PSYCHOSOCIAL EXPERIENCES OF WOMEN WITH INFERTILITY AND THEIR COPING STRATEGIES IN ZAMFARA STATE, NIGERIA.

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THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF SCIENCE IN NURSING DEGREE

JUNE, 2015
DECLARATION

I declare that this dissertation is my own work produced from research undertaken under supervision, except where references have been properly acknowledged. Additionally, this dissertation has not been submitted in candidature for any other degree.

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DEDICATION

This research work is dedicated to my late mother- Hajar, my wife- Sadiya Abbas and our son- Abdulhameed.
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LIST OF ABBREVIATIONS

HLF: Human Life Foundation

WHO: World Health Organization

CDC: Center for Disease Control and Prevention
ABSTRACT

Globally, children are believed to have strong value especially among African societies. Therefore, the inability to bear children is a stressful situation that affects women socially, and psychologically, and puts them in a serious life crisis. Women with infertility have different experiences which vary from one country to the other including Nigeria, and that determine their psychosocial health. However, little is known about women’s experiences of infertility in Zamfara state. This calls for a major concern in exploring psychosocial experiences of women with infertility in Zamfara. The aim of this study was to explore the psychosocial experiences of women with infertility in Zamfara, Nigeria. Basic interpretive design of a qualitative approach was used to obtain information relevant to the research questions. Twelve (12) women who fulfilled the inclusion criteria were selected using a purposive sampling technique. Semi structured interview guide was administered to the women who fulfilled the inclusion criteria after filling out the consent form. The responses were elicited and analyzed using content analysis. The findings of this research revealed that, psychologically, majority of the women had experienced anxiety, stress and depression as a result of their inability to get pregnant. Socially, the women suffered social isolation, social stigma, social pressure and marital problems. The psychological experiences were linked to social experiences and were mostly from mother in-laws and husbands’ relatives. Major coping strategies adopted by the women were spiritual, social support, informal child adoption and diversional coping strategies. The women in Zamfara sought help for their infertility from both traditional medicine and medical treatment. However, they frequently withdrew from treatment or changed the health facility due to perceived less benefit. Therefore, infertility needs to be seen as a public health problem rather than just a disease. The findings of this study have implications for nursing practice and nursing research.
CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Infertility is considered as one of the six maternal morbidity neglected within developing countries (Hardee, Gay, & Blanc, 2012). It affects the entire women’s life (Hoseinighochani & Zargham, 2014). It is reported as being 16 times more frequent than maternal mortality (Hardee, et al., 2012). Globally, 56% of women with infertility are having problem seeking help (Boivin Bunting, Collins, & Nygren, 2007).

Clinically, infertility is a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse (Godwin, Montoro, Mudershpach, Paulson, & Roy, 2010). Demographically, infertility can be defined as, an inability to become pregnant, within five years of exposure based upon a consistent union status, lack of contraceptive use, non-lactating and maintaining a desire for a child (Shea & Shah, 2004; World Health Organization, 2014a). From the epidemiological perspective, infertility is defined as inability of a woman of reproductive age who is at risk of pregnancy, to conceive despite continuous unprotected sexual intercourse for two years or more (World Health Organization, 2014b).

Infertility can be primary or secondary. Primary infertility is the inability to conceive in a couple who have had no previous pregnancy (Hart, Norman, Callander, & Ramsden, 2000). Whereas secondary infertility is the inability to conceive in a couple who have had at least one
previous pregnancy which may have ended in live birth, still birth, miscarriage, ectopic pregnancy or induced abortion (Hart et al., 2000).

Globally, about 9% of the population suffer from infertility (World Health Organization (WHO), 2009; Nygren, 2007). It is estimated that, about seventy two million (72,000,000) women are affected with infertility and majority are from developing countries (Boivin et al., 2007; World Health Organization, 2009). It is also estimated that 10% of women are affected with infertility worldwide (World Health Organization, 2014b). In 2010, among women aged 20–44 years that were exposed to the risk of pregnancy, 1.9% were unable to conceive. Out of women who had had at least one live birth and were exposed to the risk of pregnancy, 10.5% were unable to conceive again (Mascarenhas, Flaxman, Boerma, Vanderpoel, & Stevens, 2012).

In the United Kingdom (UK), 2.4% of women aged 40–55 years had unresolved infertility with no pregnancies (primary), and a further 1.9% had been pregnant but not achieved a live birth (Oakley, Doyle, & Maconochie, 2008). According to the Center for Disease Control and Prevention (2013), approximately 10% or 6.1 million women in the United States struggle with infertility.

In Africa the prevalence rate of infertility may be as high as 20-30% in some areas, and vary from region to region even within the same country (Leke, 2014). Infertility prevalence is highest in South Asia, Sub-Saharan Africa, North Africa/Middle East, and Central/Eastern Europe and Central Asia (Mascarenhas et al., 2012). In sub-Saharan Africa, primary infertility is much less prevalent than secondary infertility (Akwame, 2013; Hollos & Larsen, 2008). These disparities are reported to be the result of the high prevalence of untreated sexually transmitted infections, abortion and postpartum infections (Callister, 2010; World Health Organization, 2014b). It has been reported that, the exact prevalence of infertility in developing countries is
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unknown due to a lack of registration and scarcity of empirical investigations in the area (Ombelet, Cooke, Dyer, Serour, & Devroey, 2008).

The overall burden of infertility is significant, likely underestimated, and has not displayed any decrease over the last 20 years (World Health Organization, 2014b). Infertility causes great worry and sorrow for many couples in Africa, especially for the women. Medical evidence shows that men and women usually have the same rates of infertility (Human Life Foundation, 2013). Yet African tradition continues to view infertility as a woman’s fault (Human Life Foundation (HLF), 2013).

Regardless of its medical causes, infertility causes women in African societies a personal grief and frustration, depression, social stigma, social isolation, and often serious economic deprivation (Cousineau & Domar, 2007; Hollos & Larsen, 2008; Hollos, Larsen, Obono, & Whitehouse, 2009; Naab, Roger, & Heidrich, 2013; World Health Organization, 2009). There is a difference in partners’ perceptions of infertility and their distress, and which is associated with their psychological adjustment of the fertility problem (Benyamini, Gozlan, & Kokia, 2011). There is also the feeling of disgrace, shame and finally divorce (Akwame, 2013). In Nigeria, depression and anxiety were significantly higher among women who were divorced due to primary infertility and had a negative attitude towards adoption (Rouchou, 2013).

In USA, psychosocial effects of infertility among women include shock, grief, depression, anger, and frustration, as well as a loss of a sense of control over one’s destiny (Ferland & Caron, 2013; Lindsey & Driskill, 2013; Miles, Keitel, Jackson, Harris, & Licciardi, 2009). Women’s experiences of infertility can result in feelings of extreme isolation, where many women feel like an outsider in a world that seems to only welcome parents and children (Ferland & Caron, 2013).
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Women in Africa suffer psychological distress and trauma resulting from spouses, relatives, and neighbours (Dhont, 2011). If the husband takes a second wife, the first wife may then have trauma from living in a polygamous and abusive marriage (Dhont, 2011). A study in Rwanda found negative consequences of infertility for both men and women (Dhont, 2011). Compared to western societies, infertile women in Third World countries feel a deeper depth of guilt, shame, worthlessness and depression (Rouchou, 2013). Every South African woman admitted to intense emotions such as anger, profound sadness, bitterness, loneliness and desperation (Rouchou, 2013). Some women confessed that they have had suicidal thoughts, while others were inconsolable when speaking of lost relationships and broken marriages (Rouchou, 2013).

In West Africa, women also suffer psychosocial problems of infertility. For instance, in Ghana, infertile women report facing severe social stigma, social isolation, anxiety, depression, marital strain and a range of mental health difficulties (Fledderjohann, 2011; Rouchou, 2013; Naab et al., 2013). Many women feel that they shoulder a disproportionate share of the blame for infertility and, by extension face greater social consequences than male partners for difficulties conceiving (Fledderjohann, 2011; Rouchou, 2013; Naab et al., 2013).

In Nigeria, psychological distress of infertility is significantly higher among couples with infertility compared with their fertile counterparts (Omoaregba, Morakiny, James, Lawani, & Morakinyo, 2011). Infertile women who had previously sought help from a traditional or faith-based healer for infertility were more likely to experience probable psychological distress (Omoaregba et al., 2011). In Nigeria, the levels of anxiety and depression among women with infertility varies according to individuals’ beliefs and religion, For instance, anxiety and depression are lower among religious couple but higher symptoms were predicted among
couples who were previously exposed to couples counseling and higher number of wives (Ramazanzadeh, Noorbala, Abedinia, & Naghizadeh, 2009; Upkong & Orji, 2007).

Psychological suffering is a significant and sometimes debilitating consequence of infertility in Nigeria. For instance, almost 50% of infertile women in Nigeria have been diagnosed with depression (Upkong, & Orji, 2007). Women’s beliefs about infertility have been reported to have an effect on their psychosocial health and contribute in varying degrees to their levels of depression, anxiety, stress, stigma and social isolation (Naab et al., 2013). Some risk factors for infertility have been reported. In Turkey, 35-50% of students thought that smoking, alcohol, stress, sexually transmitted diseases, infections, pollution, chemicals, radiation and cancer treatment could be risk factors for fertility (Gungor, Rathfisch, Kizilkaya Beji, Yarar, & Karamanoglu, 2013). Advanced age and obesity were seen as risk factors for women (Gungor, et al., 2013). Half of the students believed that infertility is preventable (Gungor et al., 2013).

Major causes of infertility as reported by Nigerians are medical and supernatural. Medical causes include family planning, especially the use of oral contraceptives, abortion and the use of drugs. Supernatural causes have also been implicated. For instance a person could be punished by offended witches, wizards or elders. Infertility could also be caused by powers of darkness, called ‘juju’ and behavioural factors such as sexual intercourse outside of marriage which is construed as immoral (Liu, Theobald, Odukogbe, & Nieuwenhuis, 2009). Likewise in northern Nigeria, majority of respondents in a study perceived infertility as a disease (Illiyasu et al., 2013). Only 18.1% of the respondents considered couple infertile after one year of marriage (Illiyasu et al., 2013). Causes of infertility mentioned by participants included paranormal events, suprapubic pain, induced abortion, sexually transmitted infections, blocked tubes and irregular menstrual cycles (Illiyasu et al., 2013).
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African women have negative experiences of infertility. For instance, in Tanzania, women suffer lack of respect in the community, verbal abuse and considered as useless (Hollos et al, 2008). In Ghana, women with infertility suffer high level of stress, social stigma and depression (Naab et al, 2013; Naab, 2011). Nigerian women experience psychological torture, verbal abuse, ridicule, physical abuse and deprivation (Anozie, Ameh, Kene, et al., 2007).

Women apply religious coping strategies and gain a faith-based strength to adapt to the effect of infertility. For example, in Iran religious women with infertility experienced infertility as an enriching experience for spiritual growth (Roudsari & Allan, 2011). This perspective helped them to acquire a feeling of self-confidence and strength to manage their emotions (Roudsari & Allan, 2011). Some other coping strategies adopted by women with infertility are being optimistic (i.e. women try to think positively and hope that things will get better), and self-reliant (i.e. women keep feelings to themselves and want to be alone to think things out) (Lee, Wang, Kuo, Lee, & Lee, 2010).

Efforts to assist the women with infertility to deal with the emotional impact of infertility should include preparing them to deal with the interactions and communications from those in their environments (Khalifa & Ahmed, 2012). This preparation may be particularly more relevant for rural dwellers who experience infertility because of the sense of closeness of community members that is so prevalent (Khalifa & Ahmed, 2012).

In southern Nigeria, infertility distress was high among couple who are infertile, so also depression and anxiety were significantly higher among women who were divorced due to primary infertility and had a negative attitude towards adoption (Omoaregba et al., 2011).
Nigerian women perceived infertility to be caused by medical and supernatural factors (Omoaregba et al., 2011).

Majority of the studies related to infertility in Nigeria were conducted in southern part of the country which has different cultural background with those in the northern part where this study was conducted. Yet little is known about the experiences of women with infertility in Zamfara. Therefore, this study explored the psychosocial experiences of women with infertility and their coping strategies in Zamfara.

1.2 Statement of Problem

African women with infertility have been subjected to domestic violence due to infertility (Sahin, Yildizhan, Adali, Kolusari, Kurdoğlu, & Yildizhan, 2009). Couples with infertility live in fear and anxiety about the infertility diagnosis, treatment process, and treatment outcome (Ozcelik, Karamustafalıoğlu, & Ozcelik, 2007). This situation may cause conflict between the spouses, a decrease in self-esteem, frequency of sexual intercourse, and the development of feelings of inadequacy in a female or a male. As a result, the bonds of marriage are put under psychological pressure (Holter, Anderheim, Bergh, & Moller, 2006; Moghadam, Salsali, Erdabili, Ramezanzadeh, & Veismoradi, 2011). Therefore, it can be a reason for marital incompatibility and also divorce (Holter et al., 2006; Moghadam et al., 2011). Domestic violence of women with infertility include psychological torture, verbal abuse, ridicule, physical abuse and deprivation (Anozie, et al. 2007). Infertility is also associated with frustration, pain, social ostracism, stigma, marital instability, and suicide (Moyo, 2014).

A Report in Nigeria has shown that, infertility has a serious social, psychological and economic impact on women and men's lives (Liu et al, 2009). Infertile women prioritize the
psychological impact of infertility while infertile men prioritize the economic impact, and reported spending between 55-100% of their income to address infertility (Moghadam et al., 2011). The prevalence of psychiatric morbidity was 46.4% in infertile women, 37.5% and 42.9% were cases of anxiety and depression respectively (Upkong & Orji, 2007).

It has been established that, the socio-demographic variables of women with infertility contributed to the prediction of psychiatric morbidity, because of the effects of age, not having at least one child and poor support from spouse (Upkong & Orji, 2007). Nigerian women with infertility have higher level of anxiety and depression (Fatoye et al., 2008; Omoaregba, James, & Morakinyo, 2011). Infertile women in southern parts of Nigeria are not considered as part of the community and are not even buried in town land (Hollos et al., 2014). There are variations in the extent to which childlessness is considered to be problematic in different regions of Nigeria (Hollos, & Larsen, 2008).

Despite the psychological and social problems associated with infertility, women are reported to have adopted various coping strategies which further increase their distress. While some of the strategies may not impose pressure on the women directly but to their partners (Donkor & Sandall, 2009). This means that, adopting inappropriate coping strategies may cause marital instability and separation.

If the impacts of infertility on women are known in other parts of Africa and Nigeria, what is the situation in Zamfara state? Currently, little is known about women’s psychosocial experiences and impacts of infertility in Zamfara state. Thus, this study explored the psychosocial experiences of women with infertility and their coping strategies in Zamfara.
1.3 Research Purpose

The purpose of this study was to explore the psychosocial experiences and describe the coping strategies of women with infertility in Zamfara state, Nigeria.

1.4 Research Objectives:

The specific objectives of this study are to:

1. Ascertain the psychological experiences of women with infertility
2. Explore the social experiences of women with infertility
3. Investigate the coping strategies adopted by women with infertility
4. Find out the health-seeking behavior of women with infertility

1.5 Research Questions

1. What are the psychological experiences of women with infertility in Zamfara?
2. What are the social experiences of women with infertility in Zamfara?
3. What are the coping strategies adopted by women with infertility in Zamfara?
4. What are the health seeking behaviours of women with infertility?

1.6 Significance of the Study

The findings of this study may assist health practitioners in gaining more knowledge on the psychosocial experiences of women and contribute towards providing directed psychosocial care and health education. Providing and promoting psychosocial care is of crucial importance for reducing anxiety related to infertility and preventing complications such as depression and physical problems like hypertension and psychiatric disorders. Thus, the findings will assist nurses in designing and providing health educational programmes targeting and strengthening women psychologically and offer ways for effective community integration. It will also help in
providing counseling on more effective ways of adaptation. The findings may also contribute to the body of knowledge in the area of infertility and pave the way for further research.

1.7 Operational Definition

**Psychological experiences**: Factors that contribute to the instability and border one’s mind

**Social experiences**: Factors leading to ineffective interaction with one’s physical environment

**Infertility**: Inability to give birth despite all efforts to do so.

**Anxiety**: A state of fear, doubt, worries, thinking too much and feeling weakness due to infertility

**Stress**: State of frequent crying, confusion, disturbances, and insomnia as a result of infertility

**Depression**: Infertility related sadness, angry, irritability, loneliness, lack of happiness, and loss of interest in communication

**Social Stigma**: Negative understanding attached to infertility

**Social Isolation**: Lack of involvement in social interaction or activities
CHAPTER TWO

LITERATURE REVIEW

In this chapter, literature relevant to the problem investigated were reviewed. Previous findings on the subject were examined critically, analyzed, summarized, and gaps identified based on study design, sample size, generalization and context of the study. The literature was reviewed based on the study objectives and categorized into psychosocial experiences of women with infertility, coping strategies to infertility and health seeking behaviours of women with infertility.

Most of the information was accessed via internet search. Online library catalogue and databases such as Google scholar, Biomed central, Pubmed, Wiley-online library, AJOL, EBSCOHOST were explored. To get articles relevant to the research topic, the Boolean method using a combination of words were used (e.g. infertility psychosocial, coping with infertility, health seeking behaviour of infertility sometimes linked by “AND”, “OR”).

The articles were scanned through and evaluated before selection for the review. The criteria used for selection included publication status, evidence, reference and whether it was reviewed. For the empirical studies, recent articles published from 2008 upwards were mostly selected. However, in an area with limited literature, some articles published in 2007 and 2006 were reviewed.

2.1 Overview of Infertility

Infertility is defined as twelve months of unprotected sexual intercourse without conception (American Society for Reproductive Medicine, 2008). About 10% or 6.1 million women in the United States suffer from infertility (Centers for Disease Control and Prevention, 2013). In sub-Saharan Africa, prevalence of secondary infertility is higher than that of primary
infertility (Hallos & Larsen, 2014; Sule, Erigbali, & Eruom, 2008). Differences in prevalence of secondary infertility among Africans existed in terms of educational level of the individuals and ethnicity (Hallos & Larsen, 2014; Liu, Theobald, Odukogbe, & Nieuwenhuis, 2009; Serour, 2008).

One-third of the cases of infertility is due to male factors, one-third to female factors and one-third relates to a combination of male and female factors or has no identifiable cause (Cousineau & Domar, 2007; Johnson & Everitt, 2007). While Tuzer et al. (2010), found that, 35% of infertility cases are due to women factors, 55% due to men factors and 15% is unknown. The differences existed between the two findings above could be as a result of variations in socio-demographic characteristics of the respondents, access to health care services and utilization. In places with poor access to health care and low income countries, common preventable causes of infertility include post-partum and post-abortion infections, tuberculosis and untreated sexually transmitted infections, female genital mutilation, drugs and psychological stress (Homan & Davies, 2007; Liu et al., 2009; Ombelet, Cooke, Dyer, & Serour, 2008; Plessis, Kashou, Vaa-monde, & Agrawal, 2011). From the respondents views causes of infertility include: contraception, abortion, supernatural, behavioural factors (Odukogbe et al., 2009). Although male factors contribute to about half of all cases of infertility, this is rarely acknowledged and women are often held responsible for couples’ inability to conceive (Dhont et al., 2010).

Provision of infertility care in low-income countries has not been encouraged among people in high-income countries. Members of the medical and scientific community increasingly call for action to reduce the global burden of infertility (Gerrits, Ombelet, & Vanderpoel, 2012; Vayena, 2009).
According to Makuch, Amaral, and Rossi (2011), and Ombelet et al. (2008), while some have the view that, strategies to improve education about sexual and reproductive health and to prevent infertility are paramount to reduce the prevalence of infertility, others assert that these strategies should be coupled with provision of infertility care, including assisted reproduction, since sex education and improve reproductive health do not resolve the plight of infertility for those affected.

To make infertility care accessible to as many people as possible, it is suggested that services for basic infertility investigations (to determine cause of infertility) and simple forms of infertility treatment (such as ovulation induction and artificial insemination) are integrated into existing reproductive health settings (Ombelet et al., 2008). Sallam (2008) proposed a model with three levels of assistance: (i) a basic infertility clinic offering diagnostic tests and simple forms of infertility treatment; (ii) an advanced clinic where, in addition to the services offered in the basic clinic, IVF (the simplest procedure) and more advanced diagnostic procedures are available; and (iii) a tertiary-level infertility clinic offering specialized assisted reproduction and surgical procedures. Depending on the level of service, funding options include public–private partnership models and partnerships between the World Bank and government, donor agencies, professional societies and the World Health Organization (WHO) (Sallam, 2008).

In 2001 WHO recommended that infertility be considered a global health problem and stated the need for adaptation of assisted reproduction technology in low-resource countries. In response, simplified protocols have been developed (Hammarberg & Kirkman, 2013). These use less potent and cheaper drugs to stimulate oocyte development, minimal monitoring, simplified
culture systems and less technologically advanced equipment, thereby drastically reducing the per-treatment cycle cost (Hammarberg & Kirkman, 2013).

A crucial part of implementing simplified protocols in low-income countries is that safety and effectiveness are monitored by a body independent of the clinic (Ombelet, et al., 2008). While lower success rates are expected with simplified protocols, they have been shown to deliver acceptable live birth rates (Aleyamma, Kamath, Muthukumar, Mangalaraj, & George, 2011). The two most common adverse effects of assisted reproduction treatment are ovarian hyperstimulation syndrome, which is potentially lethal and is caused by fertility drugs, and multiple births (Ombelet, et al. 2008).

In 2010 The Walking Egg (www.thewalkingegg.com), a not-for-profit foundation promoting accessible and affordable infertility services in developing countries, was established. The Walking Egg collaborates with ESHRE and WHO to make infertility care an integral part of reproductive health care in low-income settings through innovation and research, advocacy and networking, training and capacity building, and service delivery (Ombelet & van Balen, 2012).

While these and other initiatives provide some hope for the goal of alleviating the personal suffering of infertility and improving reproductive health in low-income countries, there are still many social, political, financial and logistic barriers to overcome before this becomes a reality. In-depth interviews with key informants in Bangladesh, including stakeholders from government and non-governmental organizations, policy makers, donors and public health researchers, revealed that, although the need for infertility services is acknowledged, infertility is not recognized as a priority area in a healthcare system that can provide only the most basic care.

Informants also pointed to the lack of technical expertise and infrastructure as barriers for
infertility care in Bangladesh (Nahar, 2012). Similar difficulties are identified in other low-income settings such as Sudan, West Africa and Vietnam (Hörbst, 2012; Khalifa & Ahmed, 2012; Pashigian, 2012).

Although these barriers may seem insurmountable, strategies to move towards amelioration of inequitable access to infertility care have been proposed. Nahar (2012), argues that the decisions of policy makers are dependent on donor agencies allocation of funding and because donor agencies rely on epidemiological data to determine their funding priorities the psychosocial burden of infertility is not accounted for. She believes that increasing the body of knowledge about the adverse effects of infertility through rigorous research and strong advocacy directed at donor agencies and policy makers will help them see the need to provide funding for infertility care. Khalifa and Ahmed (2012), suggest that, decentralization of infertility care and public–private partnerships have the potential to reduce cost and improve accessibility to medical treatment for infertility in countries like Sudan. They recommend that public–private partnerships provide basic infertility investigations and treatment such as ovulation induction and intrauterine insemination in local satellite fertility centers and more technologically advanced treatment such as IVF and intracytoplasmic sperm injection in a centralized service in the capital city. This would in their view improve the quality of the public services and reduce the cost of private services. Hörbst (2012), also believes that the public sector needs to engage with private providers to improve access to infertility care in West Africa. The number of private providers is increasing in West Africa and while they operate according to international standards and have comparable success rates to clinics in high-income countries, they are also aware of and able to accommodate local socio-cultural needs and wishes in their practice. To ensure that more infertile couples can benefit from the experience of established private providers, the public
sector should actively involve them in initiatives to deliver affordable infertility care in West Africa (Hörbst, 2012). The importance of training local healthcare professionals in all aspects of infertility care is emphasized by Ombelet and van Balen (2012). They recommend that training programmes run by experts from high-income countries in each of the fields of reproductive medicine, nursing, counseling, embryology and administration would allow local expertise to develop. Well-trained local experts would be able to provide safe, effective and culturally sensitive infertility care to couples in resource poor settings.

### 2.2 Women and Infertility

The inability to conceive children is experienced as a stressful situation by individuals and couples all around the world (Cousineau, & Domar, 2007). The experiences of infertility are manifold and can include societal repercussions and personal suffering (Cousineau, & Domar, 2007).

West and South Africa, have documented the overwhelming importance of childbearing and the suffering caused by infertility in these societies (Donkor & Sandall, 2009; Dyer, Abraham, Hoffman, & Van, 2005; Dyer, 2007; Hollos & Larsen, 2008; Hollos, Larsen, Obono, & Whitehouse, 2009). For instance, in Nigeria it was reported that, children have a strong value, therefore, having a child, or at least expressing the desire to have a child, was regarded as the norm and that it was unusual for a man or woman to say that they did not want children (Ibisomi & Mudege, 2014; Nigeria Demographic Health Survey, 2006). The exception to this was the acceptance of voluntary childlessness chosen by the nuns and monks in Christianity as part of their own way of serving God (Ibisoma, & Mudege, 2014). In Nigeria, voluntary childlessness is considered negative and a man or a woman involved are often referred to as lazy, impotent, thief and prostitute (Ibisomi, & Mudege, 2014).
2.3 Experiences of Women with Infertility

Infertility has typically been presumed to be a woman’s problem, and women with infertility are more culturally salient figure than the sterile or impotent men because it is perceived that, it is the women who bear or fail to bear children (Akwame, 2013; Center for Disease Control and Prevention, 2013). In addition, Naab (2014), established that, in African society, women are blamed for infertility. Women who are most at risk for experiencing psychological distress as a result of infertility are women who have a strong desire for a biologic child (Kraaij, Garnefki, & Schroeters, 2009; Wischmann, Scherg, Strowitzki, & Verres, 2009) and those who engaged in self-blame (Kraaij et al., 2009).

In Europe, significant relationships were found between psychological costs and basic hope \( (r=0.369; p< 0.01) \). The longer the infertility treatment, the higher the psychological stress and the more advanced the method, the higher the psychological stress (Dembiska, 2014). Hope as an emotional state was identified as the most important of all psychological costs, decrease of hope as an emotional state leads to more intense experiencing of the other costs (Dembiska, 2014).

Compared to western societies, infertile couples in Third World countries feel a deeper depth of guilt, shame, worthlessness and depression if they cannot conceive (Dhont, Wijgert, Coene, Gasarabwe, & Temmerman, 2011; Dhont, 2011; Fledderjohann, 2012; Eshre, 2008; Greil et al., 2010).

Researches have shown that, women suffer more of the consequences than their male counterparts (Dembiska, 2014; Fledderjohann, 2012; Peterson, Newton, & Feingold, 2007). The psycho-social experiences suffered by infertile couples in Rwanda are severe and similar to those reported in other resource-poor countries (Dhont et al., 2011). Many women feel that they
shoulder a disproportionate share of the blame for infertility and by extension face greater social consequences than male partners for difficulties in conceiving (Flederjohann, 2012; Rouchou, 2013; Naab et al., 2013). It could be due to long association of women`s fundamental role in childbearing (Forsythe, 2010). Women feel like an outsider in a world that seems to only welcome parents and children (Ferland & Caron, 2013). Severity of infertility experiences varies depending on women`s religious, social and infertility status. For instance, higher symptoms were predicted by respondents' previous exposure to couple counseling and living in polygamous family, advanced age with no child, poor support from partner and socio-demographic variables of the women (Fatoye, Eegunranti, Owolabi, & Fatoye, 2009; Upkong, & Orji, 2007; Yuit, et al., 2012).

In general, it was established that, infertility affects the entire woman`s life (Hoseinighochani & Zargham, 2014). By implication, this brought about life dissatisfaction for women (McQuillan, Stone, & Greil, 2007; Rostad, Schmidt, Sundby, & Schei, 2014).

2.3.1 Psychological Experiences

Conceiving a child is considered as major milestone in the lives of married couple (Yuit, et al., 2012). The psychological problems are experienced in different forms as discussed below:

Loss of Self-Esteem, Grief and Depression

Women in the United State of America experienced many losses among which is the loss of self-esteem as a result of infertility (Resolve, 2013). In certain traditional Chinese or Indian cultures, women are only accepted as part of the family when they have children (Wong et al., 2012). Therefore, women with infertility often view themselves as unattractive, worthless,
defective, inferior, unlovable and unworthy and suffer withdrawal and low self-esteem (Golhardo, & Pinto, 2011; Yuit et al., 2012).

Women in USA experience both bargaining and acceptance which are the common responses, followed by depression, anger, and denial/isolation (Lee, Wang, Kuo, Lee, & Lee, 2010). Bargaining might appear through the whole process of grief responses, but almost ended by acceptance with another attempts to achieve conception (Lee et al., 2010).

A quantitative study using 652 respondents to identify the coping specificity of Israeli women was conducted, in which women were found to have social withdrawal, denial, self-blame, self-neglect, disclosure and acceptance (Benyamini, Bardarian, & Gozlan, 2008).

An electronic data based study conducted in Singapore to discuss the impact of infertility on women’s psychological health, women were found to suffer grief, shame and depression as a result of infertility (Yuit et al., 2012). Women described being “haunted” by memories, a grieving for what was lost, and the persistent sense that “there are some broken hearts that never heal,” despite efforts to recover and adjust (McCarthy, 2008). In other studies conducted with Chinese women, it was shown that childlessness was significantly related to loneliness and depression, even after adjusting for multiple socio-demographic factors (Zhang & Liu, 2007).

Grief is an emotion that an infertile African woman experience (Hollos, & Larsen, 2008; Hollos et al., 2009 & World Health Organization, 2009). It occurs when a woman experience losses such as loss of sexual identity, parenthood, marital relationship, and self-esteem (Yuit et al., 2012). On the side of depression, it is one of the most prevalent psychological disorders experienced by women with infertility (Golhardo & Pinto, 2011). The risk of depression in
women with infertility is almost as high as those with severe illnesses like cancer or cardiac disease (Cousineau, & Domar, 2007).

Research from US suggest that, beside inability to have a child, individuals receiving negative results following ART cycles exhibited greater levels of depression (Thomas & Rausch, 2008). Depression is high among infertile women of Turkey (Kazandi, Gunday, Mermer, Erturk, & Ozkinay, 2011). In Turkey, it has shown that fertility is still viewed very traditionally and that there is a lot of social pressure for newly married women to become pregnant (Kazandi, et al., 2011). If a woman has to undergo infertility treatment no matter what her educational level, employment status or affluence of husband, her feelings of hopelessness and anxiety are significantly more severe than a woman who is fertile (Gulseren et al., 2006 & Kazandi, et al., 2011).

South African women admitted to intense emotions such as anger, profound sadness, bitterness, loneliness and depression (Dyer et al., 2006). Some women confessed that they have had suicidal thoughts, while others were inconsolable when speaking of lost relationships and broken marriages (Dyer et al., 2006). Depression and stress were found to be more prevalent symptom and high among women with infertility in Ghana (Golhardo & Pinto, 2011; Naab et al., 2013; Naab, 2011).

In Nigeria almost 50% of women with infertility have been diagnosed with depression (Upkong, and Orji, 2007). Women in Nigeria had higher mean score for depression score (p <0.001) than their husbands (Fatoye, Owolabi, Eegunranti, & Fatoye, 2008). Upkong, and Orji, (2007), established that, the prevalence of psychiatric morbidity was 46.4% in the women with infertility, 37.5% and 42.9% were cases of anxiety and depression respectively. In Nigeria, depression and anxiety were significantly higher among poor women who were divorced,
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suffering from primary infertility, and had a negative attitude towards adoption (Upkong & Orji, 2007).

**Stress, Anxiety and Anger**

Beliefs about infertility and poor understanding of infertility is related to infertility-related stress (Naab et al., 2013; Sherrod & Houser, 2013; Benyamini, Gozlan, & Kokia, 2011). Women with infertility often feel anxious and frustrated as they wait every month in anticipating that they will miss their menstrual cycle (Wong et al., 2012). Having their period will mean that, they have lost the chance of becoming pregnant (Omu & Omu, 2010). Anxiety becomes chronic even when the woman becomes pregnant anxiety will continue due to the fear of unknown and miscarriage (Wong et al., 2012). Constant pressure to have a child from the family members may cause psychological trauma. Among the various occupations of the sample, women who were in professional/technical/managerial/clerical jobs experienced the least stress related to infertility whilst women who were in jobs classified as sales and services experienced the highest stress score in relation to their infertility (Perkins, 2006). The level of anxiety increased if the woman has strong desire to deliver and struggled to have a child (Perkins, 2006 & Fatoye et al., 2009).

A qualitative study of the experience of treatment for infertility among women who successfully became pregnant using 230 respondents, established that, women had difficulties associated with conception resulted in many women in the UK describing themselves as becoming totally preoccupied, feeling of emptiness, experiencing great distress and feeling that they will never become parents (Redshaw, Hockley & Davidson, 2007).

A study conducted in Singapore indicated that, women suffer with negative experiences of infertility among which are anxiety and stress (Yuit et al., 2012). In Greece, the mean score of
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respondents’ state of anxiety was 44.5 (SD 9.5). Women in Kuwait present psychological problem in the form of tension, hostility, anxiety, depression, self-blame and suicidal ideation (Fido & Zahid, 2007).

Stress and anxiety may develop among African women because children are found to be useful in satisfying emotional needs (Dyer, 2007). Infertility brings about chronic stress to women and has long term implications on the social and psychological aspects of women’s life (Wong, et al., 2012). The stress experienced may arise from multitude of factors such as desire to attain parenthood, strains imposed on marital relationship as well as cost and success rate of treatment (Yuit et al., 2012). According to Khademi, Alleyassin, Amini, and Ghaemi (2008), the prevalence of female sexual dysfunction was highest and lowest in arousal-sensation (80.2%) and orgasm (22.8%) domains. Anxiety may occur during sexual intercourse, where the woman is reminded of her infertility and gradually this will affect the couples’ level of sexual satisfaction, due to the shift in focus from the initial bonding and intimate act of love, to a worrisome and technical chore in order to become pregnant (Cousineau et al., 2007; Golhardo & Pinto, 2011; Peterson, Newton, & Feingold, 2007).

The relationship between the women’s responses and their demographic characteristics was explored. Women’s age and social class were not statistically significantly associated with respondents’ psychological status. However, educational level was significantly associated with women’s levels of anxiety, social stress and depression (Lykeridou et al., 2009).

Ghanaian and Nigerian women reported to have high levels of infertility-related stress, and low levels of anxiety (Fatoye et al., 2008; Fledderjohann, 2012; Naab et al., 2013; Naab, 2011). Women in Nigeria had a significantly higher mean anxiety score (p<0.001) than their
husbands. Emotional burden in the family was significantly associated with low religious inclination of husband and wife, strained relationship of couple, extended family pressure on husband, husbands' negative attitude towards child adoption, and lower age group of wife (Fatoye et al., 2008; Fatoye et al., 2009). In relation to residential location, women who had spent their childhood in the village experienced the highest infertility-related stress whereas women who had been brought up in the city during their childhood had the least infertility-related stress (Donkor & Sandall, 2007).

2.3.2 Social Experiences

Under social experiences, the following are discussed: social isolation and social stigma, marital instability and divorce, economic experiences and violence and abuse.

Social Isolation and Social Stigma

Among South Asian women there is pressure to conceive, and those who fail to do so can face isolation and stigmatization (Cross-Sudworth, 2007). In Kuwait, childlessness results in social stigmatization for infertile women and places them at risk of serious social and emotional consequences (Fido & Zahid, 2007). In Tanzania women who have never had a child suffer from the stigma of being useless women unlike a woman who delivered even once (Hollos & Larsen, 2008). Demonstrating that primary infertility is more serious compared to secondary infertility.

African women suffer social stigma as a result of infertility (Cousineau & Domar, 2007; Hochschild et al., 2009; Hollos & Larsen, 2008; Hollos, Larsen, Obono, & Whitehouse, 2009; Naab et al., 2013). For instance in Ghana women are reported to have social stigma and social isolation (Donkor & Sandall, 2007; Naab et al., 2013; Fledderjohann, 2012). They are reported to
have moderate level of social isolation and low level of social stigma (Naab et al., 2013). But according to a study by Fledderjohann (2012), using a sample of 107 respondents established that, women in Ghana experience severe social stigma. The difference may be due to the number of respondents used by Naab and colleagues (N=203) which is more than that of Fledderjohann (N=107) which may allow for more data collection and result in generalization. Sequential multiple regression analyses indicated that higher levels of perceived stigma were associated with increased infertility-related stress. The findings suggest that the social status of infertile women derived from other factors can be of importance in minimizing the impact of stigmatization and stress related to infertility (Donkor & Sandall, 2007).

A Harvard Mental Health Letter report noted that, family and friends may inadvertently cause pain by offering well-meaning but misguided opinions and advice (Harvard Medical School, 2009). This problem is even worse in Africa, where the extended family system is practiced and valued. Though this system may be beneficial in other ways, it often aggravates the infertility problem (Harvard Medical School, 2009).

Marital Instability and Divorce

A married African woman who has no child is living on borrowed time (Akwame, 2013). This is because a woman acquires an identity through marriage and most importantly, when marriage is fertile. If not, she may be returned by the husband to her parents at any moment, in disgrace and shame (Jindal et al, 2009). The impact of infertility on marital relationships was more negative when couples assigned blame for infertility on someone or something (Wilkes, Hall, Crosland, Murdoch, & Rubin, 2009). It was found that the emotional symptoms in both women and men were related to decrease marital adjustment when the infertility was not due to
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Male factor (Golharo & Pinto, 2011; Jindal, et al., 2009). One possible reason for the high anxiety in women might be the women blaming themselves for the lessened satisfaction about the relationship, as well as the infertility itself (Tuzer et al., 2010).

According to a study by Sami (2008), in Karachi, more than two thirds (67.7%) of women stated that their inability to give live births or give birth to sons had resulted in marital dissonance in which the respondents had been threatened for divorce (20%), husband marrying another wife (38%) or to be returned to their parent's home (26%) by their in-laws or husbands. Majority (68%) of the women threatened did not have any live births. However, those who had live births (32%) had a girl child only followed by difficulty in conceiving again (secondary infertility). Infertility was described as a cause of violence against women with infertility. The women reported that they were being physically and verbally abused by husbands (10.5%) and in-laws (16.3%) for being infertile. Nearly 70% of women facing physical abuse and 60% of the women facing verbal abuse suffered severe mental stress (Sami, 2008).

In Jordan, women are faced with the adversity of adding another wife, and the adversity of changes in the marital relationship characterized by lack of care and pressure (Obeisat, Gharaibeh, Oweis, & Gharaibeh, 2012). This is similar to the findings of Akwame (2013), in Zimbabwe. Wilkes et al. (2009), found that, infertile couples often blamed the relationship or each other for infertility, which resulted in emotional isolation, communication problems, and arguments. Such anxiety may also result in mistrust and blame towards each other, after several attempt to conceive, hence causing tension in marriages (Lemoine & Ravitsky, 2013; Perkins, 2006). Several studies demonstrate that women with infertility who experience rejection or pressure from husbands and family experience higher levels of distress (Gulseren et al., 2006). Based on the study by Valsangkar, Bodhare, Bele, and Sai (2011), number of episodes of sexual
intercourse among fertile couple is higher than that of infertile couples at about 18 and 12 episodes per month respectively. Sexual dysfunction was reported more frequently in the survey by infertile than fertile couples in Ruwanda (Dhont et al., 2011). Among the couples in Sweden, half of women were divorced and almost all stated that, they had sexual problem (Wirtberg, Möller, Hogström, Tronstad, & Lalos, 2007).

Women in Ghana are faced with marital strain and instability. Findings in the study by Fledderjohann (2012), showed an increased risk of insecure sexual behaviour of both men and women, in which rate of AIDS, gonorrhea, syphilis and other sexually transmitted infections have increased due to both genders trying out different partners, attempting to prove that they are not the source of the infertility. Just as in a case of Ruwanda, women in Ghana also expressed a decrease in their interest for sex (43.6%), while only 20% of men confirmed the change (Fledderjohann, 2012).

In Nigeria, according to Whitehouse and Hallos (2014), in their mixed study titled: Definitions and the experience of fertility problems: infertile and sub-fertile women, childless mothers, and honorary mothers in two southern Nigerian communities, using the sample of 246 women with infertility established that, divorce, permanent separation and polygamy were often the result of infertility in Nigeria.

**Economic Experiences Consequences of Infertility**

One of the most significant economic consequences of infertility is treatment (Redshaw et al., 2007). Current treatments, such as in vitro fertilization, hormone injections and artificial insemination, are expensive, time consuming and most commonly not available in developing countries (Rouchou, 2013; Dhont et al., 2011). In a longitudinal research conducted in the UK, women in UK described the infertility process of treatment as costly and stressful (Redshaw et
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In India, having a child increases the earnings for a woman’s family; children are viewed as a source of labour and security in old age (Kumar, 2007).

A study conducted in Bangladesh focused on the link between infertility and poverty showed that childlessness generates poverty among rural families more than among urban middle-class families for numerous reasons, including marriage devaluation and social isolation. These two factors lead to the demoralization of a man, which negatively affects his status as an individual who is capable of holding a job. There are disbursements for citizens who do not hold a job, so men become deprived of financial means (Nahar, 2012).

Infertility struggle leads to serious economic deprivation among African women (Hallos, & Larsen, 2008; Omoaregba et al., 2011; Odukogbe et al., 2011). For instance, in Rwanda, the husbands of infertile women often refuse to buy food and clothes for her because she cannot give him a child in return; here, children are currency (Dhont et al., 2011).

Traditional healers are more expensive than faith-based healers (Liu et al., 2009), but Nigerian women spend between 55% and 100% of their earnings on attempts to treat their infertility (Odukogbe et al., 2011; Liu et al., 2009). Despite that, it was established that, infertile women who had previously sought help from a traditional or faith-based healer for infertility were more likely to experience probable psychological distress (p<0.017) (Omoaregba et al., 2011). Women view childbearing as invaluable, so they are willing to prioritize treatment (Odukogbe et al., 2011).

In Nigeria and Rwanda, one of the greatest concerns to an infertile woman is the financial discrepancy between her and her extended family. In Nigeria, a woman who has not borne children cannot be recognized as an elder because she has not been able to bear a son; therefore, she does not have a right to her husband’s property, nor can she return to her parents’ compound.
as she will be mistreated (Odukogbe et al., 2011). An infertile woman is often left without a home and without any money (Odukogbe et al., 2011).

Unfortunately, research has not prioritized the economic consequences of infertility in many developing countries where resources are sparse, financial burdens arise and drive couples further into poverty (Rouchou, 2013; Dhont et al., 2011; Gana & Jakubowska, 2014; Okonofua & Obi, 2009). For example, men in Rwanda who do not have children stated that they are less motivated to work since they do not have any offspring to support. It is with this attitude that the cycle of poverty continues (Greil, Blevins, & McQuillan, 2010; Dhont et al., 2011).

**Violence and Abuse Related to Infertility**

More than two-thirds of women in a rural town in India experienced verbal, physical and emotional abuse from their husbands after finding out that they were infertile (Cwkel, Sheiner, & Gidron, 2006). It is unclear whether the remaining women even consider their infertility as a root of the abuse. In Ruwanda, couples presenting with female and/or male factor infertility problems at the infertility clinic of the Kigali University Teaching Hospital (n= 312), showed that, domestic violence is higher in infertile couple than fertile one (Dhont et al., 2011).

In Nigeria, 97 (41.6%) of the women had experienced domestic violence because of their infertility state. The forms of domestic violence experienced were psychological torture 50 (51.5%), verbal abuse 38 (39.2%), ridicule 27 (27.8%), physical abuse 17 (17.5%) and deprivation 6 (6.2%). The main culprits were the husbands 47 (48.5%) and female in-laws 31 (32%). Yoruba women were more likely to experience domestic violence than other tribes, although this difference did not reach statistical significance ( p > 0.05.) Educational level, parity, type of marriage and duration of infertility were not statistically significant (p > 0.05) (Anozie et al., 2007).
2.4 Coping Strategies of Infertility

A number of empirical studies globally showed that, women with infertility use a variety of strategies to cope with their infertility stressors which in turn is known to influence wellbeing (Baker & Berenbaum, 2007; Jindal et al., 2009; Martins, Peterson, Almeida, & Costa, 2011). Fleming and Burry (2008), suggested that, infertility grief and other stressors should be viewed as a process which may require the mastery of ongoing coping strategies and support.

Some coping strategies adopted by women with infertility may do more harm than good to them rather than strengthening them. Some may be beneficial to women and be problematic to their partners (Donkor & Sandall, 2009; Peterson, Newton, Rosen, & Skaggs, 2007; Suzanne, Reada, Robert Whitleya, Sharon, & Zelkowitz, 2014). For instance, a study by Morrow, Thoreson, and Penny (2006), showed that, avoidance strategy of coping with infertility was found to be associated with increased distress. Similarly, a study conducted by Morrow et al., (2006), showed that, coping strategies of accepting responsibility and escape-avoidance adopted by women with infertility were significantly and positively correlated with emotional disturbances.

However, Center of Reproductive Medicine (2012), proposed that, coping can be easier if women with infertility keep the following strategies in mind:

- Accepting support from friends and family
- Taking time to acknowledge one’s feelings and that of his partner
- Join a support group
- Seeking the help of a professional,
- Avoiding self-blame
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- Working as a team with partner

Better coping strategies about infertility can be helpful to couples with infertility for the better adoption to infertility problem (Cousineau & Domar, 2007). This is because; evidence showed that an individual’s coping strategies influence distress and relationship satisfaction (Lechner, 2007). The following are numbers of strategies adopted by women with infertility worldwide.

2.4.1 Social Support

Social support is level of receiving kindle and attention of family, friends, and others (Sarafino, 2002). Social support is an effective strategy in stress management process in which an individual accepts help from others (Calvete & Connor-Smith, 2006). Lack of social support can be a source of stress (Luo & Wang, 2009).

Seeking social support is a useful coping strategy adopted by women with infertility, as it was reported that, significant levels of stress among women with infertility decreases with each increase in the women’s social support (Baker & Berenbaum, 2007; Bayley, Slade, & Lashen, 2009; Boivin et al., 2007; Malik & Coulson, 2008; Soskolne & Baor, 2012). Social support is beneficial to recipients if only he perceived it as such. If someone does not feel supported, then they will not experience the benefits of social support, even though other people might have considered the provider’s words or deeds to be supportive (Peterson et al., 2007).

Boivin et al. (2007), found that the most frequently used sources of support were talking with spouse, family and friends, and using documentation on emotional aspects of infertility obtained through the clinic, newspapers or television programmes. It was pointed out that while infertility
can be quite distressing for patients, external support from family and friends, new treatment opportunities could all reduce emotional distress.

It is in this line, it was reported that, women in USA and Israel seek psychosocial support as coping strategy of infertility (Benyamini et al., 2008; Peterson et al., 2007; Suzanne et al., 2014). This is also reported among Arabian women. Iran is an example where Faramarzi et al., (2013), reported that women cope through seeking for social support. This is also reported among African women. For instance, in Ghana and Nigeria women were reported to seek for social support as coping strategy (Donkor, & Sandall, 2009; Omosun & Kofoworola, 2011).

### 2.4.2 Child Adoption

Adoption is a legal act where a child becomes affiliated to a parent to whom he/she is not biologically related. It is the act of legally placing a child with a parent or parents other than those to whom they were born (Webster’s unabridged dictionary, 2009). Adoption can either be an open or a fully disclosed adoption. It allows identifying information to be communicated between adoptive and biological parents and perhaps, interaction between kin and the adopted person (Webster’s unabridged dictionary, 2009).

Infertility is the main reason parents seek to adopt children to whom they are not related (Omosun & Kofoworola, 2011). This practice is well known and done in certain high income countries. In developing countries, only 1.2% of women with infertility had already adopted a child, 27.2% had the wish to adopt a child (Nwobodo & Isah, 2011). Many factors are involved in accepting adoption as coping strategies. These include, level of education, social beliefs, duration of infertility and socio-economic level among others (Adewunmi, Rabiu, Etti, & Tayo,
Women’s Experiences of Infertility (Charlotte, Clovis, Halle, & Eugène, 2014; Oladokun et al., 2010; Oladokun, Arulogun, & Arulogun, 2009).

It was found that, adoption, instrumental and emotional support, as coping strategies exert a significant positive influence on psychological health, facilitating self-esteem, self-efficacy, and resulting in lower stress among women with infertility (Valsangkar, Bodhare, Bele, & Sai, 2011).

In Cameroon, among 300 women, 269 (89.7%) had heard about adoption through different ways and majority (62.1%) heard about it through the media. Seventeen percent knew who to meet in order to adopt a child in Cameroon. Two hundred and thirty patients (76.7%) were in favour of adoption but 48.7% of them said no to adoption. One percent of patient had adopted a child. Eighty five percent of women with secondary infertility do not want to adopt while 44.7% want it (p = 0.0003). According to the author, attitude of women in Cameroon is favorable for adoption but the practice of adoption remains low (Charlotte et al., 2014).

Similarly, in Nigeria majority of women with infertility (85.7%) had heard about child adoption and majority (59.3%) of them knew the correct meaning of the adoption. More than half of the respondents (68.3%) said that they love an adopted child but less than half of them (33.7%) were willing to do adoption (Omosun & Kofoworola, 2011). Unlike that of Cameroon, 13.9% of women with infertility in Nigeria have adopted a child. The major reason given for their unwillingness to adopt was their desire to have their own biological child. Factors that were favourable towards child adoption were Igbo tribe identity, an age above 40 years, duration of infertility above 15 years, and knowing the correct meaning of child adoption (Omosun & Kofoworola, 2011).
2.4.3 Self-blame Distancing, Self-controlling Coping and Accepting Responsibility

Women in USA were reported to use distancing, self-controlling coping, peer mentoring for coping with infertility (Peterson et al., 2006; Suzanne et al., 2014). Women were also reported to use Self-blame to cope with infertility (Kraaij, Garnefki, & Schroevers, 2009).

Regarding the coping strategies and anxiety or depression in women, two significant relationships were identified. Accepting responsibility and distancing coping strategies. These were significantly predictor for anxiety/depression of women (Bayley et al., 2009; Cousineau et al., 2008). Women who were more accepting relationship and distancing have high tendency for anxiety and depressive symptoms. A tendency to accept or not accept responsibility for situation that required a solution caused a distress (Peterson et al., 2007).

2.4.4 Religion and Infertility

Globally, women use religion to cope with infertility (Donkor & Sandall, 2009; Greil et al., 2010; Roudsari, Allan, & Smith, 2007). For instance, women in Iran were reported to cope using their religious beliefs (Faramarzi et al., 2013). Equally the same women with infertility of India were reported using religion as coping strategy (jindal et al, 2009).

Fouché, Nortjé, Phillips, & Stroud (2011), in their study in south Africa, they administered five subscales for coping (the cognitive, social, emotional, physical and spiritual/philosophical subscales) and found that, women adopt physical resources strategies less (The physical domain provides an indication of the degree to which individuals behave in a way that promotes good health and physical well-being). However, they apply spiritual/philosophical strategies more. As in a case of Iran and Nigeria, according to Donkor and Sandall (2009), the majority of the Ghanaian women use religious faith to cope with infertility.
2.4.5 Shared experience and avoidance of unpleasant memories

In USA women cope using shared experience, and guidance through the treatment process, written information about practical and emotional aspects of treatment (Peterson et al., 2007; Suzanne et al., 2014). Contrary to that, women in Ghana preferred to keep their infertility issues to themselves. This may be associated with the stigma of infertility as identified by other studies and their cultural background. Women in Ghana also cope by trying to avoid any circumstances that remind them of their infertility (Donkor & Sandall, 2009).

2.4.6 Other Coping Strategies Adopted by Women

In a study conducted on Israeli women, it was established that, women with infertility adopt eight different coping strategies in an attempt to cope with infertility and infertility related problems. The strategies include: Investing in oneself, compensation, self-neglect, social withdrawal, and disclosure, hope, and maintaining control over decision making (Benyamini et al., 2008).

In India, a cross-sectional analysis study of 85 Indian women with infertility was conducted by Jindal et al., (2009), some of the key coping strategies adopted by women were: sexual satisfaction and familial support were associated with better adjustment and were identified as helpful intrapersonal and interpersonal coping strategies. Though the study yielded out important coping strategies, the sample size (N=85) used for the study was small to generalize for southern India.

In Taiwan, some of the frequent strategies used by women were: optimistic (i.e. women tried to think positively and hoped that things would get better), and self-reliant (i.e. women kept feelings to themselves and wanted to be alone to think things out) as effective coping strategies, while emotive, palliative, and evasive coping strategies were less utilized (Lee et al., 2010).
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Iran, researches established some strategies used by women with infertility in order to cope with their stressful situation. The strategies are avoidance, distancing, accepting responsibility, and self control (Faramarzi et al., 2013).

Study to explore the coping strategies adopted by 615 women seeking infertility treatment in southern Ghana was conducted (Donkor & Sandall, 2009). The findings suggest that, the majority of the women do not want to discuss their infertility problems with other people. Other coping strategies identified by the authors include: seeking support from husbands, achieving economic independence through occupation and avoiding situations that remind them about their infertility problem (Donkor & Sandall, 2009).

2.5 Health Seeking Behaviours

2.5.1 Seeking Health Help in Response to Advice and Encouragement

Social networks were established to have influence on health-seeking behaviour of women with infertility. Among women with infertility, those who were encouraged by their close family and friends to seek for medical treatment were more likely to do so (Boivin et al. 2007). Women who were strongly encouraged to seek for infertility treatment by family, relatives and friends were seen to have higher odds of in-person health-seeking and combining in-person and online health-seeking compared to only going online or doing nothing by those who have less motivation (Slauson-Blevins, McQuillan, & Greil, 2013). In Canada, couples with infertility expressed their needs for psychosocial supports, but often felt that supports were not available (Suzanne et al., 2014).
2.5.2 Factors Influencing Utilization of Infertility Care and Choice of Place of Help

Researches from Arabian countries showed that, women who were educated were more likely to seek for infertility health services (El-Kak, Khawaja, Salem, & Zurayk, 2009; Fido & Zahid, 2007). Likewise in African countries, Nigeria and Ghana for instance, education is a determinant factor for seeking infertility health services (Donkor & Sandall, 2007; Upkong & Orji, 2007). That is not the case in Zambia, as reported by Stekelenburg et al. (2006), who established that, level of education is not a determinant factor for seeking infertility health services.

Perceived success of the procedure, location of infertility clinics influence women with infertility to continue seeking and or seek for care or not, or the choice of the place to seek for the care (private or hospital) (Bennett et al., 2012; Nahar, 2010).

According to a study conducted by El-Kak, et al. (2009), in Beirut, findings showed that, higher parity and financial problems were significantly associated with utilization of public and low cost infertility services, and majority seek for private services. They further found that, younger age, health insurance, severity and duration of problems were indicators for health seeking. In the same vein, women in Zambia concern more about infertility and seek more care as they acquire advanced age in life (Stekelenburg et al., 2006). Social class and geographical location were also found to be essential factors determining health seeking behaviour of women (Nahar, 2010).

2.5.3 Combining Medical Treatment with Other Sources of Help

Women were reported to have utilized medical treatment from different studies of the world (Bennett et al., 2012; Nahar, 2010; Stekelenburg et al., 2006). However, in some areas
Women’s Experiences of Infertility

Women were reported to have combined medical treatment and other sources of help. For instance, women in Iran because of their religious beliefs expected counselors to be open to taking time to discuss their spiritual concerns in counseling sessions (Roudsari & Allan, 2011).

It is reported that, the majority of the respondents (88%) sought care from traditional healers (Stekelenburg et al., 2006). However, if they are dissatisfied with the services of the traditional healers, 86% of the women would seek care from formal hospital (Stekelenburg, et al., 2006). Opposite to that, Bennett et al. (2012), established that, Indonesian women with infertility frequently switch to the traditional healers as they perceived failure in the hospital treatment. In Kuwait, Faith and traditional healers were considered as the first treatment choice among illiterate women (Fido & Zahid, 2007).

In Bangladesh differences existed between health seeking behaviours of women with infertility in urban areas and those in rural areas. Unlike their rural counterparts, urban women with infertility predominantly seek modern treatment for their infertility (Assisted Reproductive Technologies (ART)) which is available only in the formal sector, and in private services. However, despite their affiliation with modern treatment, urban women with infertility still believe, like their rural counterparts, that the remedy for infertility ultimately depends on God. As a result, in addition to biomedical treatment, many return to or simultaneously pursue various traditional, spiritual or folk treatments (Nahar, 2010).

In Nigeria infertility treatment is considered as best when the three (biomedical, faith based and traditional) sources were used (Omoaregba et al., 2011). This could be due to religion and cultural respects they have for tradition and religion. It can also be due to their low level of education.
2.5.4 Utilizing Non Medical Sources of Help

According to a study conducted by El-Kak et al. (2009), in Beirut, of 273 (62%) women who sought care for their infertility problems, majority (52.5%) sought care from private providers. Local healers in the informal sector were found to be the most popular health service option among the rural childless women. The factors for utilizing them included low costs, the gender of the provider (with same-sex providers being preferred), having a shared explanatory model with the healers, and easy availability (Nahar, 2010).

In Bangladesh, the results suggest that rural childless women rely mainly on the informal sector. The main folk sector providers include: Kabiraj (herbalists), Fakir (magic/religious healers), Baidda (gypsy, snake charmers), Hujur and Emam (both are religious leaders), Moajjin (people who call for prayer in the mosque), Majar (holy shrines), Pir (Muslim spiritual healers), Shadhu (Hindu healers), Ojha (magic healers, experts in possession and snake bites), street canvassers, and medicine shop-keepers (Nahar, 2010). Respondents said that some women do undergo ultrasonography, not for biomedical reasons but to check whether they have joha-juhi inside their womb (Nahar, 2010).

2.5.5 Online Health Help

Some women use online services as part of the management for their infertility. Slauson-Blevins, McQuillan, and Greil (2013), found that, women with greater resources had higher odds of using online sources of information about infertility. This could be as a result of level of their socialization and access to internet services. Slauson-Blevins et al. (2013), found that, out of the 1352 women, 459 (34%) neither go to the hospital nor seek for online help, 9% sought online
information, 32% sought care from the hospital did not go online, and 25% sought help from both the hospital and online.

In conclusion, based on all the literature reviewed, it has become clear that, little empirical research has been conducted on the psychosocial experiences of women with infertility in northern Nigeria and Zamfara state to be more specific. Therefore, the purpose of this study is to explore the psychosocial experiences of women with infertility in Zamfara of northern Nigeria.
CHAPTER THREE

METHODOLOGY

This chapter provides detailed description of the research design chosen to answer the research questions. In this study, the qualitative approach was used to describe the experiences of women with infertility and their coping strategies in Zamfara state. The chapter describes the study setting, population and its characteristics, sample size and sampling techniques as well as data collection procedure. It also explained the method of data analysis, methodological rigor and ethical considerations.

3.1 Research Design

According to Opoku (2012), a researcher must conceptualize the research problem and then put it into a structural perspective that will guide data collection and analysis. Therefore, qualitative approach and basic interpretive design were used to describe the psychosocial experiences of women with infertility and their coping strategies. A qualitative approach was chosen because it provides details of the phenomenon. It allows the researcher to use naturalistic methods (Field & Morse, 1985) and elicits respondent’s account of meaning, experiences or perception of a phenomenon (De Vos, Strydom, Fouche, & Delport, 2002; Polit, Hungler, & Beck, 2001). According to Morse & Field (1995), individuals have unique perceptions and respond differently to their experiences, hence the overall purpose of choosing this approach. Interpretive descriptive design is an inductive analytic approach that can be used in qualitative enquiry into human health and illness experiences for the purpose of developing nursing knowledge. It is an approach that creates ways of understanding clinical phenomenon as well as yielding implication that can be applied to the clinical environment (Thorme, 2008). Therefore, since interpretive design allows understanding experiences related to health and illness, it was
used to explore and describe the psycho-social experiences of women with infertility and their coping strategies.

3.2 Research Setting

The study was conducted in Zamfara state of Nigeria. Zamfara State is a state in northwestern Nigeria and its capital is Gusau. Until 1996, the state was part of Sokoto State. Zamfara has an area of 38,418 square kilometers. It is bordered on the north by Niger Republic and the south by Kaduna State. The eastern part is bordered by Katsina State and the west by Sokoto, Kebbi and Niger States. It has a population of 3,278,873 (Census, 2006) and contains fourteen local government areas. Zamfara state consists of Hausa and Fulani people. The major groups of people are the Zamfarawa mainly people in Anka, Gummi, Bukkuyum and Talata Mafara Local Governments areas. Gobirawa people lived in Shinkafi Local Government. The people of Gobirawa actually migrated from the Gobir Kingdom. The Burmawa are found in Bakura and Fulani people in Bungudu, Maradun, Gusau and are scattered all over the state. In Tsafe, Bungudu and Maru Local Governments are mainly Katsinawa, Garewawa and Hadejawa. The people of Alibawa are in Kaura Namoda and Zurmi. Agriculture is the most important occupation of the people of the state, hence its slogan "farming is our pride”.

The Federal Medical Centre, Gusau took-off in January, 1999 on a Temporary Site (Specialist Hospital Gusau) donated to it by the Zamfara State Government. The structures taken over at the Specialist Hospital Gusau were mostly constructed over three to four decades ago hence they require frequent maintenance/renovations. Development at the Permanent Site commenced in earnest in 2007.

Staff Strength: The Centre took over the Specialist Hospital Gusau which had less than 100 bed capacity, four medical officers, less than one hundred (100) nurses and other clinical and non
clinical officers. Today, the Centre has a bed capacity of 265 and total staff strength of 884. These include 16 numbers of Consultants in various discipline, 103 numbers of Medical Officers, 231 numbers of Nursing Officers, 534 numbers of Clinical and Non Clinical Officers. The federal medical centre was used as an outlet for respondents recruitment.

3.3 Population of Study

The target population was women with primary and secondary infertility in Zamfara.

3.4 Inclusion Criteria: The criteria for selection were women who have never conceived before or delivered at least once but cannot conceive again despite the need and struggle to conceive (primary and secondary infertility). They were able to speak English and or Hausa languages and were receiving treatment from the hospital. They were between the ages of 18 and 49 years.

3.5 Exclusion Criteria: Women outside Zamfara state and women who voluntarily decided not to have children were not included in the study.

3.6 Sample and Sampling Technique

Khan (2012) defined sampling as the process of selecting part of a group or entire population with the aim of collecting information, which is used to determine the features of the entire population being studied. In most research situations it is not possible to study the entire population, hence the need for selecting part of the population (Opoku, 2012).

Purposive sampling is a non probability method in which the researcher selects study respondents on the basis of personal judgment about which ones will be most appropriate to generate that required data (Polit et al., 2001). Purposive sampling was selected to ensure richness in data that were gathered (Fossey, Harvey, McDermott, & Davidson, 2002). Purposive sampling technique was used because it gave the researcher the opportunity to select women who
had the experiences regarding infertility. This ensured the collection of data from relevant sources which made it rich and useful for the researcher.

3.7 Sample Size Determination

According to Burns & Grove (2001), qualitative studies focus on the quality of the information obtained from respondents rather than the size of the sample. Therefore, interpretive descriptive study can be conducted on a sample of any size (Thorme, 2008). The engagement with a small number of individuals would provide sufficient data to explain the phenomenon comprehensively. In this study, a total number of twelve (12) respondents were used since the data saturated at that level.

3.8 Data Gathering Tool

Using in-depth interviews allow the respondents to describe their experiences in their own words (MacDougall & Fudge, 2001). Therefore, in order to create that room and elicit more information, semi-structured interview guide and field notes were utilized. Each participant was interviewed separately using open-ended questions in semi-structured interview guide. The guide was developed based on the study objectives and literature. The interview guide comprised of two parts. Section A focused on socio-demographic characteristics of the respondents. Section B comprised the main questions (See appendix B). For content validation, the interview guide was presented and vetted by the experts who have knowledge and experiences in qualitative research, and finally made their comments.

3.9 Procedure for Data Collection

Ethical approval was sought from the Institutional Review Board of Noguchi Memorial Institute for Medical research of the University of Ghana. Introduction letter from School of
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Nursing, University of Ghana was collected. Ethical approval was sought from ethical research committee of Federal Medical Centre Gusau. Finally verbal permission was sought from the Chief Medical Director and Chief Nursing Officer of Federal Medical Centre Gusau. The researcher selected the respondents who fulfilled the criteria for the study, the purpose of the study was explained to the respondents and those who agreed to participate signed the consent forms. To ensure privacy, the interview was conducted in an office at outpatient department of Federal Medical Centre Gusau. Female research assistant was trained and conducted the interview with those respondents who were uncomfortable with the researcher who was a male. Before beginning the interviews, rapport was established, in which the researcher introduced himself and research assistant. Each interview took about 30-40 minutes. Interviews were begun with general questions related to respondents’ socio-demographic characteristics and then followed by main questions.

3.10 Data Management

All interviews were audio taped and transcribed verbatim and field notes were taken. The audio recordings were downloaded on a personal computer and also saved on MP3 player. To ensure confidentiality, the data were saved in a computer well secured with password. The data were not discussed with any other person except the supervisors and the issues arose from an individual interview were not discussed in a way that identified the respondents. The researcher transcribed the interview by himself and that limited the access of other people to the data. While transcription and during re-listening to correct identifiable errors, the researcher isolated himself to avoid sight and hearing of people. All hard copies were locked in a locker and key was stored securely.
After every interview the audio recordings were played and transcribed verbatim by typing directly on a laptop using Microsoft word. All interviews done in Hausa languages were transcribed in Hausa and then translated into English. The audio recorded interviews were played back to cross check the typed transcripts for any errors or omissions and these were corrected. Each interview was labeled with the respondent’s interview number and a false name to serve as a pseudonym and was saved with a password in a folder opened in a Microsoft word on a personal computer. Extra hard copy was made and kept safely to avoid loss. A soft copy was also saved on a pen drive and a CD to serve as backup; these were kept and locked in a locker for future use and to ensure confidentiality.

The transcripts were printed and filed with the field notes, information sheets and consent forms in a properly labeled file. In addition to false names, the researcher assigned an identification number to each respondent’s file for easy identification. The researcher used upper case alphabet R to represent respondents and number 1-12 to represent interviews. Therefore, a labeled of R1 meant respondent who was interviewed first.

3.11 Data Analysis

The data were analyzed using content analysis as described by Mayan (2001). This technique is inductive in nature, as the categories and themes emerged out of the data (Patton, 2002). It was chosen because it is a flexible approach to the analysis of data that is inductive in nature. Content analysis also helps to discover meaning of specific groups of data and ideas within the context of all the detail (Mayan, 2002). The main and sub themes were identified from the respondents’ responses. At the end of each day of the interviews, the researcher transcribed the recorded information, compared it with note taken and reflected on events of the interview to identify some level of subjectivity (Bradbury-Jones, 2007), and modified those subjected to
influence the responses and process of data collection negatively. After all the interviews and transcriptions, the researcher listened to the audio tape and compared with what has been transcribed for consistency. In addition to that, the transcriptions were brought to the supervisors and they read and ensured the integrity of the transcriptions. After that, coding was done in which the important phrases, sentences and paragraphs that were of interest to the researcher were highlighted and assigned a label or code. The coded passage then was compared. Codes that have common elements were grouped to form main and sub themes. Then, themes were continually revised to ensure the data were suitable. The individual objective was achieved by conducting interviews using the interview guide as proposed by qualitative research approach. Then later content analysis was used to analyze the data for each objective.

3.12 Methodological Rigor

Methodological rigor or trustworthiness is an important consideration in evaluating findings of qualitative research. It is an indicator of the extent to which the study was conducted rigorously. Four criteria that are truth-value, applicability, consistency, and neutrality were used to support the trustworthiness of this study (Guba, 1981).

Credibility (Truth-value): It is about the truthful description of the experiences of the respondents. To ensure this, the researcher met the respondents prior to interview and built up relationship with them. Besides recording, immediate transcription of the interview to be able to recall some of body gestures and also try to reflect on how the interview conducted was done. Field notes were also taken and utilized maximally during the transcription. The researcher conducted face-face interview and inquired a lot from the respondents. At the end of the interview, notes taken were used to summarize the interview and asked the respondents to clarify where necessary.
Transference (Applicability): Refers to the ability to move qualitative research findings to similar contexts within similar groups (Polit & Beck, 2004). To ensure this, a clear description of the procedure for respondents’ selection as well as the detail description of the setting and entire process of the study was done in order to enhance applicability.

Dependability (Consistency): This refers to stability of the data over time and over conditions including the ability of another researcher to follow the same qualitative audit trail with similar findings (Polit & Beck, 2004). To ensure thorough understanding of the method and its effectiveness, the exact method used for data collection, analysis and interpretation was included in the report. In addition, strategies such as validating findings with respondent and non respondent with similar experiences, and with other experts in the field through subjecting to peer review were also used.

Confirmability (Neutrality): Is the objectivity or neutrality of the data in a way that there would be agreements between two or more independent people about the data’s relevance or meaning. To achieve this, an audit trail involving compiling records such as field notes, audio recordings, analysis notes, coding details were kept. Survey instrument and proposal were developed in order to allow an independent auditor to be able to come to a conclusion about the data.

3.13 Ethical Considerations

Ethical approval was sought from Ethical Review Board (ERB) of the Noguchi Memorial Institute for Medical Research prior to the recruitment of the respondents. Letter of introduction was collected from School of Nursing to the Chief Medical Director Federal Medical Centre Gusau and Chief Nursing Officer of the same institution. It was made clear that, participation
was voluntary. For those that met the criteria and were willing to participate, informed consent was obtained from them and they were assured that there would be no harm and all information collected would be treated with confidentiality. The consent obtained covered participation in the study, audio taping and transcribing as well as notes taking and finally reporting their description. Anonymity was ensured by assigning pseudonyms instead of names of the respondents and personal data of the respondents were omitted to ensure privacy. Place of interview was in the office and respondent’s home to ensure privacy. While conducting the interview the individual right to privacy was observed and she was told to stop the researcher whenever she felt like doing so.
CHAPTER FOUR

FINDINGS

This chapter presents the findings of the study. Four main themes and sixteen subthemes emerged from the data. The demographic characteristics of the respondents are presented first followed by the themes.

4.1 Demographic Characteristics of the Respondents

The respondents were all females who participated in the study and their ages ranged from 22 to 45 years. All the respondents were Muslims and Hausa by tribe and were all married. One of the respondents was a registered midwifery tutor, one had a National Certificate of Education, one had primary school certificate, three had secondary school certificate and the remaining six were illiterate. Ten of the respondents were in polygamous family marriage and two were in monogamous family marriage. Half of the respondents suffered primary infertility and equal number suffered secondary infertility. Four of the respondents had one child each, one had three children (but still regards herself as infertile) and all the others had no children. Five of the respondents engaged in small scale businesses and five were housewives.

4.2 Organization of Themes

The thematic findings have been grouped into major themes and under each of these major themes were sub-themes. Direct quotes from respondents were used to support the themes that emerged. The themes and their corresponding sub-themes are presented in the table 4.1 below.
Table 4.1: Thematic Findings

<table>
<thead>
<tr>
<th>THEMES</th>
<th>SUB-THEMES</th>
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<tr>
<td>PSYCHOLOGICAL EXPERIENCES</td>
<td>• Anxiety</td>
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<td>• Depression</td>
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<td>• Stress</td>
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<td>SOCIAL EXPERIENCES</td>
<td>• Isolation</td>
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<td>COPING STRATEGIES</td>
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<td>• Child adoption</td>
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<td>• Diversional therapy</td>
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<td>• Marital separation</td>
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<td>• Support</td>
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<tr>
<td>HEALTH SEEKING BEHAVIOUR</td>
<td>• Seeking for help</td>
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<td></td>
<td>• Reason for seeking help</td>
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<td></td>
<td>• Withdrawal from treatment</td>
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4.3 Psychological Experiences

One of the major themes identified on the basis of the women’s experiences was psychological. Women with infertility in Zamfara have a lot of psychological trauma. These psychological experiences include anxiety, depression and stress.

4.3.1 Anxiety

Anxiety is frequently reported to affect women with infertility and depending on the circumstances, the women expressed feeling of anxiety in various ways. Vast majority of the women described their situation as being worried, too much thinking, doubt, worries and fear. The women described feeling of anxiety in the form of thinking too much as described by Vada, Fafa and Manuna below;

“If I sit alone I think too much; sometime I can’t hear someone talking to me until when I am touched” (Vada).
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“Up till now I am speaking to you sometimes if I sit alone I start to think things, that my younger ones they have about 5 - 6 children but being me the most senior child of the family, I don’t have any” (Fafa).

“In fact there is no single day I will not think of the situation that I am facing. I will be thinking that, is that how life will continue with me? Is that how I am going to end?” (Manuna).

Some women described anxiety in the form of whether their condition would be permanent or they will have a solution to it. Vada and Waya described that below;

“But generally it wasn’t easy for me to accept. I always think that am I going to remain in this condition forever without a child? I think whether God will give me a child or not since I spent almost ten years never missed my menses, and each time I saw the menses I become so disturbed” (Vada).

“I have been thinking that, am I going to spend another 6 years without being pregnant as in the case of my first child” (Waya).

Some women described anxiety to be worries as stated by Falaka

“You will feel worried because I could remember there was a time when one of my younger sisters got married. In my mind I said, this lady may deliver before me. I was 5 years in my marital home then and that was exactly what happened” (Falaka).

Women also described anxiety in the form of doubt as described by Fafa.

“When I was married I married proudly that after nine months or a year I will get pregnant and have my baby. So when things have changed I began to doubt myself” (Fafa).

Fear is an aspect of anxiety affecting some of the women with infertility. The fear varies from being lonely, divorced to their husband’s marrying a second wife. Zara described anxiety as being scared because there will be no one to pray for her after her death.

“I was so scared when I understood that, something was going wrong with me because any woman needs to have a child of
All of the women who were in monogamy family expressed their fear that their husbands may marry another wife because of their inability to have children. Vada, Ulaika, and Falaka shared their stories

“I know even if he (her husband) refused to tell me in his mind he will be hoping to marry another wife and I know one day he wouldn’t be able to resist it. Whenever a woman calls him I will be so eager to hear their discussion and to identify who she is. Hmmm! I am so scared because I know one day she will come” (Vada).

“Now that I am 30 years old I know he loves me but he also needs a child. Now that he lives with me alone I think is because he doesn’t have the money to marry another one, but as soon as he gets the money I am finished!” (Ulaika).

Falaka expressed her fear of divorce below:

“….. my husband always sits with me and try to calm me given me some psychological assurances. I am the one who think of whether he is going to divorce me but he always tells me that, it is God that gives child to whom he wants to. So I should exercise patience” (Falaka).

4.3.2 Depression

The women were found to suffer depression as a result of their infertility. They described being depressed in different ways. The most common ways they described depression were in the form of sadness, lack of happiness, restlessness, angry and loss of interest in social communication and interaction. Some women described depression as being sad as stated by Umara and Fafa

“Sometimes someone will ask me, why are you looking sad is there any problem? I said no. But honestly I always look sad and not happy at all. Because of that so many times I preferred to stay in my room doing other things” (Umara).
“So sometimes in the matrimonial home I will be looking very sad” (Fafa).

Lack of happiness was also described as a sign of depression by the women. Vada and Zara described their lack of happiness as follows:

“Actually I feel deep in me that I am not happy because I spent many years without an issue. Now I feel I am just there not myself. I always feel I have a lot of problems” (Vada).

“I will never be happy because people will be saying you are filling their toilet with big stool but no issues. How will one be happy in such situation? In that case you cannot do anything to satisfy them because of your inability to get pregnant” (Zara).

Ige described her negative reaction to people as a consequence of her depression.

“When I am in that situation I react negatively to people following small thing. Or I will tell them please leave me alone for now” (Ige).

According to Jarira and Fafa, their depression is expressed in the form of anger

“This is because of what has been happening in my matrimonial home. My husband’s relative have been saying a lot of things. So I must be angry” (Jarira).

“Ehhh! I will be found angry without even a cause” (Fafa).

4.3.3 Stress

The women were found to have passed through a lot of stress. The stress symptoms described by women with infertility in Zamfara were crying, forgetfulness, disturbances, lack of sleep, palpitation and loss of libido. Majority of the women described stress in the form of crying because of the abuse from mother in-laws, husbands, family or society. Zara and Jarira reported crying for the following reasons:
“After being abused by people I shed a lot of tears when I entered my room” (Zara).

“When I remembered of our lives in the past, my heart palpitates; I have to hold my chest and shade tears. It is very difficult to spend a week without shading tears” (Jarira).

Some of the women reported instances when they had to hide in their rooms just to cry. Manuna stated that

“I also hide myself in a room and cry. When I come out from the room people will see the sign of worries on my face and asked what is happening I tell them that I am not feeling fine” (Manuna).

Jarira expressed stress as forgetfulness

“I became easily to forget things. I swear to God I enter into my room to pick something and I will just forget what I am there to do. I am not old enough to develop that” (Jarira).

Some women on the other hand described feeling stress as being disturbed.

“After all the thorough investigations, my fertility problem was confirmed. Since from that day, I was so disturbed. I am disturbed because every woman wants to give birth to a child just as the way she was being given birth by her mother” (Fafa).

“I must be disturbed because my mother in-law has been complaining, why am I not pregnant? I explained to her but she can’t consider my explanations” (Umama).

Inability to eat, inability to sleep and frequent memories of the past were described by some women as their experience of stress as stated by Falaka, Jarira and Ige.

“………..sometimes I can’t eat I cannot even be able to sleep” (Falaka).

“Sometimes I can’t even sleep. I remember negative past memories frequently. If a small thing negative happened to me, it will remind me of a lot of things I passed through” (Jarira).

“(Quit) Yes it (libido) reduces, because sometimes I will lack interest in that affair (sexual intercourse) simply because I saw
4.4 Social Experiences

One of the major themes that emerged was the social experiences of these women. The women’s psychological experiences were linked to social aspect of their lives. These social experiences include isolation which could be either self or social isolation, social stigma, social pressure, marital problems and social support.

4.4.1 Social Isolation

The women reported two forms of isolation. These are self isolation and social isolation.

Self isolation is a kind of isolation chosen by the women themselves as the way of life based on their experiences. Ulaika shared her self-isolation story as follows:

“Even if they gathered I don’t put myself among them and I will be doing my things alone” (Ulaika).

The women gave various reasons for isolating themselves from the society. Fafa isolated herself in order to avoid statements that may affect her negatively.

“I avoid taking part in their conversation because I don’t want someone to say a word that will hurt me or affect me negatively. In such instances I may response and that can lead to a conflict” (Fafa).

Ulaika said she isolates herself because she wants to avoid mockery.

“Though you think more while in a room alone, i prefer that sometimes because it makes you avoid people’s mockery” (Fakala).

Vada isolates herself to enable her think about her situation.
“I prefer sometimes to be alone thinking of what is happening to me, what is causing it and how can I get out of this situation” (Vada).

Social isolation is as a result of the society isolating the women from social activities and decision making. According to Fafa people isolated her whenever they had discussion about children.

“There was a time when they were going to do something that has to do with children, they said leave her she doesn’t have experience on that, she will not give us the experience that we required” (Fafa).

Jarira’s opinion was not sought anytime her family had to take crucial decisions.

“I don’t know why in so many instances I will just hear things done without consulting me. For instance, when my husband was getting married, I didn’t know anything about it just of a sudden I was told to come and take lefe (marital gift) to the lady he was going to marry” (Jarira).

Women reported social isolation in the form of people withdrawing children from staying in their surroundings. Fakala and Umama shared their stories

“Whenever I had a conflict with my rival she will call her children back to her room and tell them to avoid my sight” (Fakala).

“Most of the time they don’t allow their children to stay in my house, they always call them back” (Umama).

4.4.2 Social Stigma

The women described two dimensions of stigma. These were actual stigma experienced and perceived stigma. For actual stigma, women were being branded controllers of their fertility. They reported situation in which people described them as users of family planning, lovers of high education, being barren/infertile and aggressiveness. Perceived stigma was described in the form of mockery.
Actual stigma was experienced in various ways. Fafa, Fakala and Waya described being stigmatized as users of family planning.

“People were telling me to stop taking family planning. I must be using family planning that is why I am not pregnant” (Fafa).

“My neighbours think that I am having fertility problem because I am using family planning or I used them before” (Waya).

Fafa and Falaka also expressed their experienced of actual stigma as a women who do not want get pregnant.

“Some are thinking that I was the person that don’t want to conceive. Since I am a health personnel I have something that I am doing to prevent myself from getting pregnant” (Razara).

“They think that, there is something I am doing secretly. This involved even my close friends and neighbours…. So this hurt me more because I see it as even my close ones think otherwise. They think I am the cause” (Fakala).

Some other women were also stigmatized for being aggressive because of their inability to conceive as described by Ulaika;

“People were saying that I am aggressive, something that I don’t need to fight about but I do. Some time they even said that I am inhuman” (Ukaila).

Waya was also stigmatized as having infertility because she didn’t marry early as a result of high education.

“They will be saying that, I have infertility because I spent years without marriage. I was there trying to pursue high education” (Waya).

Some of the women experienced stigma in circumstances they perceived as stigmatizing.

For instance, Umama and Fakala expressed their perceived stigma as follows:
“Some discussions that were not related to me I will feel as if they were really talking about me. Although sometimes I used to realize that they were not referring to me, in most cases I feel as if they were referring to me” (Umama).

“……, because even if someone is not referring to you when he talks about a child you will feel as if he is actually referring to you. You will feel as they are trying to show that you didn’t give birth to the child” (Fakala).

4.4.3 Social Pressure

The women were faced with challenges that imposed pressure on them because of their infertility. The pressure identified could be actual pressure or perceived pressure.

Actual pressure is the one imposed directly on the women by the family, husband or society. Majority of the women reported actual pressure as one of the problems they faced.

Razara, Jarira and Manuna described pressure from their husbands as stated below:

“My husband shows that my rival is more important than I because she gets pregnant and delivers which I couldn’t.” (Razara).

“Whenever my rival delivers my husband changes towards me and gives her more attention than me” (Manuna).

But Umara received pressure from the husband because he expressed his desire to marry another wife.

“My husband found it to be his hobby to be telling me that; he will marry another wife. He always threatens me with such offensive words” (Umara).

Manuna had memory of her husband’s attempt to send her away because of her inability to get pregnant.
“It has been hurting to me whenever I remembered that, some years back, my husband sent me out of his house because I couldn’t get pregnant!” (Manuna).

Because the majority of the women were married and living in polygamous families, they reported having pressures from their rivals.

“My rival despite the good things I have been doing for her, there were times when she said I was jealous of her pregnancy” (Ige).

“My rival always abuses me, if I fight with her I will be blamed because they will be saying she is a small girl” (Jarira).

Pressure from mother in-laws was also reported by the women and being described in different ways. For instances, Waya and Jarira described their pressures as threatening divorce as follows:

“They abused me a lot. There was a time when my mother in-law even said if not because we have relation and that the house is not wide enough she would have asked him to divorce me and marry another wife” (Waya).

“My mother in-law asked my husband to divorce me because of my inability to get pregnant. He said no if it is because of my infertility” (Jarira).

Pressures from husband’s relatives were also reported by the women and described by Manuna, Razara and Waya in the following ways:

“I lived with my husband for 2 years without enough food; now just because of this (silent and tears). Now just because of this problem (infertility) my husband’s relatives are telling me to leave the house forgetting that it was together with me he became wealthy” (Manuna).

Razara described her pressure in the form of challenges after delivery of her rival

“So when my rival delivered I faced challenges with my husband’s relatives. They told me that, my rival got pregnant and delivered for them but I refused to. It reached to the extent at
which we fought. From the pregnancy of my rival to delivery and to the death of that baby I faced a lot of challenges with them” (Razara).

Waya described her own pressure experience as being abused and mocked by her husband’s relatives.

“My husband’s relatives abused and mocked at me a lot. They said all what I can do is to put on weight while their brother reduces weight. I refused to be pregnant but I am best in eating and giving out stool” (Waya).

Society also imposed pressure on the women due to their infertility. They described it in different ways. Waya and Ulaika reported experiencing societal pressure whenever people call them infertile.

“Some of them can even be mocking at you. For instance, there was a lady I knocked her child and she said it was because I am infertile that is why. I just told her that I heard” (Waya).

“Any time I have misunderstanding with them (people) they will be saying that, nobody will concern about me because I am infertile but they have even a grandchild.” (Ulaika).

Zara described pressure from society as mockery in which she is told to send her children if she wants to do some errands;

“Another thing is the issue of mockery, if you want to send their child to somewhere, sometime they will be telling you to send yours and they know you don’t have a child. Or you will hear them saying yes is my son I born him myself” (Zara).

Some women were also mocked as only giving out stool rather than a child as described by Zara;

“Some of my neighbours we live peacefully but others make it a their hobby to be telling me that I am filling my husband’s toilet with stool rather than given him a child. Yes they say it that I am filling my husband’s toilet” (Zara).

Two women described that the pressure was extended to their children who were not at any fault.
“They will be looking at my only daughter and be telling her “batayi goshi ba or tayi bakin baya” meaning she is an unlucky girl since she has no younger brothers and sisters. They talk to her but I think they are referring to me since she didn’t know what they said” (Umara).

“My children when they came back from the school and it happened I was not in the house, they will be knocking the gate but she (her rival) will forget about them. It is not my children that have infertility but still receive the consequences” (Jarira).

On the other hand, women also received unintended pressure from the society, their families and friends. This unintended pressure was reported as concerned pressure and perceived pressure. Concerned pressure is a pressure in which concern shown to the women by others imposed pressure on them. This is described by Fafa and Vada

“Sometimes I am disturbed because of my parent. They were so disturbed about my present condition. Any time I met with them, they will be asking me any news?” (Fafa).

“Another thing that hurt me is when my relatives discussed about my problem in any gathering. For instance, they will be saying o God! Our sister is still not be able to be pregnant and have a child. I am the only one who doesn’t have a child in our family” (Vada).

In perceived pressure, women were being hurt on a discussion not intended to refer to them but they perceived it as such as described below:

“only the mother in-law will be complaining, we are not leaving in one place not in one state, but everyday her own problem is that, she continue asking me how far have I conceive? all sorts of things and that worry me a lot” (Fafa).

“Some people will be talking about you indirectly just to hurt you” (Umama).
4.4.4 Marital Problems

Marital problems are the misunderstandings that occurred between the husbands and their wives as a result of infertility. In polygamous families, it also involved rivals. Marital problems reported by the women include divorce, marrying another woman, and conflicts.

Divorce is described by two women as part of their social experiences.

“Although I couldn’t know the reason of the divorce, after some months I heard that he said the reason why he divorced me was because his relatives mocked at him. They mocked at him because he married me for 2-3 years but I couldn’t conceive” (Fafa).

“Mother In-law forced my husband to divorce me. Initially he wasn’t wanted to divorce me but she forced him to do so” (Razara).

The women reported that, their husbands married other women because of their fertility problem. All the women described either their mother in-laws or husband’s relative as the driving force for marrying other women, with little concern from the husband as stated below:

“So they used the excuse that, he (husband) needs children to succeed on their mission. They got a lady in my neighborhood and made him to marry her and we are still living together with her. You see it (infertility) is the root of all these. Because had it been I am well all these things wouldn’t have happened” (Jarira).

“They mocked at me and finally made him to marry another wife. Yes they did that and finally made him to marry another lady” (Waya).

“Yes actually when they came to understand that I have a problem, his parent told him to get another wife and he did so” (Umara).

Conflict was another marital problem described by the women. The women reported having misunderstandings with their husbands and their relatives as a result of their inability to
get pregnant. Sometimes misunderstanding occurred because of the lack of common interest on the type of help to be sought (either traditional or medical treatment).

Fafa described the conflict she had in the form of anger problems with her husband as follows:

“I if I follow my husband’s words we would be having problem at all the time. There was a time he said that, this is the problem with health personal, why can’t I try another way to seek for medicine.... and I said I can’t go anywhere to seek for help beside hospital. So he got angry for 2 days we were not talking with each other” (Ukaila).

Manuna reported fighting constantly with her husband and rival;

“I don’t accept what they do to me any longer. My husband and my rival call me infertile who fills their toilet with stool; so I fight with them any time they utter such utterances to me” (Manuna).

4.4.5 Social Support

Support was reported by the women as part of their social experiences. The women received both psychological and economic supports from their husbands and relatives which were their main sources of support.

Psychological support provided by the husbands was described by Ulaika and Fafa as follows:

“My husband shows me some pity and sympathy because he has some children. Any time he understood that I am not in good mood, he will call and advice me not to worry myself” (Ulaika).

“Because my husband accepted it in good faith, he was even the one giving me psychological support so that I should not be disturbed” (Fafa).

The women’s relatives were reported to be their sources of support. According to Umara her family provided traditional medicine for her plight.
“My relatives showed me nothing bad only that they tried getting some traditional medicine” (Umara).

According to Waya, her family calmed her by giving her references of her sisters who had similar problem;

“I was disturbed initially but my parent calmed me down. So they referred me to two of my sisters who were also having the same problem. One of them spent five years in marriage but delivered once and that is after she has been going to the hospital for treatment. The other one is still going to hospital; she has spent eight years in marriage but still not even an issue” (Waya).

Razara and Ige reported support they have received from the society as follows:

“Equally the same my neighbours children are like mine, sometimes what I do with their children I may not do it with my own daughter” (Razara).

“They look at me as one who deserved to receive pity. They also pray for me. They use to say this one who came after I gave birth but I am still hanging” (Ige).

The women reported economic support they were offered by their husbands and relatives.

Vada and Waya described their economic support in the form of buying them the drugs prescribed by the Doctor;

“He (her husband) buys the drugs prescribed for me by the Doctor” (Vada).

“He never refused to buy drugs for me. He bought all the drugs written by the Doctor” (Waya).

Razara described the economical support in the form of her husband providing her with all she needed.

“I don’t have a problem, because he (her husband) provided me with everything I need as a woman” (Razara).
4.5 Coping Strategies

In this section coping strategies used by the women with infertility to enable them adjust to their problem are reported. The coping strategies reported by the women include the use of religious beliefs and prayers, diversional coping strategies, marital separation, social support as coping strategy and informal child adoption.

4.5.1 Religious Coping Strategies

Majority of the women in Zamfara used religious strategies to cope with their infertility. Prayers were frequently used by women to adjust with their problem as described by Ulaika and Zara:

“I use to pray to God to let me out of this bitter life. My prayer always is to have a child and as a good Muslim I have the belief that, God will give me a child” (Ulaika).

“For sure I use innalillahi wainna ilaihi rajiun (We are from God and we are going to die and return back to him) because whatever disturbs and worry someone and he continuously utters these words God will give him/her what he wants. So I pray to God to give me a child who will make me happy in life” (Zara).

Some women cope by trying to leave things to God who is capable of giving them children as shared by Falaka:

“I leave my things to God and depend on Him alone because He is the only one who can give me a child” (Falaka).

One woman described how she coped by counseling herself to accept the will of God with good faith as she stated below:
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“I had to sit down and counsel myself because this could be my destiny, so if that is the will of God I will accept it in good faith as a Muslim” (Fafa).

4.5.2 Child Adoption as Coping Strategy

Child adoption practiced by these women in Zamfara is a form of local or informal adoption that does not necessitate official agreement. If a woman feels the need to adopt she may solicit for a child from one of her family members to stay with her. The women used local adoption as a means to reduce tension and to feel at home. Fafa, Ige and Manuna described their adoption as follows:

“I have 3 children that are staying with me. I keep them so that I will feel at home. Presently they are all under me and I take care of their responsibilities. I put them in the school and all are under my care” (Fafa).

“I actually received a child from my husband. She is now matured and closed to get married. The way she is closed to me is not as close as she is with her biological mother. Always I looked at her I will feel less stress because she respects me; I send her wherever I need. She has been doing well to me, especially when she reached her maturity” (Manuna).

“I brought a girl from my parent’s home. She stays with me currently. I looked after her as if I am the one who gave birth to her and it makes me happy whenever I looked at her” (Ige).

4.5.3 Diversional Coping Strategy

Women also engaged in some activities that diverted their attention from their problems. These activities include social interaction and listening to music.

Waya and Manuna expressed their diversional coping strategies as follows:

“I use to go out of the house if I am stressed, other than that I need someone to visit me. When I go out of the
“House I feel relieved, this is because I think about it (infertility) when I am alone, so I relieve myself by going out” (Waya).

“I use to go to our house and rest there so that I will feel a little relieved” (Manuna).

Some women also shared that they cope through listening to music as described below:

“I use diversional therapy, sometimes I will listen to Islamic cassette, sometime I will read holy Quran, sometime I will listen to preaching and sometimes I watch television just to divert my attention” (Fafa).

“Yes I use to listen to Islamic music and that helps me a lot” (Waya).

4.5.4 Marital Separation

For some women separation was a strategy used to reduce the pressures they faced in their matrimonial homes. Jarira is an example of such women and she narrated as follows:

“...... but I thought to leave the house for them, if I was not in their house, I wouldn’t have seen all those things, that is all I thought to reduce tension on me” (Jarira).

Fafa and Ige described that separation can be used to avoid pressure and the possibility of getting pregnant with a different man

“.... I have said that I have undergone several investigations I don’t have a problem and now I said if this infertility is going to have a problem to him (husband) let us just separate” (Fafa).

“Sometimes I even think of creating conflict with my husband for him to divorce me, may be is with him that I am not be able to get pregnant. With thinking that, I may get a child somewhere” (Ige).
4.5.5 Social Support as Coping Strategy

Social support was described both as a social experience (which has already been described above) and a coping strategy. For instance, some women identified the support received from family and friends as well as that of hospital as the strategy they used to reduce their tension. For example, Ige identified the husband’s support as helpful to her as stated below:

“*My husband helps me a lot because any time he sees me sad, he will try to calm me and be telling me that, it is because he is a man that is why I can’t understand his worries but he feels the same. He continues telling me that*” (Ige).

Umara and Ulaika appreciated the support received from their relatives as described below:

“*Yes my relatives used to advise me. I really appreciate their advise because it gives me some relieve. That is why sometimes I contact them to talk about my problem; what I want is for them to tell me about other people who had similar problem and got out of it*” (Umara).

“*Other peoples` concern is of great importance for someone with fertility problem. This is because you don’t have children to care for you, you need people to strengthen you otherwise you will be lonely in life*” (Ulaika).

Zara considered the hospital as the source of support to her as she expressed:

“*I also go to hospital seeking for counseling and treatment*” (Zara).

Fafa expressed looking for support through reading materials containing information about infertility as narrated below:

“*I will tell him (Doctor) if he has any infertility CD plate he should call me so that I can be able to have it*” (Fafa)
4.6 Health Seeking Behaviour

These women in Zamfara adopted different ways and approaches of seeking for help due to infertility. Some were purely traditional, some combined the orthodox and traditional and some of them utilized only medical care. The women reported changes in the institution they sought for health help; they changed from orthodox to traditional and vise versa. Some of the women withdrew from treatment because they were no longer interested. The women also expressed their reasons for going to the hospital to seek for help and at the same time narrated their reasons for withdrawal.

4.6.1 Seeking for Help

The women sought both traditional and medical sources of help.

All the women interviewed attended hospital to seek for care. Fafa and Fakala described their medical care as follows:

“Since I am a health personnel, I believe that the only place I can get assistance is the hospital to find my medical status. So I have been going to the hospital” (Fafa).

“I went to the hospital to seek for treatment; but initially I was just at home. As I was praying to God, my husband told me to go the hospital. I visited Federal Medical Centre and general hospital. I am sure time has come for me to get pregnant” (Fakala).

However, majority of the women reported seeking for help through combining both medical and traditional medicine as stated below:

“We met the traditional doctor, because he combines both orthodox medicine and herbs. So he also placed me on investigations and later said I should continue taking some herbs” (Fafa).
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“Yes I used traditional medicine and that of the hospital. I think that my first pregnancy was as a result of traditional medicine” (Waya).

“I used traditional medicine for my lower abdominal pain but not to seek for pregnancy; I only sought that in the hospital” (Zara).

4.6.2 Reason for Seeking Help

The women reported various reasons for seeking help. Some of them were medical reasons while others were not. Meanwhile, majority of the women were advised to go to the hospital by their husbands, family or friends. Ige and Vada described that as follows:

“I was advised to go to hospital. Some advised me to look for traditional medicine but some said I should go to the hospital. Finally I chose to come to the hospital” (Ige).

“My elder sister and my brother’s wives said I should go (Hospital) since my husband was not ready to take me. They wanted me to go to private infertility clinic, because there are more qualified doctors there but I couldn’t do that, due to lack of resources” (Vada).

However few of the women made the decision by themselves due to pressure put on them as shared by Kazara:

“I thought to look for treatment, because of the pressure put on me by my husband’s relatives” (Razara).

Jarira also said

“I came to the hospital because of lower abdominal problems that prevent me from getting pregnant, I am hoping to get well and be part of my husband’s family with no stress and pressure” (Jarira).

Few among the women went to the hospital to look for the treatment of lower abdominal pain which is said to cause infertility as stated by Zara below:
“Nobody advised me at the first instance to go to hospital, but I heard people saying that lower abdominal pain can cause infertility and I knew I suffered from it. I looked at my situation and said they were really saying the truth. So that is what made me to come to hospital seeking for help before it is too late” (Zara).

4.6.3 Withdrawal from Treatment

Based on the prolonged period of medical treatment and perceived less benefits of that treatment the women frequently stopped the medication and either changed to another form or stopped seeking for any treatment. Women withdrew from medical care because there was no expected result. Umara and Fafa shared their experiences as follows:

“I have been going to the hospital but all prove futile till date; as of now I decided to stop going to the hospital and I will stop any moment from now. I will stop because it has been long I have been looking for treatment but no issues” (Umara).

“Sometimes if he (Doctor) gave me an appointment I will just ignore it; so I said what is the essence of going since is just one word, no any word that is changing, sometime they have to even call me that they didn’t see me, I just say Doctor I am tired” (Fafa).

The structure of the health care system also contributed to the women’s withdrawal from treatment. For instance, where there is a change in the Doctor responsible for their consultation, they felt that, any new Doctor will start asking them all over again questions that make them uncomfortable. Fafa expressed that as follows:

“So if I am sick again I don’t want go to the hospital, sometimes I will just take my drugs and that is because if you go to the hospital, they will start asking you questions. Are you married? Do you have children? How is... so it will make me recall event that I wanted to take it out of my mind. So I go to the hospital if it is a must that I have to go, sometimes I ignore it” (Fafa).
The women also withdrew from traditional medicine because they spent too much time taking the medicine and perceived negative result. Ulaika and Umama described that as follows:

“My sister advised me to seek for help from one traditional doctor at shabanke area; he gave me some herbs and I used them for two months but later I stopped when I understood that there was no issue” (Ulaika).

“I have been using traditional medicine with the hope that I will have my child, but unluckily that couldn’t help; so I have to go to hospital as advised by my husband” (Umama).

“He (Traditional Doctor) gave me some herbs mixed with oil. I took it but it didn’t work for me; so I stopped going to him” (Falaka).

In summary, the findings of this research revealed that, the women who participated in the study were aged of 22-45 years and half of them were illiterate and engaged in small scale business. They were all Muslims and Hausa by tribe.

Psychologically, majority of the women had experienced anxiety, stress and depression as a result of their inability to get pregnant. The stress experienced was mostly due to social pressure.

Socially, majority of the women experienced social isolation, social stigma, social pressure and marital problems. The psychological experiences were linked to social experiences and were mostly from mother in-laws and husbands` relatives.

Major coping strategies adopted by women were religious, social support, informal child adoption and diversional coping strategies.
The women in Zamfara sought medical treatment for their infertility from both traditional medicine and medical treatment. However, they frequently withdrew from treatment or change the place of health help due to perceived less benefit.
CHAPTER FIVE

DISCUSSION OF FINDINGS

This chapter presents the discussion of findings of the study. The discussion covers the demographic characteristic, psychological experiences, social experiences, coping strategies and health seeking behaviours of the women. The findings were discussed in relation to the previous empirical studies reviewed.

5.1 Demographic Characteristics

The findings of this study suggest that, all the respondents were Muslims and Hausa by tribe and were all married. The findings further indicated that, majority of the respondents (ten) were in polygamous family marriages. These findings were contrary to that of Upkong and Orji (2007), in southwestern Nigeria. This may be due to the differences in religio-cultural background of the respondents because Islam allows marrying more than one wife. The findings of this study have shown that, the respondents were between the age range of 22-45 years which is consistent with one age group reported by Upkong and Orji (2007).

About half of the respondents suffered primary infertility and equal number suffered secondary infertility. Majority of those with secondary infertility had one child each. Half of the respondents were literate and other half had no formal education. Among the literate, majority had secondary school certificate. Most of these findings were consistent with the general characteristics of women in Ghana as found by Naab and Colleagues (2013), with the exception of the type of infertility and literacy level. The findings of this study revealed that, majority of the respondents had work or business to do as similar reported by Upkong and Orji (2007). However, businesses engaged by majority of the women were small scale businesses. Probably
because married women in Zamfara are not allowed to go out of their marital homes for business purposes. Poverty and low level of education may also account for this choice of small scale businesses.

5.2 Psychological Experiences

One of the major experiences identified among the women was psychological. Women with infertility in Zamfara have a lot of psychological trauma. These psychological experiences include anxiety, depression and stress.

The findings indicated that, anxiety frequently affects women with infertility and presented in various ways. These ways include too much thinking, doubt, worries, and fear. This finding is congruent with that of Fatoye et al. (2008), that of Fledderjohann (2012), that of Naab et al. (2013), in Ghana, and that of Upkong and Orji (2007), in southwestern Nigeria. For instance, according to Wong et al. (2012), women with infertility often feel anxious and frustrated as they wait every month in anticipation that they will miss their period. This is because, missing a menstrual period is believed to be associated with pregnancy. By implication, women with infertility become more anxious when they menstruate every month (Naab, 2014). Unfortunately, the level of the women’s anxiety as reported by other studies (Donkor & Sandall, 2007; Naab et al., 2013; Upkong & Orji, 2007), could not be measured in this study because of the study approach. Also, measuring the level of anxiety is beyond the scope of this study. Therefore, further research is needed to establish the level of anxiety among women in Zamfara.

Similarly, the findings of this study, established that, women suffered stress as a result of infertility. The stress symptoms described by the women with infertility in Zamfara were crying, forgetfulness, disturbances, lack of sleep, palpitation and loss of libido. Similar findings were reported in most of the studies reviewed in the literature (Golhardo & Pinto, 2011; Naab et al.,
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2013; Naab, 2011). For instance, Donkor and Sandall (2007) found that, infertility-related stress was higher among women especially among less educated women. The stress experienced may arise from a multitude of factors such as desire to attain motherhood, strains imposed on marital relationship as well as cost and perceived less benefits of treatment.

The findings of this study in relation to depression concurs with the findings of previous studies as well (Cousineau et al., 2007; Kazandi et al., 2011; Upkong, & Orji 2007). For example, Dyer et al. (2006), found that, South African women admitted to intense emotions such as anger, profound sadness, bitterness, loneliness and depression. Similarly, in this study, the women were found to suffer depression as a result of their infertility. The most common ways they described depression were in the form of sadness, lack of happiness, restlessness, angry and loss of interest in social communication and interaction. This could be due to the failure to achieve pregnancy following all the efforts put in place, feeling of loneliness, verbal abuse and social isolation.

5.2 Social Experiences

Another major experience of the women with infertility was the social aspects of their lives. The women’s psychological experiences were linked to social life experiences. These social experiences include social isolation, social stigma, social pressure, marital problems and support.

Women in this study were found to suffer social isolation in which they were isolated by people around them because of their infertility. The finding resonates with previous studies by Naab et al. (2013), in Ghana, Odukogbe et al. (2011), in Southern Nigeria and that of Cross-Sudworth (2007). For instance, Naab and colleagues (2013), established that, women in Ghana reported low levels of social isolation. Furthermore, these authors reported that, women were
more likely to report lower social isolation if they spent many years in marriage, had been in
treatment, and had fewer negative beliefs about the consequences of infertility. However, this
study reported self-isolation where women isolated themselves which was not described in their
study. In addition to that, women gave reasons for isolating themselves which are to avoid being
hurt by people and to think about their situation. This may be due to the experiences they had in
the course of their social interaction.

Findings related to perceived stigma in this study are consistent with those in the
literature. In the present study, the women were found to have experienced perceived stigma
which was described in the form of mockery. Donkor and Sandall (2007), suggested that,
Ghanaian infertile women experienced different level of perceived stigma. In addition to that,
actual stigma was also reported in this study, where women were being branded controllers of
their fertility. They reported situation in which people described them as users of family
planning, lovers of high education, being barren/infertile and aggressiveness. Possible
explanations for that could be due to ignorance about causes of infertility and rejection of family
planning. Further research should be conducted to explore the causes of infertility among women
in Zamfara.

This study found that, women were faced with challenges that imposed pressure on them
because of their infertility. The women were mocked and abused mostly by their mother in-laws,
husbands’ relatives and sometimes husbands and society as reported in other studies (Anozie et
al., 2007; Dhont et al., 2011; Kazandi et al., 2011; Cwkel, Sheiner, & Gidron, 2006). For
instance, Kazandi et al. (2011), has shown that, fertility is still viewed very traditionally in
Turkey and that there is a lot of social pressure for newly married women to become pregnant.
But in this study, pressure was experienced by women with more than one child. This may be
due to competition among rivals in polygamous families. However, as reported by Anozie et al., (2007) in southwestern Nigeria, that the main culprit was the husband; this was contrary to the findings of this study. In this study, the main culprit was the mother in-law which is in line with findings of Sami (2008). Furthermore, majority of the women in this study were found to suffer verbal abuse which is supported by the findings of Anozie et al. (2007). However, contrary to the submission of Sami (2008), who identified the physical abuse as the main problem imposed on women, the present study indicated that the major problem of women in Zamfara is psychological problem.

Infertility has been reported to cause marital problems among couples. One of the marital problems found in this study was divorce, where women were threatened for divorce or been divorced. Similar finding was reported by Whitehouse and Hallos (2014), in Nigeria, Jindal et al. (2009), and Sami, (2008) in Karachi. Jindal et al. (2009), asserted that, women acquire an identity through marriage and most importantly, when the marriage is fertile. If not, she may be returned by the husband to her parents at any moment, in disgrace and shame. Sami (2008), reported similar findings, where women had been threatened with divorce.

Another reported marital problem was marrying another wife, and this was reported by Whitehouse and Hallos (2014). For instance, Obeisat et al, (2012), in Jordan, established that, women are faced with the adversity of adding another wife, and the adversity of changes in the marital relationship characterized by lack of care and pressure. The result of this study suggests that, husbands threatened to marry another wife due to the infertility of their wives. This could be due to the love for children and or as a permissible act by the religion.
In this study, marital conflict between couples was reported due to the inability of the women to get pregnant. Similarly, Wilkes et al. (2009), found that, infertile couples often blamed the relationship or each other for infertility, which resulted in emotional isolation, communication problems, and arguments. Conflicts may arise because women were always blamed to be infertile as shown by other studies. In this study, conflicts existed even in the process of seeking for infertility help.

The women received psychological and economical supports from either their family or husbands. This is contrary to the findings of Dhont et al., (2011) in Ruwanda and that of Odukogbe et al. (2011) in Southern Nigeria. For example, in Southern Nigeria, a woman who has not borne children cannot be recognized as an elder because she has not been able to bear a son and does not have a right to her husband’s property, nor can she return to her parents’ compound as she will be mistreated. The possible explanation for differences in the reports may be due to religio-cultural background, where Hausa culture and Islamic religion obligate wives’ responsibilities upon their husbands.

5.3 Coping Strategies

The women were found to adapt various strategies to adjust to their problems. The coping strategies reported by the women include the use of religious beliefs and prayers, diversional coping strategies, marital separation, social support as coping strategy and informal child adoption.

Globally, women use religion to cope with infertility (Donkor & Sandall, 2009; Greil et al., 2010; Roudsari & Allan, 2011). For highlights, Faramarzi et al. (2013), in Iran, established religious beliefs as one of the strategies used by women with infertility in order to cope with
their stressful situation. Similarly in this study, majority of the women in Zamfara used religious strategies to cope with their infertility. Furthermore, women were reported to pray to and rely on God who was believed to give them children.

Regarding adoption, the findings from this study are consistent with the literature in some ways and inconsistent in others. In Southern Nigeria (Charlotte et al., 2014), and in Cameroon (Omosun & Kofoworola, 2011), it is reported that, women with infertility have accurate knowledge and information about child adoption, yet child adoption is a difficult task for these women. Similarly in this study, few women were found to have adopted a child. However, the adoption practiced by the women in present study was a form of local or informal adoption that does not necessitate official agreement. If a woman feels the need to adopt she may solicit for a child from one of her family members to stay with her. Possible explanation for informal child adoption may be due to ignorance of the formal adoption process and high parity among Hausa tribe (for those who are fertile, in which they can easily give out one for adoption).

As part of the coping strategies, the women were found to be engaged in some activities that diverted their attention from their problems. These activities included social interaction and listening to music. They were reported to have listened to preaching and other music in order to divert their attention from tension related to infertility. Furthermore, the women were also reported to have relieved themselves by interacting with people.

For some women, marital separation was a strategy thought to reduce the pressures they faced in their matrimonial homes. They often felt that, if they separated with their husbands and marry another man, they will be out of the pressure and may be able to have their own children. However, this is contrary to the effective coping strategy proposed by Center of Reproductive
Women’s Experiences of Infertility Medicine (2012), which suggests that, working as a team with the partner and educating oneself strengthen women to cope effectively with their infertility.

Social support was also reported as a coping strategy in this study. For example, some women identified support received from family and friends as well as that of the hospital as the strategy they used to reduce their tension. The women sought for social support may be due to the communal nature of the communities of Zamfara state. This resonates with that of Benyamini et al. (2008), in Israel, that of Suzanne et al. (2014), in USA, and that of Jindal et al. (2009), in India.

5.4 Health Seeking Behaviour

It was found that the women in Zamfara adopted different ways and approaches of seeking for help for infertility. Researches from Arabian and African countries show that, women who are educated are more likely to seek for infertility health services (Donkor & Sandall, 2007; El-Kak et al., 2009; Fido & Zahid, 2007; Upkong & Orji, 2007). However, in Zambia, as reported by Stekelenburg et al. (2006), level of education is not a determining factor for seeking infertility health services.

In relation to seeking for help, this study reported that, some women sought traditional help, some combined the orthodox and traditional and some of them utilized only medical care. This supports the submission of Omoaregba et al. (2011), in Nigeria, who investigated that, infertility treatment is considered as best when the three (biomedical and faith based and traditional) sources were used. This could be due to multiple factors such as low level of education and poverty. Furthermore, as reported by Bennett, et al., (2012) and Stekelenburg et al. (2006). The women in these studies combined biomedical, faith, and traditional sources of
help for their infertility. Meanwhile, Bennett et al. (2012) established that, Indonesian women with infertility frequently switched to the traditional healers as they perceived failure in the hospital treatment. The frequent changes in the medical and traditional care may occur due to a strong desire for children and social pressure.

The women reported various reasons for seeking help. Some of them were medical reasons while others were not. Majority of the women sought for help because they were advised to seek for help by their husbands or their families. Similar to that, Boivin et al. (2007), asserted that, among women with infertility, those who were encouraged by their close family and friends to seek for medical treatment were more likely to do so. However, the few women who sought help on their own did so based on some other medical conditions such as pelvic conditions.

In this study, women were found to withdraw from medical treatment due to prolonged period of medical treatment and perceived less benefits of that treatment. They frequently stopped the medication and either changed to another form or stopped seeking for any treatment. This is similar to the findings of Bennett et al. (2012), and that of Nahar (2010), who narrated that, perceived success of the procedure, location of infertility clinics influence women’s decision on the continuation of infertility treatment.

In summary, women with infertility in Zamfara suffer psychological problems which include anxiety, stress and depression. They also reported social problems such as social isolation, social stigma, social pressure and marital problems. Similarly, the women were found to have adopted various coping strategies which include: informal child adoption, diversional, social support and spiritual coping strategies. Women patronized both medical and traditional sources of help with reported cases of frequent switch from one health help to the other.
CHAPTER SIX

SUMMARY, IMPLICATIONS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of the entire study, implications, limitations, conclusion, and recommendations.

6.1 Summary

Little is known about experiences of infertility among women in Zamfara state. This study explored the psychosocial experiences of women with infertility in Zamfara state, Nigeria.

A qualitative research approach was used and basic interpretive design was employed. A total of twelve respondents were purposively sampled. A semi structured interview guide which comprised of questions based on the psychological experiences, social experiences, coping strategies and health seeking behaviour of women with infertility was used for data collection. Respondents were interviewed for 30-40 minutes each. All interviews were audio taped and transcribed verbatim. Content analysis was used to categorize the data into themes.

The findings of this research revealed that, the respondents were between the ages of 22-45 and half of them were illiterate and engaged in small scale businesses. They were all Muslims and Hausa by tribe. Psychologically, majority of the women had experienced anxiety, stress and depression as a result of their inability to get pregnant.

The psychological experiences were linked to social experiences with pressure mostly from mother in-laws and husbands’ relatives. Socially, majority of the women experienced social isolation, social stigma, social pressure and marital problems.
Women’s Experiences of Infertility

Major coping strategies adopted by the women were spiritual, social support, informal child adoption and diversional coping strategies. The women in Zamfara state sought help for their infertility from both traditional medicine and medical treatment. However, they frequently withdrew from the treatment or changed the source of treatment due to perceived less benefits from the health facility.

6.2 Implications

The findings of this study have implications for Nursing practice, and Nursing research.

6.2.1 For Nursing Practice

The study established that, women with infertility in Zamfara state experienced perceived stigma, self isolation, and withdrawal from the medical treatment. Therefore, the women need to be educated on those areas to reduce infertility related stress. Nurses need to educate the women on effective coping strategies. There is the need for families to be educated on the impact of infertility on women and also be encouraged to provide support for women with infertility. Lack of knowledge about infertility may be the grass root of social stigma. Therefore, the family and society should be educated about the effects of infertility on women. This education may also help address the self isolation reported by women with infertility in this study.

6.2.2 For Nursing Research

One of the reliable approaches to the acquisition of valid knowledge for evidence based practice is research. Every nurse or midwife need to be research minded in identifying the major concerns of women. The competencies that midwives and or Nurses have in providing infertility services will not be enough if they do not find out the best way to deliver such services for the
benefit of women, families, and the community in general. It is important for nurses and midwives to conduct further research in the area of infertility to explore major constraints in accessing and utilizing infertility services as well as possible ways to address fertility problems.

6.3 Conclusion

This study was the first of its kind conducted in Zamfara state to explore the psychosocial experiences of women with infertility and their coping strategies. The findings suggest that, women with infertility in Zamfara state experienced a lot of psychosocial problems that are associated with their infertility. It is also established that, the women adopted various number of strategies to cope with their infertility. However, despite the number of strategies used by the women, their psychological problems were linked to their social experiences. Therefore, infertility needs to be seen as a public health issue rather than a pure medical condition. Women in Zamfara state primarily patronized medical treatment for their infertility. However, they frequently withdrew from their medical treatment as a result of perceived less benefits and prolonged duration of the treatment. Therefore, medical care for women with infertility should be structured to avoid impediments to accessibility of infertility services in Zamfara state.

6.4. Limitations of the Study

The study was limited to the women who sought infertility medical treatment excluding those women with infertility who sought treatment for other medical problems. Moreover, unlike quantitative studies the use of qualitative approach may not allow for generalization of the findings.
6.5 Recommendations

The following recommendations are made based on the findings of the study to the following bodies: Ministry of Health, Hospital Service Management Board, Non-governmental Organizations, and nurse researchers.

6.5.1 To Ministry of Health

- Ministry of Health should send nurses to be trained on infertility management in order to have more nurses specialized in the area.

- Ministry of Health should provide drugs and supplies needed for infertility care and always make them available and sufficient either free or affordable to the clients.

- Health educational programmes about infertility through the mass media about infertility should be sponsored.

6.5.2 To Hospital Service Management Board

- Structure of the hospital system should be made in a way that discourages frequent transfer of Doctors and nurses caring for clients with infertility.

- Counseling should be incorporated in the care of patients with infertility.

- Hospital service management board should sponsor researches related to infertility.

- Hospital service management board should employ more counselors and post them to various hospitals in the state.
6.5.3 To Nongovernmental Organization

- Non-governmental organizations should view infertility as a public health issue, since the most common cause of infertility in African countries is sexually transmitted infections.

- Health education about infertility should be done through the mass media.

- Programmes about infertility should be sponsored if infertility is within the purview of the NGO.

6.5.4 To Nurse Researchers

- Nurse researchers should use the quantitative approach to explore the psychosocial experiences of women with infertility in Zamfara state.

- The scope of future research should be extended to both government owned and private hospitals where infertility care is provided to enable adequate representation.

- The relationship between the socio-demographic characteristics and levels of anxiety, stress, and depression should be examined among women with infertility in Zamfara.
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Women’s Experiences of Infertility


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APPENDIX A: CONSENT FORM

Title: Psycho-social experiences of women with infertility and their coping strategies in Zamfara state, Nigeria

Principal Investigator: Yakubu Lawali

Address: School of Nursing University of Ghana, Legon, Email: lawaliyakubu@yahoo.com

General Information about Research

Little is known about women’s experiences of infertility in Zamfara state. This study is about finding out how women in Zamfara live with infertility. You are invited to participate because you are seeking treatment for infertility at federal medical centre Gusau Zamfara state. If you agree to participate, you will be required to sign a form and attend an interview. Interview will last about 30-40 minutes and it will be held at the outpatient department of federal medical centre Gusau. But if you are not comfortable you can suggest where you think is more comfortable to you. During the interview, you can stop or withdraw if you feel like doing so.

Possible Risks and Discomforts

Some of the questions to be asked may remind you of some unpleasant circumstances. In that case if you feel like continuing with the interview that will be ok, but if not the interview will be stopped base on your request.

Confidentiality: Your name, signature or other information that will make you known will not be included. Instead, false name will be used for identification purpose. Information you provided will be labeled with a protected number and locked by me. Only the researcher and his supervisor will have access to the information, and your name will not be mention in any of the research report. All study information will be destroyed five years after the study. Also any
publication from this study will not include any identifiable information, only group data (themes) will be use.

Compensation

Five hundred naira (GHc8) would be given to you as transportation fare after the interview. You will also receive soft drinks and snacks of your choice after the interview.

Voluntary Participation and Right to Leave the Research

For your information, this research is voluntary and you have the right to decide to participate or not. You can also withdraw if you wish without any worry or penalty from any one.

Termination of Participation by the Researcher

You will not participate in the study if you do not sign the consent form and or you are found coming to the hospital for other reasons rather than seeking for infertility treatment

Contacts for Additional Information

If you need more clarification about this research you can contact me or my supervisor through the following contacts:

Yakubu Lawali (Researcher)
School of Nursing, College of Health Science, University of Ghana, Legon.
0549259708, 07037575799, Email: lawaliyakubu@yahoo.com

Dr. Florence Naab, Lecturer, School of Nursing, College of health Sciences University of Ghana, Legon. Phone number: +233024522332, Email: fnaab@ug.edu.gh

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm
through the landline 0302916438 or email addresses: nirb@noguchi.mimcom.org or HBaidoo@noguchi.mimcom.org. You may also contact the chairman, Rev. Dr. Ayete-Nyampong through mobile number 0208152360 when necessary.

**VOLUNTEER AGREEMENT**

The above document describing the benefits, risks and procedures for the research title *Psycho-social experiences of women with infertility and their coping strategies in Zamfara state, Nigeria* has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

__________________________                                        _________________________________  
Date                                                                             Name and signature or mark of volunteer  

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

__________________________                                      __________________________________  
Date                                                                          Name and signature of witness  

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

__________________________                                        _________________________________  
Date                                                                              Name Signature of Person Who Obtained Consent
APPENDIX B: INTERVIEW GUIDE

Section A

Personal Data:
Please tell me about yourself

Section B

Psychological experiences
1. Can you share with me how you felt when you were told that, you have infertility?
2. As a married woman with this condition how have you been feeling deep in you?
3. What reminds you of this situation?
4. What are normally your feelings or reactions as you remember?
5. How do you perceive life in this situation?

Social Experiences
1. Can you kindly share with me life situation in your matrimonial home about the diagnosis of this problem?
2. Considering our culture which is in full of need for children, what are some of your experiences in relation to your relatives, husband, his relatives and friends?
3. From your experiences, how does society look at you?
4. From your understanding of the situation, how will you compare your position in the society before and after the diagnosis?
5. Can you please describe how you relate with people before and after the diagnosis?

Coping strategies
1. Looking at all that you have shared with me, have you been using some measures to adjust?
2. If no why?
3. If yes, can you please share with me those measures?

Health seeking behaviour
1. Can you share with me general situation regarding your seeking for help?
2. What are the factors that make you to come to hospital seeking for help?
3. Have you tried using other ways of treatment before coming to the hospital?
4. Were you asked by someone to come to the hospital or you made the decision by yourself?
APPENDIX C.

FEDERAL MEDICAL CENTRE, GUSAU

(Health Research and Ethics Committee)

Yakubu Lawali
Dept of Maternal Child Health
School of Nursing
College of Health Sciences
University of Ghana

APPROVAL FOR RESEARCH PROPOSAL

This is to inform you that, Health Research and Ethics Committee of Federal Medical Centre, Gusau has approved your request to interview patients on the research topic title Psychosocial Experiences of Women with Infertility and their Coping Strategies in Zamfara, Nigeria.

The soft and hard copies of your findings should be submitted to the Secretary HREC for record purposes. Note that your findings should be strictly use for the purpose of your research work.

Thank you.

IBRAHIM HUSSAINI KANKIA
For: Chairman HREC
APPENDIX D

SCHOOL OF NURSING
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA LEGON

Telephone: 0302-513255 (Dean)
           Ext. 6206 (Dean)
0302-513250 Secretary
0289531213

Fax: 513255
E-mail: nursing@ug.edu.gh

Your Ref: ....SONI.FJJL ..............

The Chief Medical Director
Federal Medical Centre
Gusau Zamfara State Nigeria.

Dear Sir/Madam,

MSC CANDIDATE: YAKUBU LAWALI

I am writing to introduce Mr. Yakubu Lawali to you as an MSc student under my supervision at
the School of Nursing, College of Health Sciences, University of Ghana, Legon. Since the
commencement of the programme, Yakubu has demonstrated maturity, diligence and
commitment in all aspects of his work. We are very happy with his progress to date and we have
had regular supervisory meetings with him. He has also demonstrated unique intellectual skills
evidenced by critical analysis exhibited in his contributions during academic seminars.

His thesis research is entitled "Psychosocial Experiences of Women with Infertility and their
Coping Strategies in Zamfara". He would like to conduct the study at the Obstetric and
gyneacology department of your institution.

I would be very grateful if you could grant him permission to recruit participants for his study.
Please feel free to contact me if you need further information. I can be reached via email
@fnaab@ug.edu.gh

Thank you.

Yours sincerely,

Dr. Florence N aab
Lecturer/Course Supervisor

February 27, 2015
On 31st March 2015, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) conducted an expedited review and approved your protocol titled:

**TITLE OF PROTOCOL**

Psychosocial Experiences of Women with Infertility and their Coping Strategies in Zamfara State, Nigeria.

**PRINCIPAL INVESTIGATOR**

Lawali Yakubu, MSc Cand.

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 30th March, 2016. You are to submit annual reports for continuing review.

Signature of Chair:

Mrs. Chris Dadzie
(NMIMR—IRB, Chair)

cc: Professor Kwadwo Koram
    Director, Noguchi Memorial Institute
    for Medical Research, University of Ghana, Legon