the American people" and the National Healthcare Disparities Report (NHDR), which concentrates on "prevailing disparities in health care delivery as it relates to racial factors and socioeconomic factors in priority populations," women are included in the priority population when it comes to improving health quality (AHRQ, 2010).

Health Disparities for Arab communities in Michigan

According to the Michigan Department of Health and Human Services (MDHHS; 2015), the Health Disparities Reduction and Minority Health Section (HDRMHS) aims to focus on attaining health equity, including equity for Arab communities in Michigan. According to a 2009 report, lack of transportation and proximity to health centers are identified as blockages to better healthcare (Michigan Department of Community Health [MDCH], 2009). Moreover, approximately 21% of Arab-Americans are uninsured (MDCH, 2009). In 2009, these were the factors that would improve the health of Arab-Americans in Michigan:

> [Having a healthcare] system that is accessible to more people and easier to navigate; improvement in cultural competence of providers and availability of linguistic services; community engagement and education though the media and

faith networks; and change in policies to decrease youth tobacco and drug use. (MDCH, 2009, p. 2)

Infertility Status in Michigan

According to a report released by the Michigan Department of Health and Human Services, 5.8% is the infertility rate in Michigan (MDCH, 2009). From a sample of individuals who have tried to get pregnant in 2012, 4.5% of infertility cases have been found in other races (MDCH, 2009). There has been no study found that discussed the infertility status of Arab women in Michigan.

Theoretical Foundation

The theories used in this study were: the social support theory and the choice theory. The "choice theory" by Glasser (1998) was the theoretical base used in this study to understand how Arab women in the United States perceive infertility, and how they recognize and define the Health Related Quality of Life Measures. The "social support theory" was applied in this study primarily to satisfy the social, emotional, and informational needs of infertile Arab women. This theory allowed pre- and post-evaluation of the social change aimed from conducting this study.

In many cultures, infertile couples consider themselves isolated from fertile couples. This status increases their feeling of distress, ostracism, and insecurity (Ali et al., 2011; Cousineau & Domar, 2007). The feeling of isolation from the surrounding world due to a health problem is an outcome of social and cultural factors. Different cultures perceive infertility differently, and the individuals' choice to cope or to isolate themselves

from the community is totally influenced by their culture (Berger et al., 2013; Erickson, 2005; Kaddour et al., 2005). Arab women are considered to be a sensitive population highly affected by their cultural and religious beliefs. This population needs specific attention when targeting their health issues. It is highly recommended for health professionals to be aware of how the culture affects their decision-making towards their health problems in order to provide the best health care possible to overcome their health obstacles. I chose the "choice theory" by Glasser (1998) as the mean to understand how Arab women in the United States perceive infertility, and how they recognize and define the Health Related Quality of Life measures.

Women are being blamed in most cases for their infertile condition, and they feel responsible for having a childless life. The choice theory starts teaching individuals about their personal responsibilities. It also reveals individuals as the main decision-makers for a happier life (Glasser, 1998). In this study, the perceptions of infertile women were evaluated because women are the ones blamed in their culture for their health status. Glasser (1998) explained how the individuals' reactions are always linked to external factors such as culture and family. This study looked at how cultural factors affect women's perceptions of infertility and consequently their view of the future; these factors are vital in explaining the women's behavior.

The choice theory helped evaluate and understand how the Arab women react, behave, and function to face their infertility in response to their cultural background, their ethnicity, and social relationships (Glasser, 1998). It has been confirmed by the literature

that infertility is a source of distress and may cause psychological issues for couples. Moreover, the whole quality of life of infertile couples will be impacted and modified dramatically due to their infertility (Schmidt et al., 2004; Van Balen & Gerritis, 2001).

In the choice theory, Glasser (1998) explained that the status of depression or distress is already predetermined by people around us. The effect of culture on us is the key determinant of what we feel. This fact explains why infertile women in general and infertile Arab women in particular feel a significant amount of distress and pressure. Glasser explained that much of the time individuals do not do what they want to do; instead they do what the culture wants them to do. This is known as the "I know what's right for you tradition." This again explains why women fear to be infertile. The community blames the woman for being infertile, making her feel incomplete due to her childlessness. Even family and friends may be the reason for her loneliness and neglect (Glasser). Glasser explained that it is the person's decision to make his life happy or sad. In other words, the person is the only one responsible to allow people or factors around him/her to make him/her happy or unhappy (Glasser, 1998).

The key here is to truly know the borders of our responsibilities and to accept it to be able to make the best decision that changes our life to a happier one (Glasser, 1998). It is very essential here to mention that the choice theory basically focuses on five main values: love and belonging, power, freedom, fun, and survival (Glasser, 1998). These five values characterize our life or what Glasser (1998) recalled as "quality world" (p. 20) If we look into each value we can see that they are formulating our quality of life measures

which we are planning to evaluate in this study. The individuals' needs, as Glasser explained, are completely immersed in these five values that are achieved through the relationship of the individuals with their surroundings and their beliefs (Glasser). Throughout the literature, we can see that the choice theory has been used to evaluate human behavior. In many cases, we see that the application of the choice theory resulted in understanding the individuals' responses and reactions to changes around them (Glasser, 1998).

Mickel and Miller (2013) applied the choice theory in addition to social constructivism in their reality therapy to make a change in veterans who suffer from anxiety. The therapy used focused on changing the original, traumatic pictures these veterans had. By changing their pictures, they could change their behaviors. Simply changing pictures that make individuals unhappy to pictures that bring individuals happiness could change their behavior (Mickel & Miller, 2013).

Another study applied the choice theory to evaluate children who have been sexually abused . The study focused on understanding the behavior of children once the abuse ended. That study highlighted the importance of choice theory as a framework to assess the child's behavior or reaction after being sexually abused. These children were trying to behave differently (negatively) to meet their needs (Ellsworth, 2007). This is what Glasser (1998) meant in his theory that individuals will seek to behave in a certain manner to determine what they want from what they need.

Another concept in choice theory is the concept of good relationship. This concept was tested again by a study called "Potential Impact of Lead Management Principles on Academic Achievement When Implemented in Comprehensive School Counseling Programs" by Mason (2013). The application of choice theory and reality therapy enhanced the academic performance of students. This enhancement was linked to the development of good relationship between the teachers and students.

Almost the same application of the choice theory and reality therapy was revealed in a study conducted to examine the social-emotional and educational performances of prisoners' children. The theory here is concerned with the relationship between the children and their imprisoned parents. Whereas choice theory posits the need for love and belonging, children of prisoners are apt to experience detachment, which can affect the children negatively. The study revealed the distress these children suffered due to their parents' incarceration (Edwards, 2009). This distress affected their school behavior as well. Consequently, reality therapy was used with these children to enhance their behavior and school performance (Edwards, 2009).

The application of choice theory is widely used in studies that focused on evaluating and understanding individuals' behaviors. This indicates that the application of this theory to this study will also help in understanding and evaluating the women's behavior and perception of their infertility status. The five values of the choice theory are entangled with the women's experiences with infertility. This concept is revealed throughout the literature in which infertile women were always trying to conceive to feel

secure, to love and feel love, to identify their identity as full females and as mothers, to feel respect from others, and to survive (Gerrits, 2002; Berger et al., 2013; Kim, 2006).

Summary of Infertility Issues

As a global health issue, infertility varies in its definition among the different sectors of health care professions (Ali et al., 2011; Boivin et al., 2013; Carter et al., 2011; Gurunath et al., 2011; Inhorn, 1996; Larsen, 2005; Montazeri, 2008; Ziegler et al., 2010). This variation is also seen with the different percentages of infertile couples among the different countries. As an estimate, 8%-10% of couples suffer from infertility worldwide (RHO, 2003). The African countries account for the highest percentages of infertile couples. These high percentages also vary among the African countries due to different beliefs, as well as cultural and behavioral factors (Erickson, 2005). Although causes and factors influencing infertility may vary as well among different countries, we can still find high infertility rates in Egypt (Inhorn & Buss, 1994). All studies conducted had revealed the numbers and statistics for infertility, yet few studies focused on the way individuals perceive and live with infertility based on their different cultural background (Erickson, 2005). As a result, understanding the socio-cultural perspectives surrounding this health problem would help us foresee and predict individual behavior.

Studies Related to the Present Study's Methodology

Only one study was found that dealt with the same research topic. However, it was an ethnographic study, not a case study. Inhorn and Fakih (2006) compared the barriers to infertility care of Arab-Americans and African-Americans in Dearborn,

Michigan. The authors also used an ethnographic approach with semi-structured reproductive histories and open-ended questions. The conclusion was that "Arab Americans and African Americans living in metropolitan Detroit are at increased risk of infertility and share similar histories of poverty, racism, and cultural barriers to medical treatment" (Inhorn & Fakih, 2006, p. 849).

No research could be found that dealt with this topic, examined a similar population, and used a case study approach. The present research may therefore be unique in the field as of the date of its completion. I hope that further case studies on the infertility problems faced by Arab-American women are conducted in the future.

Summary of Literature Review

The purpose of this study was to be able to understand how Arab women who live in Dearborn, Michigan feel about infertility and to understand their concerns and worries about their health status. The literature showed how the value of children, fulfilling personal emotion, securing family support, and recognition of identity make childlessness an unacceptable status in many different countries. Research reviewing all these different factors have been reported in many countries--such as Australia, Africa, the United States, England, and Nigeria--yet there is a lack of knowledge and a gap in the literature that need to be fulfilled in regards to the Arab population in the United States. The concept of family is one of the driving forces in an individual's economic life. This reflects why Arabs perceive the importance of building a family as a must, a need, or a priority (Aroian et al., 2006).

Understanding how the Arabic family is constructed with respect to gender power is critical in this study because infertility is commonly taken for granted as a female health issue. Men are the source of power in Arab communities, and the main aim and purpose of an Arabic woman is to get married, to have children, and to take care of the family (Aroian et al., 2006). Although many Arabic immigrants have changed their views and have incorporated some of the new traditions and concepts of their adopted country, the aforementioned perceptions of an Arab woman's purpose dominates most Arabic beliefs and perceptions (Aroian et al., 2006). To conduct and evaluate effective public health service, a deep understanding of how ethnicity and culture could influence the population's behavior towards any health issue is needed. This includes the values, traditions, beliefs, perceptions, and expectations a patient may have that could help prepare the public health providers and professionals with the knowledge and tools needed to deliver the best health services. The need for this understanding makes the case study approach appropriate and useful

All of the above-mentioned factors make infertility a difficult, stressful health issue faced by women who will have to make the decision whether to accept her status as being infertile, or to seek medical help to conceive a child. In both cases, we should evaluate the individual woman's experience and understand how she recognizes, defines, perceives, and accepts infertility.

For this study, the theory of "social support" was applied to evaluate how Arab women perceive infertility. The social support theory was mainly used in health

promotion interferences to fulfill unmet social, emotional, and informational needs for a certain community or population (Sarason & Sarason, 1985). Through this framework, I understood and learned how Arab women function in response to their cultural background, their ethnicity, and social relationships (Sarason & Sarason, 1985). The social support theory had been applied widely in public health studies and interventions. Studies that applied this theory mainly focused on understanding and evaluating the pre- and post-social change as a positive outcome (Orrick et al., 2011; Kossek et al., 2011; Thoits, 2011; Westmaas et al., 2010; Lakey & Orehek, 2011; Baran, Shanock, & Miller, 2012).

In addition to the social support theory, the choice theory was used to determine how Arab women in the United States feel towards their infertility (Glasser, 1998). choice theory, along with the social support theory, helped determine individuals' responses and behavior based on their different cultural backgrounds. Glasser (1998) explained that the status of depression or distress is already predetermined by people around us. In other words, the effect of culture on us is the key determinant of what we feel. Most of the times individuals do what the culture wants them to do; this is known as the "I know what's right for you tradition" as stated by Glasser (1998). Understanding how Arab women living in Dearborn, Michigan feel towards their infertility will allow health care professionals to know what to expect from patients, and accordingly to provide the best health care services.

In this chapter, studies related to infertility and how infertility is perceived in the Arab community were presented. The following chapter, Chapter 3, explains the methodology for this study. This qualitative case study method of research focuses on connotations, which in turn focus on the reasons behind a specific matter, procedure, condition, minor group, or societal dealing (Dworkin, 2012; Yin, 2013). The study's semi structured interviews will aid in understanding the topic through exploring the deep-thinking element of representation of viewpoints as created by Husserl in 1969.

Chapter 3: Research Method

Introduction

The purpose of this qualitative case study was to analyze the views of Arab women who live in Dearborn, Michigan regarding infertility. Specifically, one of the aims was to understand their health status within the framework of society. A qualitative case study methodology was used to illuminate the quality of life variables or measures linked to infertility. This approach was in alignment with the goal of the study, to provide an in-depth examination of the individual experiences of a group of individuals who were similar and had had similar experiences; in this case, the same health issue experiences. In qualitative research, the case study approach places emphasis on the importance of different cultures, as the experiences of persons from a distinctive culture can be examined as they are inhabitants of a land with a much different culture . Such a comparison is enabled from the analysis of the data and can add to understanding of how different populations behave differently (Creswell, 2012; Merriam, 2014; Yin, 2013).

In this chapter, I will justify the qualitative research methodology and the case study method. I will also highlight the purpose of the study and the research questions and discuss the data collection procedures and data analysis. In addition, I will discuss

issues pertaining to the ethical treatment of the participants. In this study, the research questions were:

RQ1: What are the perspectives of Arab women toward infertility?

RQ2: How do Arab women see the impacts of their infertility on their future?

Research Method

This study employed a qualitative case study design, which was the most appropriate approach for a study where the data sought were the in-depth experiences of a particular group of individuals. The study used the case study approach, which is often used when the researcher wishes to examine a group of individuals who share common characteristics and have undergone and/or are undergoing similar experiences, but whose perceptions of and responses to those experiences may vary considerably . In this study, I focused on Arab women as the target population in order to understand their perspectives toward infertility.

According to Merriam (2014) and Creswell (1994), a qualitative study seeks to understand a phenomenon based on developing a holistic picture from the textual descriptions of the participants. A qualitative study extracts data that are expressed verbally and has a subjective component (Merriam, 2014). On the other hand, a quantitative study is about testing a theory and analyzing the results with statistical procedures (Merriam, 2014). Qualitative research methodology is used in studies that are aimed to provide a detailed account of the specific situation. The qualitative method is multimethod as it involves an interpretative and naturalistic approach to the topic

(Merriam, 2014). Qualitative researchers study subjects in their natural setting in an attempt to interpret the phenomena based on the experiences of the participants (Merriam, 2014). Qualitative method involves the use and collection of various empirical sources: case study, introspective life story, interactional text, interview, observation, and historical data (Merriam, 2014). For this study, I used the case study approach as I sought to thoroughly understand the experiences of a particular group. In this study, I explored the issue of infertility among the Arab-American female population living in Michigan. Through this study and the qualitative case study approach, I wanted to understand the perspectives held by those women.

Patton (1990) provided a description of the following kinds of research questions that require the qualitative method. First, the questions should focus on the process of its participants (Patton, 1990). The focus of the current study was to understand how Arab women who live in Dearborn, Michigan feel about infertility and to understand their feelings about their health status. Second, the questions necessitate detailed information about the participants (Patton, 1990). In-depth information was needed in order to fully understand how infertility affects the specific needs of this minority population. Third, the individuals in a study, in their uniqueness of quality, bring significance to the study (Patton, 1990). I interviewed participants and found out the similarities and differences between their experiences with infertility, and I created a comprehensive landscape of the health status of this minority population. Lastly, the goal of a study was to understand the experiences, attitudes, and beliefs of the participants in the context of the research

problem (Patton, 1990). This is similar to the purpose of the study. Creswell (1994) as well as Merriam (2014) emphasized that the nature of the research question is important in choosing which method to use. In a qualitative study, the question starts with how or what.

Patton (1990) also stated that a researcher could choose qualitative methods based on practical reasons associated with these methods. First, the intended audience of the results of the research might prefer (a) that the researcher had personal contact with the participants and (b) the data be from a qualitative study (Patton, 1990). One of the intended audiences of this study was healthcare providers. Healthcare providers could use the results of this study so that they would be able to better understand their Arab-American clients who are experiencing infertility. Second, qualitative methods may be chosen in the absence of acceptable quantitative measures for the desired outcomes of the study (Patton, 1990). In this study, there were no valid and reliable quantitative measures available to evaluate the experiences of the Arab-American women with infertility. Such methods, in addition, would not provide the rich, descriptive data that I felt was needed for this study.

Quantitative methods can be used when the researcher simply wants to establish relationships between the variables or to describe the strength of the correlations (Patton, 1990). However, a quantitative methodology cannot be effective when the researcher is trying to define causation or to provide interpretation of the research problem (Patton, 1990). Qualitative methodology was therefore appropriate in addressing my research

questions effectively. Additionally, a quantitative methodology was not chosen because there was a need for context-specific knowledge to understand the experiences of Arab-American women with infertility. Moreover, a quantitative method does not adequately capture the understandings of participants' experiences. It is also restricted by narrowly created variables.

Design Appropriateness

I employed a qualitative case study approach for this research as my goal was to understand how a medical experience, infertility, affected a particular population, Arab-American women in the United States, in a particular location and context, Dearborn, Michigan. It was necessary to gather a population of participants who shared those similarities and met my criteria. Given that I wished to examine their experiences and perceptions in depth, it was essential to choose a research design that allowed for the collection of rich, thick data (Yin, 2013).

While case studies and ethnographic studies have several similarities, this study was not an appropriate setting for ethnography because the participants/cases were not in a natural setting, a prerequisite for an ethnographic study (Yin, 2013). The participants, while adhering to the cultural norms and values of their countries of origin, were not in those countries but rather, the United States, a country where cultural practices, norms, and beliefs are mostly dissimilar to those in Arab nations. Thus, the setting was unnatural in that these women were not in the setting where their culture and values would have been predominant. In addition, ethnography usually involves the study of the history of the group, kinship patterns, rituals, politics, education system, social structure, and the degree of contact between the specific culture and mainstream cultures (Spiers et al., 2014). This study was not about an examination of the participants' culture, but rather their experiences as members of a given culture experiencing a medical event.

While this study examined a phenomenon, the medical issues experienced by Arab-American women who are infertile, my goal with the study was to examine the results of the phenomenon, not the phenomenon itself. Therefore, a phenomenological approach was deemed inappropriate. Several qualitative methods were also considered but were deemed inadequate to address the research questions and the purpose of the study. Grounded theory (GT), "a general methodology for developing theory that is grounded in data systematically gathered and analyzed" (Strauss & Corbin, 1994, p. 273), was deemed not appropriate because the purpose of the research is not to postulate an alternative theory. Participatory action research (PAR) was also deemed inappropriate

because the emphasis is on the participation of the participants in setting the agenda, taking part in the data collection and analysis of the researcher, as well as controlling the utilization of the results (Yin, 2013). Even though case study methodology and ethnography seem similar, Yin (1994) emphasized that there is a difference. One of the differences is the theory development of the design phase.

Population

The target population in this study was the Arab-American population of Dearborn, Michigan. Specifically, I targeted females who had experienced infertility. According to the United States Census (2010), Michigan has the largest and fastest rising Arab-American population among other states with 403, 445 people of Arabic ancestry living in the state.

Sampling Frame

According to Neuman (2003), the sample of the potential participants in the study represents the target population of interest. I employed purposive sampling as it seeks information-rich data for detailed study (Patton, 1990). Berg (2001) stated that purposive samples ensure that specific types of individuals display the needed attributes that are included in the study (p. 32).

Creswell (1998), in addition to Corbin and Strauss (2014), addressed the issue of the number of participants to be included in qualitative research. Corbin and Strauss stated that there is no definite number of participants in a qualitative research. However, Creswell stated that 15 to 25 participants could be expected to provide data saturation.

For this study, the data saturation was met by nine participants. The research participants included female Arab-Americans who lived in Michigan who had experienced infertility. In accordance with Creswell, Corbin, and Strauss, I asked 10 people to participate in this study. However, one of the 10 refused to complete the interview and data saturation was reached with nine participants only.

I recruited the participants through the clients of several clinics in Michigan. I contacted the physicians of the clinic to ask their clients if they wanted to participate in the study. Interested parties informed the clinic staff, and consequently, the staff contacted me. I contacted the participants personally and described the purpose of the study.

Method of Inquiry

This study used interviews with a purposive sample from a specific population. Kvale (1983) defined a qualitative interview as "an interview, whose purpose is to gather description of the life-world of the interviewee with respect to the interpretation of meaning of the described phenomena" (p. 174). Interviews based on the case study approach are a series of open-response questions to obtain how the participants make sense of their experiences and the important events in their lives . There are three types of interviews: interview guide approach, standardized open-ended interview, and informal conversation interview (Corbin & Strauss, 2014). Cassell and Symon (2004) also stated, "The qualitative research interview is ideally suited to examining topics in which different levels of meaning need to be explored" (p. 21). In order to gather detailed

descriptions of their experiences, I used the informal conversation interview so that the participant would be more comfortable in answering the questions, especially due to the sensitive nature of the topic. All the interviews were transcribed to ensure the accuracy of the data interpretation.

The first step for the data collection was to obtain an IRB approval letter from Walden University. Once IRB approval was received, I prepared all the materials needed for data collection and I contacted the clinics in Dearborn-Michigan to ask for permission to conduct the study in their facility.

Informed Consent

Earning the trust of the participants is important in ethical research as well as in getting rich information from the participants. All participants were given an informed consent cover letter (Appendix B). The informed consent letter provided the participants with all the information of the study, the research problem I was trying to explore, the purpose of the study, the significance of the study, and specific details about their participation in the study.

Each participant signed the consent letter as an indication of a willingness-to-participate-in-the-study release (Appendix B). Moreover, the participants also had the right to withdraw from the study at any time, if they so choose to do so. A participant would have just had to inform me that she no longer wished to participate in the study in order to withdraw.

Confidentiality

The informed consent letter (Appendix B), included all the procedural steps in maintaining the privacy and confidentiality of the participants. Personal information about the participants was not to be included in the final output except for age with the approval of the participants. Moreover, I also used pseudonyms for the participants rather than revealing their real names. I also avoided including data that would lead to the discovery of the real identity of the participants. Personal information remained confidential and would not be released without prior approval from the participants. In order to protect the privacy and maintain anonymity of the participants, there was a need-to-know clause to secure from the inappropriate leak of personal data of the participants.

All the participants were required to sign and return the informed consent letter to me before the participant was permitted to participate in the research. All the responses were housed in a secure location. I will keep the materials for more than 5 years after this study has been completed for the purpose of any possible future studies.

Data Collection

I employed the following methods in this study: interviewing and note taking. During the interviews, I wrote down notes as soon as an observation was made to capture the information effectively. I kept empirical observations as notes and included interpretations of these observations. I filled in dates and times on which the observations were made and analyzed and interpreted observations and tried to attempt to recognize a pattern among them.

The method employed an informal conversation interview. According to Kwan-Gett, Baer, and Duchin (2009), an effective interview will do the following:

1. Ensure access to the setting
2. Understand the language as well as culture of the participants
3. Locate an informant
4. Conduct a field test in order to refine possible questions and probes
5. Establish rapport with the participants
6. Record the interviews
7. Collect relevant materials

During the interview, I was courteous and professional. Before the interview started, I provided a brief background of the study and asked the participant if she had any questions before proceeding with the interview. After the interview, I thanked the participant and asked if she had any additional questions.

Instrument Selection

The study relied on various tools and methods to collect and analyze the data. The interviews acted as the tool to describe and capture the experiences of the female Arab-American and how they understand their experiences about infertility. I used an informal conversation interview with a purposive sampling of female Arab-Americans living in Michigan. I prepared an interview protocol in order to be prepared for the interviews (Appendix C). All interviews were transcribed to ensure accurate data collection. Each

participant was also given a copy of the transcription to ensure the accuracy of the information. After the data analysis was done, I provided a copy of the interpretation to ensure that I have appropriately interpreted the experiences and views of the participants.

Data Analysis

Once the interviews had been conducted, they were transcribed to ensure the accuracy of the data. I transcribed the interviews in order to expedite the process. To analyze the data the following procedures were performed: (a) organize the data collected, (b) generate themes and identify patterns, and (c) write the report.

In organizing the data collection, the first step was to read and reread the data until I have become familiar with them. I also performed minor editing on the fields notes and then coded the data. Coding is about organization of the data into categories related to the framework and research questions of the study, with the aim that the codes can be used to support the interpretation of the data . I listed down on note cards the available data and tried to classify them into codes collected. I used the NVivo© qualitative software to assist with the coding because the data was entered into NVivo and the software would be able to organize them into summaries. The codes would further be organized into more inclusive domains such as case summaries, dummy charts, and tales. The field notes from observations of participants during the interviews were used to support the interview data.

Data were stored and coded using NVivo 11 software. I analyzed the data from a critical perspective that focused on the effects of explicit and implicit societal norms.

Several themes associated with social support theory and choice theory were anticipated. I considered themes pertaining to social support, the ways in which individuals interpret information, perceptions of support, environmental influences, and behaviors influenced by needs. During data analysis, I took several steps. These steps included:

- Step 1: I organized and prepared data for analysis by recording, transcribing, and importing transcripts into NVivo 11 coding software.
- Step 2: Data were read twice to gain familiarity with the information. Preliminary codes were created to provide a theoretical framework of interpretation to be used within the entire dataset. Preliminary codes were created using social support theory and choice theory in order to describe the narratives and possible factors of significance.
- Step 3: Preliminary codes were converted into open codes. Similar codes were clustered together into broader thematic categories.
- Step 4: I interpreted data by analyzing the frequencies of theme occurrences, significance of themes, and interview contexts. Data analysis involved capturing the nuances, similarities, and cultural experiences of the participants.
- Step 5: Data were textually organized by each research question and prepared for write-up.

Validity

Validity is establishing the truth-value of the results of the study and determines the trustworthiness of the data. I ensured that the research was conducted in a timely fashion so that the data collected and the results of the study were still relevant. I strived to protect the privacy and confidentiality of the participants through the informed consent and through giving them code names during the data analysis. In this way, the participants were able to trust me and provide a rich and honest description about their experiences. I also ensured that the participant signed an informed consent letter before proceeding with the observation and interview, further adding to the validity of the information.

Summary

The purpose of this qualitative case study was to evaluate and understand how Arab-American women perceive their infertility status. The case study approach was chosen because it adequately answered the research questions and fit with the purpose of the study. I asked 10 female Arab-Americans to participate in this study and one dropped out, so nine participants contributed to my data. The data collection methods that I used in this study were observation and interviewing.

Chapter 3 explained qualitative methodology as well as how the data was collected, categorized, and analyzed in order to describe the outcomes. The research methods and procedures ensured the validity of the outcomes by detailing the study's data collection and data analysis procedures. In this chapter, I focused on the methodological

design and its appropriateness, definition of the research population and sampling, data collection approaches, issues associated with internal and external validity, and the study's data analysis techniques.

In Chapter 4, I discuss qualitative data and data analysis. The purpose of the chapter is to explain the systematization and classification, as well as how data were abridged through theming (Bloomberg & Volpe, 2008). The accounts offered by the participants during discussions are provided in Chapter 4. It will also ensure the fit and appropriateness of the data collection mechanisms, the accuracy of the information, and the precise explanation of outcomes through equitably and chronologically addressing all inquiries (Burkholder & Pezalla, 2012). In Chapter 5, I will then draw clear and detailed conclusions from the study (Bloomberg & Volpe, 2008).

Chapter 4: Results

Introduction

The purpose of this qualitative case study was to examine the perspectives and experiences of Arab women diagnosed as infertile. I chose a qualitative case study design to provide a holistic and expansive survey of experiences using a critical approach to explain how latent structural paradigms impact the experiences of Arab women. In this study, I used social support theory and choice theory to determine individual behaviors and responses pertaining to issues of infertility. The use of social support theory and choice theory provided information on participant experiences and perceptions of social support and behavioral responses. I used social support theory to examine the social and emotional needs of the participants, while choice theory involved the analysis of individual responses and behaviors. This chapter will include sections discussing the research setting, participant demographics, data collection procedures, data analysis procedures, evidence of trustworthiness, results, and a chapter summary.

Research Questions

This study sought to understand the issues and feelings of Arab women living in Dearborn, Michigan toward infertility. The overarching research questions for this study were:

RQ1: What are the perspectives of Arab women toward infertility?

RQ2: How do Arab women see the impacts of their infertility on their future?

Research Setting

This study analyzed the experiences of female participants living in Dearborn, Michigan. This setting was chosen due to the large Arab-American population in the region. In this region, there is a divergence in religious affiliation; however, homogenous cultural values were shown to dominate within this population. Furthermore, the demographic make-up of this setting was found to be a significant factor in experiences of poverty and access to healthcare services. I analyzed concerns about infertility treatments and the economic impacts of infertility, as Arab-Americans have been specifically documented to experience poverty and have little access to healthcare resources. In addition to healthcare experiences, this study was aimed at uncovering the experiences of Arab-American females and the impact of perceptions on infertility issues generated by the outward community. Of the 10 initial participants, nine completed the study with one participant dropping out.

Demographics

A total of 10 participants met the inclusion criteria for the study. Nine participants completed the study, with one participant refusing to complete the interview. Purposive sampling was used to generate a sample of female Arab-American participants living in Dearborn, Michigan. Ten participants were expected to provide data saturation; however, this study reached saturation with nine participants. In the sample, participants were

grouped by age, education level, age when married, and whether they had been previously divorced. As the vast majority of participants were in arranged marriages, there was little variation in this variable, so it was not examined independently. In the sample, five participants were grouped in the age group of 20 to 35, while four were grouped in the age group of 36 to 50. Two participants did not receive education beyond high school, three participants had some college experience, and four participants obtained college degrees. Four participants were married between the ages of 18 to 23, three participants between the ages of 24 to 29, and two participants between the ages of 30 to 35. Three participants had been previously divorced. The other six participants were married and had never been divorced. Table 1 displays a summary of the participant demographic information.

Table 1

Summary of Participant Demographic Information

Participant	Age Group	Education Level	Age Married	Previously Divorced
1	20-35	Degree	24-29	No
2	20-35	Degree	18-23	No
3	N/A	N/A	N/A	N/A
4	36-50	High School or Less	18-23	Yes
5	36-50	Some College	18-23	No
6	20-35	Degree	24-29	No
7	36-50	Degree	30-35	Yes
8	36-50	High School or Less	18-23	No
9	20-35	Some College	24-29	No
10	20-35	Some College	18-23	Yes

Participant 1

Participant 1 was 35 years old, held a Bachelor's degree, was married at 24 in an arranged marriage, and had not previously divorced. The participant was comfortable talking and answering the interview questions. She mentioned that since I was not from her family or her husband's family, she was willing to answer any questions. She was especially willing after signing the consent form and confirming that everything will be confidential. She expanded her answers to one of the questions, stating how her mother-

in-law first blamed her for not being able to get pregnant, but after realizing that it was due to the husband's infertility, she stopped mentioning the issue. The participant stated that her mother-in-law "shut up her mouth" about the infertility problems. The participant also explained many times that the Arab community and the surrounding people from her community are not open. She emphasized that she experienced negative views towards infertility. She added that, "Arabs are always negative and don't know how to think beyond the issue. If I was the reason for infertility, would my husband wait on me? Or simply remarry? Or will I be divorced by now?" Many times during the interview the participant repeated the phrase, "Why me?" and "Why me that have to go through all this?"

As far as the field observational notes, this participant was very comfortable talking to me about her health issue. She was confident when talking about her infertility issue and was always maintained good eye contact with me. Although she stated in the interview that "Arabs are close-minded and they don't think beyond the issue," she revealed great hopes that she will get pregnant in the future and have her own family.

Participant 2

Participant 2 was 22 years old, held a Bachelor's degree, was married at 21, and had not previously divorced. Participant 2 was very open and comfortable talking about her problem. She was young, and had great hopes that she will get pregnant soon. She emphasized that she had great support from the family and her mother was already with her in the clinic.

As far as the observational field notes, Participant 2 was optimistic. She did not hesitate to answer all the interview questions and was open and comfortable talking about her issue. She had a big smile on her face at all times during the interview and I could sense that she was receiving all the support she needed.

Participant 3

Participant 3 was in her 40's, and this was the participant who refused to answer questions during the interview and dropped out of the study. She was not the only woman who refused to participate; three others also rejected the idea of talking about their infertility and considered infertility a private and personal issue. Although this participant refused to participate and complete the interview, I was able to observe her reactions when talking to her. She was so sad and depressed. When I approached her to ask her questions and explain my research, she directly refused and tried to walk away from me. She was nervous and I could tell that she was stressed.

Participant 4

Participant 4 was 38 years old, had not received education beyond fifth grade, was married at 33 in an arranged marriage, and had been previously divorced. During the interview, the husband was present with the participant. He continuously tried to answer the questions instead of allowing the participant to answer. He attempted to lead the discussion, and many times, modified the participant's answers. The participant felt totally hopeless. She expressed careless feelings about her life and future.

As far as the observational field notes, this participant looked nervous and careless about her infertility issue. She lacked self-confidence and most of the time, waited for her husband to answer my questions first. She did not make eye contact with me at all. She was looking at her husband most of the time and simply agreeing with what he was saying.

Participant 5

Participant 5 was 37 years old, had some college experience, was married at 21 in an arranged marriage, and had been previously divorced. This participant felt very hopeless since she knew that he had the problem from the beginning. She was nervous talking about her issue and wanted to make sure that all her answers would be confidential. She blamed society for not understanding how women feel towards their infertile status. She indicated that she believed that God wanted her to be infertile. She stated, "I don't like to discuss my issue since no one understands, so nothing will change." She emphasized the high cost of fertility treatments and mentioned that she cannot even afford to try IVF with the likelihood that it will not be successful.

As far as the observational field notes, she expressed her hopeless thoughts clearly and insisted that no one knew her answers came from her.

Participant 6

Participant 6 was 33 years old, held an Associate's degree, was married at 24 in an arranged marriage, and had not previously divorced. This participant was comfortable talking about her infertility experiences. According to Participant 6, her husband was the

one with the infertility problems. However, she often pondered whether her community would accept her as infertile if she were the reason behind it. During the interview, she asked, “Do you think my husband will be willing to pay all that money to do IVF if I was the reason behind infertility? Will his mom wait on me to get pregnant after all these years?” She added that she was in great need of her mother and family to be by her, as she believes a woman’s family provides the most support in infertility cases. As far as the observational field notes, Participant 6 revealed her distress through her body language when talking about cultural burdens. Her distress and fears were further revealed when she expressed her need for family support.

Participant 7

Participant 7 was 50 years old, held a Master’s degree, was married at 34 in an arranged marriage, and had been previously divorced. Participant 7 was highly educated, and, yet she admitted at the beginning of her married life that she did not have enough knowledge about ovulation and pregnancy. She emphasized the importance of educating her community, especially females, about sexual health and other women’s health issues. She felt that it was imperative that women got the right knowledge from the right people.

As far as the observational field notes, Participants 7 was comfortable talking about her issue and showed interest in answering my questions. She was confident and maintained eye contact with me when answering all the questions. She actually expanded her answers and added many details, especially when talking about the need of health education.

Participant 8

Participant 8 was 39 years old, had not been educated beyond ninth grade, was married at 23 in an arranged marriage, and had not previously divorced. This participant had one main concern: not to let anyone know from her family that she had a problem getting pregnant and that she already started taking fertility medication. When it came to discussing feelings and stress, she took her time to adequately express how she felt. She tried to explain and expand on the difficulties of her situation. She emphasized that her infertility experiences generate a significant amount of stress.

As far as the observational field notes, this participant revealed a great discomfort talking about her infertility issue. She was nervous and held both hands together during the interview. She barely made eye contact with me and wanted to let me know that being infertile put her under great pressure and distress.

Participant 9

Participant 9 was 35 years old, had some college experience, was married at 24, and had not previously divorced. This participant cried many times during the interview, especially when she mentioned that she tried IVF twice. Although she was fine with discussing her infertility issues and felt that she was not the reason for her infertility, the sadness of not having children was evident during the interview.

As far as the observational field notes, Participant 9 was stressed and depressed. Her sad face told a lot about what she is passing through. The way she cried revealed the

amount of sadness she had. She did not make much eye contact during the interview and the way she moved her hands showed how nervous she was.

Participant 10

Participant 10 was 33 years old, had some college experience, was married at 19 in an arranged marriage, and had been previously divorced. During the interview, Participant 10 spoke about her stress levels and associated depression. She stated, "since I am not the reason and the one to be blamed, I was okay the first few years of marriage, but stress have been increasing since I can't explain the reasons to people." She also stated, "having a family is a feeling that I will have a secure safe life and not grow up lonely." As far as the observational field notes, Participant 10 also had bad eye contact, she lacked self-confidence, and she sounded hopeless for a better and secure future.

Data Collection

Ten participants were recruited through clients of clinics located in Michigan. Appointments were scheduled with the clinics, and all participants gave consent to participate in this research. This study used purposive sampling methods and in-person open-ended interviews. A total of nine participants were interviewed during the study. Informal interviews were used to allow for participants to be more comfortable when discussing sensitive topics. All interviews were transcribed, and each participant was asked to check the interview transcriptions for accuracy.

Open-ended interviews, empirical observations, and field notes were used to gather information on participant perceptions and experiences. Using an informal

interview protocol, I ensured that several steps were taken to provide an accurate case study approach to data collection:

- I ensured that the setting was accessible.
- I was able to communicate with participants and became familiar with the culture of the participants in the study.
- I used informants to locate participants for study.
- I established rapport with the participants.
- Data was recorded and empirical analyses were observed.
- Relevant materials and literature were analyzed.

Evidence of Trustworthiness

During this study, I used several criteria to ensure trustworthiness of results. In qualitative research, evidence of trustworthiness is typically examined using: (a) credibility, in reference to internal validity; (b) transferability, in reference to external validity; (c) dependability, in reference to reliability; and (d) confirmability, in reference to objectivity. This section discusses the credibility, transferability, dependability, and confirmability methods used to provide accurate and reliable study interpretations.

Credibility

Credibility refers to the congruence of the study's findings with reality. In this study, a number of provisions were used to promote confidence in the study's procedures and interpretation of findings. The use of established research methods, familiarity with the culture of participants, member checking, and peer scrutiny of the research project

allowed for me to gather and verify information documented throughout the research process.

Transferability

Transferability involves analyzing the extent to which a study can be applied to other studies. A number of methods were employed to document the nature of the study based on characterizing information of the study. To ensure transferability, I documented the number of participants participating in the study, the number of participants dropping out of the study, the research setting and demographics, and the data collection and analysis procedures.

Dependability

Dependability centers on scrutinizing the nature of the phenomena examined and analyzing how well this study would be able to be replicated, given the same context, sample, and research methods. Detailed information gathering and processing methods were used to assess the ability to replicate results in similar research contexts. I described the research design and strategic choices made throughout the study, described nuances observed during data collection, and evaluated the effectiveness of the study design.

Confirmability

Confirmability is concerned with the extent to which data interpretations can be analyzed as objective. Methods used to minimize bias and assess the study's strengths and weaknesses allowed me to provide confirmable results. To address confirmability concerns, reflective commentary, detailed systematic analyses of data collection and

analyses methods, and the documentation of potential biases depicted how data was analyzed during this study.

Study Results

The themes that I examined during this study include: (a) supportive actions, (b) support appraisal, (c) social cognition, (d) symbolic interactionism, and (e) needs appraisal. Observed subthemes include: (a) self-acceptance, (b) self-rejection, (c) biological factors, (d) personal factors, (e) societal support, (f) personal support, (g) physical needs, (h) psychological needs, (i) natural environment, and (j) religious environment. Results revealed that self-rejection, biological factors, and personal factors were the most prevalent in older individuals, while younger individuals expressed self-acceptance, personal support, natural environment, and religious environment subthemes. Both younger and older participants expressed subthemes of physical needs and psychological needs. Furthermore, self-rejection was the most significant in discussions with participants who did not have an education beyond high school. Younger marriage ages were associated with physical needs, psychological needs, self-acceptance, self-rejection, personal factors, societal support, natural environment, and religious environment subthemes. However, biological factors were more significant in individuals with older marriage ages.

Research Question 1

RQ1 was: “What are the perspectives of Arab women toward infertility?” In this research question, perspectives of Arab women pertaining toward experiences, beliefs,

and concerns about infertility and infertility treatments were addressed. Three main themes emerged during analysis, including: (a) supportive actions, (b) support appraisal, and (c) symbolic interactionism. Support appraisal themes were more prevalent in older participants, college-educated participants, and individuals with younger marriage ages. However, symbolic interactionism themes were more significant in younger participants. Supportive action themes occurred equally among age groups, but were more prevalent in college-educated participants and participants with younger marriage ages.

Supportive actions. The theme of supportive actions centered on participant experiences and beliefs of the extent to which others promote coping and reducing the effects of stressors. This theme involved perceptions on whether participants felt supported by family, friends, and their communities. In addition, beliefs on the types of support integral to coping with infertility were examined. Participants indicated that they perceived a lack of societal support. However, personal support, through family and friends, was also evident in participant discussions. Subthemes that were observed include societal support and personal support. Themes of societal support were the most prevalent in participant discussions. Table 2 displays the number of occurrences (n) and percent of occurrences for this theme.

Table 2

Summary of Findings for Theme 1: Supportive Actions

	Number of Occurrences (n = 63)	Percent of Occurrences (n = 63)
Supportive Actions	63	100%
Subtheme: Societal Support	46	73.0%
Subtheme: Personal Support	17	27.0%

Societal support. This subtheme centered on participant perceptions on community understanding, medical assistance, and societal beliefs on infertility. Participants described negative and positive experiences within their communities, feelings of blame, and experiences of inadequate medical and financial support for infertility treatments. The participants also described personal thoughts when interacting with others. Societal support perceptions were equally significant among age groups. However, individuals with advanced college education and younger marriage ages more frequently expressed a lack of societal support as a significant issue they associated with infertility.

A variety of perceptions were observed during participant interviews. Participant 1 indicated that she did not express any resentment toward others able to have kids,

stating, “I feel so happy for them since God gifted them with kids, and I wish it is me. Never felt anything bad when I see a pregnant woman.” Participant 5, however, strongly emphasized a lack of support in her community, claiming that she experienced “blaming words,” and others often asked her, “why I don’t have kids yet and what I am waiting for.” Participant 5 stated, “They don’t know the reason why […] I can see it in their eyes!”

Participant 6 elaborated on the financial burdens of fertility treatments. She expressed concerns about a lack of financial support, indicating that financial difficulties create burdens for individuals attempting to receive infertility treatment. Participant 6 described her situation, stating, “We took a loan. It is a huge burden to afford these types of treatments.”

Participant 8 discussed feelings of blame and disapproval when describing her experiences with infertility stigmas. She indicated that others in her community were especially not empathetic toward women with fertility issues. When discussing her experiences, she stated, “Just their looks. I can feel that they are blaming me.”

Personal support. This subtheme involved occurrences of individual, familial, and friend support experienced by the participants. The participants revealed that personal support was imperative; however, the lack of societal support had a greater negative impact on their perceptions of support. Responses on personal support ranged from an emphasis on spousal support to experiences of a total reliance on the self.

Personal support was emphasized in younger participants, participants with at least some college experience, and individuals with younger marriage ages.

A variety of responses on personal support systems were documented. Participant 1 denoted that her personal support system with her husband was integral to coping with her situation. Participant 1 emphasized the mutual support experienced, stating, "My husband and myself are supporting each other. And mainly me, I am supporting him since he has the problem. But would he be supporting me if I was the problem?"

Participant 6, however, felt unable to open up to her family about her situation. She indicated that her husband's family was aware of the infertility problems, but she has not been able to garner support through her family due to the distance between them. Participant 6, when describing individuals supporting her, denoted, "My husband's family. My family has no idea what I am going through since they don't live here. […] I wish my family is here! I need their support."

Participant 9 indicated that she does not have an adequate support system in place. She revealed that she often dealt with her problems alone, but she noted that she is supporting her husband. Participant 9 stated, "No I am alone in this. I am supporting my husband."

Support appraisal. The theme of support appraisal focused on the ways in which participants interpreted their experiences, expectations, and beliefs on support. Participants perceptions on support appraisals ranged from beliefs on the biological influence of infertility to personal coping mechanisms and beliefs about why they were

unable to conceive. The support appraisal theme occurred the most often in older participants, college-educated participants, and participants with a younger marriage age. Subthemes of biological factors and personal factors were observed. The biological factors subtheme occurred the most frequently in participant interviews. Table 3 displays the number of occurrences (*n*) and percent of occurrences for this theme.

Table 3

Summary of Findings for Theme 2: Support Appraisal

	Number of Occurrences (*n* = 60)	Percent of Occurrences (*n* = 60)
Support Appraisal	60	100%
Subtheme: Biological Factors	32	53.3%
Subtheme: Personal Factors	28	46.7%

Biological factors. This subtheme involved discussions on biological explanations, interpretations, and beliefs on infertility. Participants attributed biological reasons to their infertility and sought after medical assistance; however, they noted that community perceptions on infertility often blamed females for attempting to conceive at an older age. Participants indicated that they tried to conceive, but when conception did not occur, they tried to find a biological explanation. Discussions on biological factors

were more prevalent in older participants, college-educated participants, and participants with an older marital age. Older participants were more likely to have their infertility problems attributed to their older age, despite still being young enough to conceive children.

In Participant 7's experience, she described how others blamed her lack of pregnancy on her age. Participant 7 elaborated on outside remarks, stating, "That my husband does not want kids from me, and that I am old to get pregnant! And that 34 years old is not a good age to get healthy pregnancy."

Participant 9 described her course of action when she realized that she could not get pregnant. Participant 9 indicated that it took a long time to find answers, but she eventually sought after medical explanations. She stated, "Trying to get pregnant for 3 years in normal ways but never succeeded. I did blood work, ultra sounds, and all infertility tests."

Personal factors. In this subtheme, personal coping mechanisms, beliefs about individual behaviors, and perceptions of autonomy were examined. The participants described cultural beliefs on infertility and the impact this had on their wellbeing. The individuals noted that others in their community tended to attribute infertility problems to mental problems and a lack of competence. Personal factors were more significant in discussions with older individuals, college-educated individuals, and individuals with a younger marriage age. Older individuals, in addition to receiving remarks about their age, more often felt that they were shamed for making personal decisions to delay pregnancy.

However, individuals with a younger marriage age discussed the impact of cultural beliefs on their infertility issues.

Participant 1 discussed her reactions and coping mechanisms when confronted with blame for infertility problems. She indicated that her response was to, “Simply will tell them it is none of your business, because Arabs are very negative, close minded, and they don’t think beyond the issue.”

Participant 1 also indicated that, as a woman, she is more likely to experience the blame for infertility, despite the fact that her husband is infertile. She stated, “No one in the family knows anything, especially which the problem is with my husband. However, they notice that we don’t have kids yet.”

Participant 9 found that others frequently attempt to interfere and attribute infertility problems to incorrect behavior. Participant 9 stated, “They always try to talk about it and try to interfere in our life telling us what to do and what not to do.”

Symbolic interactionism. In this theme, symbolic interactionism, or the environmental influence on the ways in which individuals make sense of their world, was examined. Participants revealed a variety of holistic explanations and interpretations of their infertility problems. Responses included perceptions on religious interpretations and biological interpretations of their experiences. All of the participants described a fundamental explanation or reason for their infertility issues, and none of the participants interpreted their experiences at face value. Observed subthemes that emerged during data analysis include religious environment and natural environment. The religious

environment subtheme occurred the most often during interviews. Individuals with college degrees were more likely to attribute a natural explanation for their infertility issues than individuals without college degrees. Consequently, individuals without college degrees more often emphasized religious interpretations on their infertility issues. Subthemes of natural environment and religious environment were both prevalent in younger participants and participants with younger marriage ages. Table 4 displays the findings for this theme where (*n*) represents the number of occurrences of the theme.

Table 4

Summary of Findings for Theme 3: Symbolic Interactionism

	Number of Occurrences (*n* = 32)	Percent of Occurrences (*n* = 32)
Symbolic Interactionism	32	100%
Subtheme: Religious Environment	17	53.1%
Subtheme: Natural Environment	15	46.9%

Religious environment. In this subtheme, participant beliefs centered on religious explanations of their infertility issues were explored. The participants often described religious aspects of their situations and religious values used to cope with their problems. The individuals found that their religious beliefs, whether or not they were able to reduce

the effects of depression or stress, were integral to their chosen coping mechanisms. Participants more often emphasized religious environment subthemes when they had a younger age, did not have a college degree, and had a younger marriage age.

Participant 5 discussed her beliefs about infertility. Participant 5 felt that her infertility problems were a result of religious intentions. She stated,

> God does not want to give me kids. I had the problem since childhood. […] I used to feel down and sad before. Although I wish to have my own kids, but since I have been trying for a long time, I don't care anymore. If God wants me to have kids he will give them to me.

Participant 8 described frustrations with infertility with religious undertones. Participant 8 felt that religious beliefs played a role in her outcome. She indicated, "So far I am trying the medication, I can't afford IVF. I wish God will help to get through this."

Natural environment. This subtheme focused on perceptions of biological explanations of infertility, biological beliefs about conception, and the inability to afford infertility treatments. During discussions, it was evident that the participants had varying levels of knowledge about conception, treatment options, and explanations of infertility. Participants often described their situations as hopeless, due to biological issues, and stated that they did not see IVF treatment as a possible option for them. Younger participants, participants with a college degree, and individuals with a younger marriage age more often emphasized natural environment subthemes.

Participant 5 discussed her feelings toward infertility treatment options. She felt that it was not a viable option for her, and she described the high cost of IVF treatment for a very small possibility of success. Participant 5 stated, “I am a hopeless case. I don’t want even to try IVF and waste my money. I know it is not for my case.” Participant 7 described perceptions about biological infertility and her lack of knowledge about conception. Participant 7 noted that, “I had no idea and zero knowledge about the woman body, ovulation, and conception.”

Research Question 2

RQ2 was: “How do Arab women see the impacts of their infertility on their future?” In this research question, perceptions about the influence of infertility on participant future experiences, behaviors, and considerations were analyzed. Participant perceptions about their self-esteem and the influence of infertility on their lives were consistently documented in all of the individuals. Themes of (a) social cognition and (b) needs appraisal emerged during data analysis. Social cognition was more prevalent in discussions with older participants and participants with a younger marriage age. However, social cognition was equally prevalent in discussions among college educated and non-college educated participants. Moreover, needs appraisal was the most significant for college-educated participants and participants with a younger marriage age. However, needs appraisal was equally significant in younger and older individuals.

Social cognition. The theme of social cognition focused on participant perceptions of what it means to be supported and the impact of support on self-esteem.

Individuals interviewed provided a range of responses from acceptance of the situation to depression and stress associated with a lack of self-fulfillment. Participants revealed that their beliefs about the impacts of fertility on their lives were related to how they perceived their self-worth. Older participants and participants with a younger marriage age more frequently discussed themes of social cognition in responses. However, social cognition was found to be equally prevalent in all education level groups. Subthemes of self-rejection and self-acceptance were analyzed during interviews, and self-rejection occurred the most often in participant discussions. Table 5 displays the number of occurrences (*n*) and percent of occurrences for this theme.

Table 5

Summary of Findings for Theme 4: Social Cognition

	Number of Occurrences (*n* = 26)	Percent of Occurrences (*n* = 26)
Social Cognition	26	100%
Subtheme: Self-Rejection	16	61.5%
Subtheme: Self-Acceptance	10	38.5%

Self-rejection. This subtheme centered on low self-esteem perceptions and feelings of inadequacy resulting from infertility issues. The participants described

feelings of self-rejection, noting that they experienced more frequent occurrences of depression, stress, and solitude. Beliefs of self-rejection were associated with shame, a lack of control, and feelings of loneliness. These beliefs were associated with negative perceptions about the future. Participants often pondered whether they would still be married in the future due to their infertility. Self-rejection was more often discussed in older participants, participants without education beyond high school, and individuals with younger marriage ages.

Participant 4 found that she was reluctant to discuss infertility problems with others due to the sadness and hopelessness she felt. Participant 4 stated, “Since my second IVF I don’t discuss my issue with no one. I lost my hopes, and I don’t want to over think about it.”

Participant 6 also elaborated on feelings of hopelessness. Participant 6 felt that she would often wish she were pregnant whenever she saw other pregnant women. This led to feelings of inadequacy and depression. She indicated, “I used to feel depressed wishing I am the pregnant woman.”

Participant 8 noted that she felt alone when dealing with her infertility problems. She stated that she did not want to reveal her infertility with anyone due to the shame she felt. She described her feelings, noting “I am facing this by myself. I don’t want anyone to know. I feel the shame.”

Self-acceptance. In this subtheme, perspectives on negating blame, living with infertility, and acceptance the situation were examined. Participants that had accepted

their situation revealed that they understood they were not in control or responsible for infertility problems. Self-acceptance was discussed as a mechanism to cope with their situation in the present and future. Participants found that, whether they attributed their infertility problems to natural explanations or religious explanations, they would make choices in the future about whether to hope for new possibilities or remain comfortable with their situations. Self-acceptance was the most significant in discussions with younger participants, participants with a college degree, and participants with younger marriage ages.

Participant 1 described how she managed to accept her situation and move on. She remarked that she still occasionally felt insecure about her infertility problems. However, she knew that her situation was beyond her control. Participant 1 stated, “I am okay. But I always ask myself why me that I have to go through all this!”

Participant 2 had experienced sadness over her inability to have children. However, she displayed confidence in acknowledging that she cannot blame herself for her situation. She discussed her experiences in moving on, remarking, “And I like taking care of children. I never blame myself for not having kids.”

Participant 10 also recognized that her infertility problems were not in her control. She felt that she was not meant to have children for religious reasons. She tried to not let the frustration from her situation cloud her judgment, and noted that she was grateful for her experiences. Participant 10 stated, “Thanks God. I am okay with whatever he decided for me.”

Needs appraisal. The theme of needs appraisal focused on participant beliefs about their present and future needs pertaining to infertility experiences. The individuals described needs to sustain themselves and their families as well as needs of personal fulfillment. Participants indicated that their infertility problems resulted in feelings of emptiness and physical and psychological burdens due to their inability to fulfill desired needs. The theme of needs appraisal was equally significant in discussions among age groups. Needs appraisal themes were also equally prevalent in individuals without an education beyond high school and individuals with some college experience. However, individuals with a college degree and individuals with a younger marriage age more frequently emphasized needs appraisal themes. Observed subthemes include physical needs and psychological needs. Psychological subthemes occurred the most frequently during interviews. Table 6 displays the number of occurrences (*n*) and percent of occurrences for this theme.

Table 6

Summary of Findings for Theme 5: Needs Appraisal

	Number of Occurrences (n = 44)	Percent of Occurrences (n = 44)
Needs Appraisal	44	100%
Subtheme: Psychological Needs	23	52.3%
Subtheme: Physical Needs	21	47.7%

Psychological needs. This subtheme involved perceptions on mental and emotional wellbeing. Participants expressed a fear of loneliness and concern about their future relationship experiences. During discussions, it was evident that a loss of hope and a lack of psychological resources and support systems had a substantial impact on participant wellbeing. Both younger and older participants expressed subthemes of psychological needs during discussions. Furthermore, participants with a college degree and a younger marriage age also described subthemes of psychological needs.

Participant 4 discussed the loss of hope due to her infertility issues. She remarked that she received medical treatments, but her outcome was unsuccessful. She indicated, “In earlier years I was hoping to try the feeling. After two IVF’s, I no longer feel anything. I lost my hopes.”

Participant 7 expressed concerns about aging alone and feeling loneliness throughout her life. She stated that she felt concerned about her infertility problems and did not have much hope. Participant 7 remarked, “I am worried about my future. I don’t want to grow up alone.”

Participant 8 discussed her lack of psychological resources and her inability to discuss her problem with others. She felt that she had a lack of support and hoped that she would be able to receive counseling to discuss her situation. Participant 8 indicated, “I would love to see counselor to talk more about my health issue and infertility. As long as no one knows from the family, I would love to receive the care and talk to someone who can help me get through this hard time.”

Physical needs. In this subtheme, perceptions of physical burdens and familial responsibilities were analyzed. Participants often seemed to emphasize that they were capable of taking care of children, revealing the strength of their desires to have children. Participants also expressed feeling burdened by expectations of having children and that they should be able to control their situation. Having a lack of financial resources and support negatively impacted participant experiences. Younger and older participants both found physical needs to be significant. Additionally, participants with a college degree and a younger marriage age also emphasized subthemes of physical needs. Participant 6 emphasized that she was capable of taking care of children, but unfortunately she could not fulfill the role she desired. Participant 6 stated, “I don’t have any problem taking care of kids. I love being around kids.” Participant 10 described how others often emphasized

the belief that she needed to have children to have a successful marriage. Participant 10 indicated, “I am always asked to have kids and to make a family.”

Participant 10 also discussed her feelings when she saw pregnant women. She felt a sense of helplessness and felt that she was not able to fulfill her needs as expected of her. She indicated, “I always wished to be in her place.”

Findings Based on Field Observations

I closely observed the participants during the interviews to generate further data for the study. Notes were taken directly once an observation was made and based on these notes, observations were also categorized into themes: comfort, easiness to complete interview, full of hopes, and self-confidence. Three out of the nine women who were interviewed were comfortable talking about their health issue. It was easy completing the interview with them and they were full of self-confidence as well as hope that they would get pregnant soon. These three participants maintained good eye contact with me and elaborated more on each of the interview questions.

Six of the nine women who were interviewed were not comfortable, answering my questions with very short answers and not trying to expand or elaborate with their answers. I could feel that they wanted to finish the interview as fast as they could. They all shared a hopeless feeling when discussing their chances of getting pregnant. They had very little or bad eye contact with me and seemed nervous while conducting the interview.

Evaluation of Findings

Themes of (a) supportive actions, (b) support appraisal, (c) social cognition, (d) symbolic interactionism, and (e5) needs appraisal were analyzed in this study. Subthemes that were examined include: (a) self-acceptance, (b) self-rejection, (c) biological factors, (d) personal factors, (e) societal support, (f) personal support, (g) physical needs, (h) psychological needs, (i) natural environment, and (j) religious environment. This study found that older individuals more often expressed subthemes of self-rejection, biological factors, and personal factors. Self-acceptance, personal support, natural environment, and religious environment subthemes were more prevalent in younger participants, but both younger and older participants described subthemes of physical needs and psychological needs. Participants who did not have an education beyond high school expressed the subtheme of self-rejection the most often. Individuals with younger marriage ages emphasized physical needs, psychological needs, self-acceptance, self-rejection, personal factors, societal support, natural environment, and religious environment subthemes. However, this study found that participants with older marriage ages more often expressed subthemes of biological factors.

Summary

This section concludes Chapter 4. In this chapter, I discussed the setting, participant demographics, data collection methods, data analysis procedures, evidence of trustworthiness, and results of the study. Chapter 5 will continue the analysis of results by discussing the interpretation of findings.

The purpose of this study was to examine the perspectives and experiences of Arab-American women experiencing infertility problems in Dearborn, Michigan. This qualitative study used a case study design to illustrate the influence of latent sociocultural structures on participant narratives of infertility. Themes of (a) supportive actions, (b) support appraisal, (c) social cognition, (d) symbolic interactionism, and (e) needs appraisal emerged during participant interviews. Participants frequently expressed concerns about a lack of support, the high cost of infertility medical treatments, and a lack of resources available to couples experiencing problems with conception. This study highlights the need for more expansive psychological services and medical resources to be available for infertile couples, a particularly significant need for Arab-Americans experiencing marginalization. Finally, social support theory and choice theory were shown to accurately represent the concerns and experiences of Arab-American females living in the United States. As this research demonstrated, societal, financial, and personal support had a substantial impact on perspectives of fertility and the ways in which Arab-American females perceived their future.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

In this chapter, I will discuss my interpretation of the findings. I will also present the limitations of the study as well as recommendations for future research. I end this chapter with my conclusions to the study.

Cultural and social factors greatly influence Arab women living in the U.S (Greil et al., 2010; Steuber & Solomon, 2011; Tabong & Adongo, 2013). In the Arab community, getting married is one of the most respected steps towards building a family and having children (Bratter & Heard, 2009; Henry et al., 2008). Thus, infertility has a stigma attached to it (Aroian et al., 2006). Infertility among Arab couples can lead to divorce in many Arabic societies (Abou-Rabia, 2013; Demirtas et al., 2013; Moghaddam et al., 2011).

The purpose of this study was to examine the perspectives and experiences of Arab-American women experiencing infertility problems in Dearborn, Michigan. This qualitative study used a case study design to illustrate the influence of latent sociocultural structures on participant narratives of infertility. Ten participants participated in the study.

Themes that emerged during the participant interviews include: (a) supportive actions, (b) support appraisal, (c) social cognition, (d) symbolic interactionism, and (e)

needs appraisal. I found that participants perceived a lack of societal support due to infertility. However, some Arab women felt that personal support from their family and friends is not lacking. For the support appraisal theme, it was revealed that most of the participants attributed biological reasons to their infertility and sought after medical assistance.

The data analysis demonstrated that cultural beliefs on infertility in their community had an impact on the women's own well-being. This theme was supported by previous work by Obiesat et al. (2012) and Hammoudeh, Hamayel, Abu-Rmeileh, and Giacaman (2013). Participants' beliefs also centered on religious explanations of their infertility issues. This theme was supported by Abou-Enein (2010) who pointed out that religious beliefs also cause infertility distress.

Participants had varying levels of knowledge about conception, treatment options, and explanations of infertility. This theme was also supported by previous researchers. Ali et al. (2011) revealed the lack of knowledge women have regarding their fertility and reproductive health. Abolfotouh et al. (2013) reported that women in Saudi Arabia reported decreased knowledge of infertility.

Participants' beliefs about the impacts of fertility on their lives were related to how they perceived their self-worth. This theme was supported by the research of Hammoudeh et al. (2013) and Fledderjohann (2012). Moreover, participants' infertility problems resulted in feelings of emptiness and physical and psychological burdens due to

their inability to fulfill desired needs. This theme was also supported by Hammoudeh et al. and Fledderjohann.

To summarize, Arab women who participated in this study expressed concerns about lack of support, the high cost of infertility medical treatments, and lack of resources available to couples experiencing problems with conception. Other researchers found these same feelings from Caucasian women who participated in infertility treatments (Fledderjohann, 2012; Obeisat et al., 2012). However, the added dimension of religion and culture affected Arab women in ways not previously described in the literature.

The results of this study emphasized the need for more expansive psychological services and medical resources to be available for infertile couples, specifically to Arab-Americans. The social support theory and choice theory accurately represented the concerns and experiences of Arab-American females living in the United States. Arab women need societal, financial, and personal support in their experiences with infertility.

Interpretation of the Findings

Lack of Support

The first research question asked about the perspectives of Arab women toward infertility. Three main findings emerged as answers to this research question. The first major finding is that Arab women feel a lack of support. Specifically, Arab women feel a lack of societal support. They perceived that personal support from family and friends are imperative, but the lack of societal support had a negative impact on their perceptions of support. However, in some instances even the relatives of the Arab women showed a lack

of support because of infertility. This is because infertility is a controversial issue. In the Arab community, infertility brings shame to the family.

This confirms findings of previous studies about infertility. In some countries, societies blame the women as the main cause of childlessness (Hollos & Larsen, 2008). In fact, previous researchers have concluded that women suffer more compared to men in infertility situations (Obiesat et al., 2012).

Hammoudeh et al. (2013) reported that fertility remains a controversial issue in Palestine. Moreover, Hammoudeh et al. also stated that little is known about the effect of infertility on women. In Hammoudeh et al.'s study, participants also expressed how social support is important to them. Participants in Hammoudeh et al.'s study also experienced lack of societal support through communal gossip, which had a negative impact on their experiences with infertility.

The perceptions of society about infertility affect society's behavior towards individuals experiencing infertility. In this study, it was revealed that infertile Arab women have social, emotional, and informational needs. The social support theory supports the notion that social, emotional, and informational needs have to be satisfied . In the case of Arab women, most of these needs are not met because of the beliefs of the society about infertility.

Arab women often experience lack of support from society, their relatives, and even their husband. Some Arab women only experience a lack of support from society because their relatives and husband still demonstrate support even in cases of infertility.

However, some Arab women also experience a lack of support from their relatives and husband. Women are being blamed for childlessness, and oftentimes, women feel responsible for being childless.

According to the choice theory, Arab women react, behave, and function in a certain way regarding infertility in response to their cultural background, their ethnicity, and social relationships (Glasser, 1998). Based on their cultural background, having a child is important in the Arab community. Infertility causes feelings of shame and incompleteness among Arab women. Moreover, Arab women also do not receive appropriate support from their community and relatives as a result of infertility. This causes Arab women to feel alone in their struggle.

Support Appraisal: Biological Factors and Personal Factors

The second major finding was that Arab women have two sources of support appraisal: biological factors and personal factors. Some Arab women attributed biological reasons to their infertility and sought medical assistance. However, there were community perceptions that the reason for their infertility was that they were trying to get pregnant at an older age. Most of the Arab women felt that their age was a significant factor in their infertility issue despite the fact that they were young enough to conceive children.

Personal factors include cultural beliefs about infertility and coping mechanisms. Cultural beliefs also have a significant impact on the well-being of Arab women. Infertility tends to be attributed to mental problems and a lack of competence. Due to

infertility issues, Arab women who participated in this study developed different coping mechanisms. Most of the women often ignored the comments of people commenting and trying to interfere with their personal lives and lack of children. Some of the women were affected especially since the people commenting about their childlessness were their relatives.

This finding extends knowledge in the discipline. There was no study found that explored the two sources of support appraisal for Arab women. Only this study found that there were two support appraisals that were significant to Arab women as response to infertility situations.

Infertility is a health problem that causes feelings of isolation for many couples . Arab women are a sensitive population that is highly influenced by their cultural and religious beliefs . Even though some Arab women attributed their infertility issues to biological factors, their reaction, and feelings towards infertility were mostly negative due to the stigma created by the Arab community about infertility.

According to the choice theory, the individuals' reactions are always linked to external factors such as culture and family (Glasser, 1998). Due to social and cultural factors, Arab women find it difficult to seek medical treatment about their infertility issues. Arab women also noted that they do not seek medical treatment because of financial constraints.

Religious and Natural Environments

The third major finding was that Arab women perceived both religious and natural environments as explanations and interpretations of their infertility problems. Arab women in this study often used religious explanations to address their infertility issues and used religious values to cope with the situation. They found that that their religious beliefs were integral to their coping mechanism. Religious beliefs have a significant role in determining individual behaviors . According to the Qur'an, the health of the individual is a priority. Moreover, it is the duty of an individual to take care of their health through personal hygiene, good nutrition, and exercise.

However, many Arabic women find it difficult to take care of their health and to seek health care from male health providers. This is supported by Abou-Enein (2010), who pointed out that religious beliefs also cause infertility distress. Arab women find it uncomfortable to talk about sensitive issues with a male doctor.

In terms of biological or natural environment, Arab women in this study had varying levels of knowledge about conception, treatment options, and explanations of infertility. Most of the Arab women had limited knowledge about biological issues and medical treatment. This finding confirms the previous findings of researchers. In an international survey that included women from Australia, Belgium, France, Germany, Italy, Sweden, the United Kingdom, and the United States, it was revealed that women's knowledge about infertility is indeed low in approximately 38% of the participants (Adachi et al., 2000).

Ali et al. (2011) revealed the lack of knowledge women have regarding their fertility and reproductive health. Abolfotouh et al. (2013) reported that women in Saudi Arabia reported decreased knowledge of infertility. Similarly, Ali et al. (2011) concluded that the knowledge of infertile women (n = 17, 500) interviewed about their reproductive health was poor. This limited knowledge about infertility also serves as a barrier for women to seek for medical treatment. The lack of knowledge women have about their reproductive health will influence how they seek treatment and determine appropriate solutions to their health problems.

According to the social support theory, behaviors of individuals are affected by society. Arab women are greatly affected by stigma attached to infertility in the Arab community . Though their religious beliefs help them cope with infertility, Arab women fail to seek medical treatment because they find it difficult to discuss their health problems to a male doctor. They find it difficult to talk to the opposite sex due to cultural factors. Moreover, Arab women also have limited knowledge about their reproductive health. The reason for this is perhaps there are only a few female doctors in the Arab community. Moreover, fertility and reproductive health are sensitive topics in the Arab community. Since Arab women find it difficult to talk to health care professionals about their health problem, they experience distress. Moreover, this also leads to limited knowledge about treatments to their health problems. The second research question asked how Arab women see the impact of their infertility on their future. Two major findings

emerged. The fourth major finding is that Arab women feel self-rejection and a lack of self-acceptance (low self-worth) due to infertility issues.

Self-Rejection and Lack of Self-Acceptance

Arab women in this study experienced feelings of self-rejection such as depression, stress, and solitude. Beliefs of self-rejection were associated with negative perceptions of the future. This finding extends previous findings about negative psychological experiences of infertile women.

Women suffer more than men in the case of infertile couples do, as is the case in all cultures (Abour-Enein, 2010). This is similar to Omu and Omu's (2010) findings that infertile women reported higher anxiety, stress, and depression. Moreover, infertile women reported stress, depression, and social and marital instability (Abolfotouh et al., 2013). Hammoudeh et al. (2013) also found that infertile women reported being "emotionally drained or overwhelmed, frustrated, hopeless, feelings of anxiety, sadness, and *hamm* (a combination of different feelings, including anger, distress, frustration, grief, incapacitation, worry, and sorrow)".

Obeidat, Hamlan, and Callister (2014) also concluded that Jordanian infertile women reported higher stress, depression, and social instability. Obeisat et al. (2012) also conducted a similar study and reported that infertile women suffered from emotional, social, and marital insecurity (e.g., divorce).

Fledderjohann (2012) concluded that infertility can cause marital dispute and psychological distress to both the husband and wife. Fledderjohann reported that women

in Ghana experience mental health difficulties due to the pressure to conceive. Women also experience greater social consequences because of their difficulty to conceive.

According to the choice theory, reactions of individuals are influenced by external factors such as society and family. In this study, Arab women experience negative emotions and feelings because of negative perceptions of their husband, family, and community about infertility. This is also related to the fact that Arab women have limited knowledge about reproductive health and tends not to seek medical treatment. Since they do not understand their health problems, they often blame themselves about their situation that leads them to feel hopeless.

In this study, some Arab women accepted their situation. They understood they were not in control or responsible for infertility problems. Self-acceptance was perceived as a mechanism for Arab women to cope with their present and their future. Participants who accepted their situation were determined to make choices in the future that bring them new opportunities or just be comfortable with their situations. This finding extends knowledge in the discipline.

No study has been found that Arab women to have accepted their situation and to believe there are new opportunities in the future for them. The choice theory aims to teach individuals about personal responsibilities. Using the choice theory to interpret this finding, it could mean that some Arab women know that their situation is neither their fault nor their responsibility. It could also mean that Arab women who have accepted

their situation is making the decision to lead a happy life than to let perceptions of other people make them depressed and lonely.

Psychological and Physical Needs

The fifth major finding of this study is that Arab women both have psychological and physical needs that must be met in order to sustain themselves and their families. Arab women experience loss of hope and a lack of psychological resources and support systems that had a substantial impact on their wellbeing. Even though some Arab women received medical treatment, it was not successful. As a result, it led to feelings of hopelessness. Due to infertility, some Arab women are also worried about their future. This finding confirms previous finding about psychological impact of infertile Arab women infertility.

In Hammoudeh et al.'s (2013) study, it was revealed that the Palestinian society believes that when couples have children then they are financially secured in their old age. This means that infertility in some countries is also associated with children taking care of the elderly. If a couple has no child, then there will be no one who will take care of them when they get old (Inhorn & Van Balen, 2002; Lancy, 2008). Infertile causes negative psychological experiences because childlessness is a major source of insecurity and not having anyone to help during senior years (Inhorn & Van Balen, 2002; Lancy, 2008).

In Africa, childlessness also causes the lack of good social life (Lancy, 2008). Fledderjohann (2012) also noted that infertility can cause marital dispute and

psychological distress to both the husband and wife. Moreover, Fledderjohann also concluded that women experience marital strain, as well as mental health difficulties due to the pressure to conceive. In fact, Orji et al. (2002) reported that Nigerian women suffered from neglect and husbands threatened to take another wife when their first wives were infertile.

Arab women also felt burdened by their situation because they do not have a control on their situation. Arab women also perceived that having children is one of the ways to make a marriage successful. Arab women feel strong desires to have children. Our finding confirms previous findings about Arab women's perception about the importance of having children. According to Fido and Zahid (2004), in the Arab culture, motherhood is one of the major purposes of a woman's life and is very essential for determining her identity as a woman. Thus, a woman without a child might experience challenges in finding their purpose and identity in their community. In the Arab community, having children means there is continuity of the family (Henry et al., 2008; Bratter & Heard, 2009). Thus, when couples experience infertility then they worry about the continuity of the family.

Based on the findings of this study, it is clear that Arab women experience negative psychological emotions due to infertility. Since infertility has a stigma attached to it, Arab women have negative perceptions of infertility. Arab women who experience infertility are also burdened because of their childlessness and as a result feel hopeless and psychological distress.

Limitations of the Study

There were a number of limitations in this study. The first was that the population of the study served as a limitation. The population in this study was Arab women who are very sensitive to this controversial topic. In their culture, talking about infertility is a taboo issue. It was difficult to ask Arab women about questions about their infertility issues. In fact, one participant decided to drop out of the study. The respondents were reassured that their confidentiality and privacy will be protected and that the researcher will not judge their answers.

Another limitation was the usage of face-to-face interviews. Since this is a controversial topic for Arab women, it was harder to get answers from the respondents while they feel ashamed with their situation. Moreover, feelings of shame and guilt might have an impact to their answers. Again, the respondents were reassured that their confidentiality and privacy will be protected and that the researcher will not judge their answers.

The third limitation was the use of qualitative study. In this research methodology, the validity is not easy to maintain. Researcher bias could influence the results of the study (Creswell, 2009; Maxwell, 2008). I followed the data collection and data analysis procedure to ensure validity of the result.

Another limitation was the limited number of specialized infertility clinics with Arab patients in Dearborn. It was difficult to find willing participants in the study. The fifth limitation was the generalizability of the results. What is true and applicable in this

study's population is not necessarily true of other populations (Creswell, 2009; Yilmaz, 2013). The study only interviewed nine Arab women. The results of the study might not be applicable to other population. The final limitation was the usage of an instrument developed by the researcher. The validity of the instrument is questioned since this is the first time that it was used.

Recommendations for Future Research

The first recommendation is to broaden the geographical location of future studies. There were only a limited number of specialized infertility clinics with Arab patients in Dearborn. Future studies that could involve several specialized infertility clinics that cater to Arab patients will lead to a higher number of participants. The second recommendation is to increase the sample size of the study. Only nine Arab women living in the United States were interviewed. Increasing the sample size could led to the sample being representative of the population.

The third recommendation is to use quantitative method. Using the quantitative method could mean recruiting thousands of participants in the study. Moreover, results of a quantitative study would also bring numerical results that might be helpful for seeking policy reforms or funding. The fourth recommendation is to use a different survey questionnaire or a different instrument. Using a different survey questionnaire or instrument could bring similar or different results. If it brings similar results, then the results of this study is strengthened. If it brings different results, then it could extend knowledge in the discipline. The fifth recommendation is to include Arab men in the

study. Data from this study that included both Arab men and women would extend knowledge in the discipline. It would be interesting to determine the similarities and differences that Arab men and women have with infertility.

Implications of the Findings

Infertility and its treatment on women are of great concern to public health officials (Berghuis & Stanton, 2002; Burns et al., 2006; Peterson et al., 2006). Women are affected more compared to men. Women experience negative physical and physiological experiences because of their infertility issues. It was revealed that Arab women experienced feelings of self-rejection such as depression, stress, and solitude. Beliefs of self-rejection were associated with negative perceptions of the future. Moreover, Arab women experienced hopelessness and psychological distress because of their infertility issues. The results of this study provided significant information about the experiences of Arab women with infertility. Due to the insights gathered from this study, it could help Arab women and individuals around them to help them in their time of need.

The findings are consistent with social support theory and choice theory. The "social support theory" is applied in this study primarily to satisfy the social, emotional, and informational needs of infertile Arab women. The results of the study showed that the social, emotional, and informational needs of infertile Arab women are not met. Thus, there should be programs and interventions developed to address these needs. From the lens of choice theory, it helped to evaluate and understand how the Arab women react, behave, and function to face their infertility in response to their cultural background, their

ethnicity, and social relationships (Glasser, 1998). Based from the results, infertility is a source of distress and may cause psychological issues for couples, especially for Arab women. Moreover, according to the choice theory, people around us predetermine the status of depression or distress. The results of showed that the people around Arab women especially their family and friends have a significant impact on their wellbeing. Most of the people around Arab women perceive infertility as something negative. Arab women feel burdened because of these negative perceptions about infertility when they have no control over the situation.

The results of the study helped advanced knowledge in the discipline. There is a paucity of research about the experiences of Arab women with infertility. Moreover, new information was discovered about how Arab women cope with their infertility issues. It was also revealed that Arab women experience negative psychological concerns due to infertility. Programs must be developed in order to help Arab women address these negative psychological experiences of feeling hopeless and distress in order to improve their quality of life.

In this study, it was revealed that women have limited knowledge about infertility, fertility, and their reproductive health. In previous studies, previous researchers have also concluded that women have limited knowledge about infertility. As such, policy-makers together with health care providers must develop and implement programs that will help to improve knowledge and understanding of infertility in Arab communities and in other populations.

Public health staff and health care providers might be interested with these findings so that they are familiar with the psychosocial factors surrounding their patients (Aboul-Enein, 2014; Ali et al., 2011). Health care provides should read the findings so that they have the skills and ability to know how Arab women perceive their situation.

Social Change Implication

The insights from this study could also lead to positive social change in reducing the stigma experienced by Arab women when it comes to infertility. The results of the study provided empirical evidence of the experiences and feelings of Arab women. Arab women who read this study will know that she is not alone in the situation. Moreover, it could also make other individuals realize the impact of infertility to a woman's life and help them in their time of need. Moreover, information from this study could also help lessen stigma associate with infertility in the Arab community.

Conclusion

The purpose of this case study was to examine the perspectives and experiences of Arab women perceived as being infertile. I used social support theory and choice theory to determine individual behaviors and responses pertaining to issues of infertility. Based from the social support theory, it was expected that Arab women needs a program to fulfill unmet social, emotional, and informational needs, specifically about infertility. Choice theory also provided a framework to understand how Arab women in the United States feel toward their infertility.

Based from the literature review, it was expected that Arab women experience challenges due to infertility. It was found that even though infertility occurs to both men and women with equal frequency, the blame is greater on the woman as the main cause of childlessness (Hollos & Larsen, 2008). Moreover, in Arab countries, infertility remains to be a controversial issue (Abolfotouh et al., 2013; Hammoudeh et al., 2013).

The first major finding included that Arab women feel lack of support. The second major finding was that Arab women have two sources of support appraisal: biological factors and personal factors. The third major finding was that Arab women both perceived religious and natural environment as explanations and interpretations of their infertility problems. The fourth major finding was that Arab women feel self-rejection and self-acceptance with their self-worth due to infertility issues. The fifth major finding was that Arab women both have psychological and physical needs that must be met in order to sustain themselves and their families.

This research demonstrated that societal, financial, and personal support had a substantial impact on perspectives of fertility and the ways in which Arab-American females perceived their future. There must be programs to help Arab-American females to understand their health problems and concerns. The information from this study may help health care professionals, policy-makers, Arab women, and the Arab community to understand how Arab women perceived and experienced infertility. Finally, this study could help Arab women understand their inner self more and their inner biases through

motivating them to talk about their health issues and taboo more easily to health care providers who should be skilled and trained professionals to deal with minority groups.

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Appendix A: Interview Guide

A.Background information:

- What is the highest level of schooling you've completed?
- How old were you when you got married?
- Did you have an arranged marriage?
- Have you been divorced, if yes, why? How many times?
- If the reason of your divorce is because you are infertile, do you hope to remarry and potentially become pregnant?

B. Infertility and its causes:

- When did you know that you have a fertility issue ?
- Have you undertaken an infertility test?
- What do you think are the reasons for your being infertile?
- Have you tried anything to conceive?

C. Social support

- Have you faced any discrimination based on being infertile?
- What are the words and expressions the people used about your infertility that made you have perceived as discriminatory?
- Is there anyone that supports you with your infertility?
- Who do you discuss your infertility problems with?

- How has the discrimination you faced due to your infertility affected you personally?

D**. Care taking:**

- What do you feel when you see other children or pregnant women?
- Have you engaged in giving care for children in your family or neighborhood? If no, why?

E**. Futurity:**

- How do you see your future life without kids?
- Have you heard about the probability of fertility success in other infertile women?
- Do you believe you will have a child in the future? if yes how? If no, why not?
- How do you feel about yourself?
- Do you have any questions?
- Do you want to add anything?