ILLNESS COGNITION, SELF-EFFICACY, MARITAL ADJUSTMENT AND QUALITY OF LIFE IN COUPLES UNDERGOING INFERTILITY TREATMENT IN KERALA

Thesis Submitted for the Award of the Degree of

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in

Psychology

By

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DECLARATION

I, hereby declared that the presented work in the thesis entitled **"Illness Cognition, Self-Efficacy, Marital Adjustment And Quality Of Life In Couples Undergoing Infertility Treatment In Kerala"** in fulfilment of degree of **Doctor of Philosophy (Ph. D.)** is outcome of research work carried out by me under the supervision of **Dr. Mohammad Amin Wani (UID-23914),** working as **Assistant Professor** in the **Psychology Department, School of Social Sciences and Languages** of Lovely Professional University, Punjab, India. In keeping with general practice of reporting scientific observations, due acknowledgements have been made whenever work described here has been based on findings of other investigator. This work has not been submitted in part or full to any other University or Institute for the award of any degree.

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CERTIFICATE

This is to certify that the work reported in the Ph. D. thesis entitled **"Illness Cognition, Self-Efficacy, Marital Adjustment And Quality Of Life In Couples Undergoing Infertility Treatment In Kerala"** submitted in fulfillment of the requirement for the award of degree of **Doctor of Philosophy (Ph.D.)** in the **Psychology Department, School of Social Sciences and Languages,** is a research work carried out by **ANOOP C D, Reg No: 41800367,** is bonafide record of his/her original work carried out under my supervision and that no part of thesis has been submitted for any other degree, diploma or equivalent course.

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ABSTRACT

Infertility is a condition defined by the inability to conceive after 12 months of consistent, unprotected sexual intercourse, poses a significant challenge for couples worldwide. With approximately 48.5 million couples affected globally, addressing infertility concerns is paramount in enhancing the chances of parenthood while minimizing physical, mental, and social distress. This necessitates a comprehensive approach that addresses the unique needs of infertile couples. Cultural attitudes towards infertility vary widely, influencing the experiences of involuntarily childless couples across different societies. Psychosocial factors impact how individuals cope with infertility and its treatment process, thereby influencing their quality of life. The present study explores specific psychological factors such as "illness cognition, infertility self-efficacy, marital adjustment, and fertility quality of life" in couples undergoing fertility treatment. These factors can potentially affect how individuals and couples experience, interpret, and manage infertility within the context of their emotional, psychological, and relational frameworks. The overwhelming strenuous nature of infertility treatment can lead patients to prematurely discontinue treatment due to physical, psychological, and financial strain. Early identification of susceptible couples during infertility investigations is crucial for providing tailored support and mitigating treatment-related stress. By understanding patients' psychological vulnerabilities, clinical staff can offer personalized care, particularly for complex procedures like IVF or ICSI. Assistance in decision-making may be necessary for patients experiencing high levels of helplessness and low levels of acceptance.

The purpose of the study is to explore how illness cognition, marital adjustment, and self-efficacy influence the quality of life of individuals undergoing infertility treatment. Additionally, it seeks to uncover the relationships between "illness cognition, infertility self-efficacy, marital adjustment, and fertility quality of life" among these individuals. Furthermore, the study aims to identify differences in "illness cognition, infertility self-efficacy, marital adjustment, and fertility quality of life" based on various demographic variables such as age, religion, education qualification, employment status, family history of infertility, duration of marital life, family type, cohabitation, type and factor of infertility, and duration of infertility treatment. We

hypothesized that illness cognition, self-efficacy, and marital adjustment significantly influence the fertility related quality of life in individuals undergoing infertility treatment. Additionally, we proposed that these psychological variables would exhibit intercorrelations, and show differences across various socio-demographic and infertility-related clinical variables.

We conducted a descriptive study using a sample of 100 couples from a pool of approximately 500 couples undergoing infertility treatment at the Susrutha Fertility Centre in Palakkad, Kerala, over the course of a year. Purposive sampling method was utilized, selecting subjects based on specific criteria relevant to the study.

The assessment process utilized several measuring tools, including a socio-demographic sheet for collecting personal information and treatment details, "the Illness Cognition Questionnaire, the Infertility Self-Efficacy Scale, the Marital Adjustment Questionnaire, and the FertiQol-Fertility Quality of Life tool." Data analysis was performed using SPSS 20.0, with data coding and tabulation carried out in Excel. The analysis included descriptive statistics such as mean, standard deviation, and frequency distribution, as well as inferential statistical methods. The Pearson correlation was used to explore the relationships between variables, linear regression analysis was applied to assess their influences, and one-way ANOVA along with independent sample t-tests were conducted to identify mean differences among groups.

In our regression analysis, helplessness domain of illness cognition emerged as the strongest predictor of fertility related quality of life ($p < .001$), followed by self-efficacy ($p < 0.001$). The acceptance domain of illness cognition also emerged as a significant predictor of quality of life, though with a smaller effect size ($p = .023$). Interestingly, marital adjustment did not emerge as a significant predictor of fertility-related quality of life in this study, although it came close to significance ($p = .066$), suggesting a potential trend that warrants further investigation in future research.

Additionally, we observed significant inter-correlations between illness cognition, infertility self-efficacy, marital adjustment, and fertility quality of life. Notably, strong negative correlations were observed between the helplessness dimension of illness cognition and multiple domains of fertility-related quality of life.

Conversely, acceptance and perceived benefits within illness cognition exhibit weaker positive correlations with quality-of-life dimensions, suggesting their influence may be less pronounced compared to feelings of helplessness. We found significant negative correlation between the domains of helplessness and acceptance within illness cognition, suggesting that individuals perceiving themselves as more helpless are less likely to adopt an attitude of acceptance towards their condition.

Moreover, a significant positive correlation between infertility self-efficacy and fertility quality of life underscores the impact of individuals' beliefs in managing their health on overall well-being. Marital adjustment showed significant correlation with quality of life, indicating that better marital adjustment enhanced the fertility quality of life.

This study also explores the relationships between self-efficacy, helplessness, quality of life, marital adjustment, and various demographic and treatment-related factors in individuals facing infertility. The findings reveal significant gender differences, with males reporting higher “self-efficacy and quality of life” compared to females. Age was also a determinant, with individuals aged 26–35 years exhibiting the highest self-efficacy. Employment status and income levels further influenced outcomes, as employed participants and those with higher monthly incomes reported better “infertility self-efficacy and fertility quality of life,” respectively. Duration of marital life was linked to helplessness, with participants married for 5–8 years experiencing the highest levels. Subfertility was associated with greater acceptance compared to primary infertility. Treatment duration and intensity played a critical role; longer durations and higher numbers of IUI cycles were correlated with increased helplessness and diminished quality of life. Notably, self-efficacy was significantly lower in individuals who had undergone one IVF cycle.

Recommendations for addressing the challenges faced by couples undergoing infertility treatment in Kerala include implementing psychoeducational interventions to enhance coping strategies, understanding of the infertility process, and promote acceptance. These interventions could involve cognitive behavior therapy, coping skill programs, group therapy sessions, and the establishment of social support groups.

Additionally, specialized training programs should be developed to equip counselors with the skills necessary to support individuals dealing with infertility. The limited research on the psychosocial impact of infertility on couples in Kerala underscores the need for further studies in this area. Given the unique socio-cultural context of Kerala, characterized by high levels of education, health awareness, and a matrilineal system of inheritance, It is crucial to examine the emotional and psychological impact of infertility within this population.

Future research could explore qualitative studies to gain deeper insights into the subjective perceptions of infertility and the lived experiences of couples facing this challenge. Furthermore, there is a need to develop psychotherapeutic interventions tailored to the socio-cultural milieu of Kerala, with input from sociologists and anthropologists to ensure cultural sensitivity. Comparative studies with other regions of the country can provide valuable insights into regional differences in the experience of infertility. Cross-cultural research methods offer a promising approach to understanding the diverse cultural influences on attitudes towards infertility and treatment outcomes.

Keywords: Infertility, Illness Cognition, Self-Efficacy, Marital Adjustment, Fertility-Related Quality of Life

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ACRONYMS DESCREPTION

IC	Illness Cognition
ISE	Infertility Self-Efficacy
IUI	Intrauterine Insemination
IVF	In Vitro Fertilization
INR	Indian rupee
M	Mean
SD	Standard Deviation
N	Number of Individuals
ANOVA	Analysis of Variance
SEM	Standard Errors of the Mean

CHAPTER I

INTRODUCTION

1.1 Introduction to Infertility

Infertility is a growing concern among couples today, affecting approximately 48.5 million couples globally according to a 2010 survey (Mascarenhas et al., 2012). Research on infertility should strive to optimize the chances of infertile couples achieving parenthood with minimal physical, mental, or social discomfort. This includes addressing issues relevant to infertile couples, utilizing appropriate technology, and sharing findings in a transparent and accessible manner (Duffy et al., 2017). Perspectives on infertility as well as experiences of involuntarily childless couples vary widely, both between cultures and within individual cultures. (Davis & Loughran 2017). The present study examines the psychological factors like "Illness Cognition, infertility Self-efficacy, Marital Adjustment, and Fertility Quality of life of couples undergoing fertility treatment, and their inter-relationships." Illness cognition, self-efficacy, and marital adjustment significantly influence the fertility quality of life in infertile couples. Negative perceptions of infertility, such as feelings of helplessness or self-blame, can increase distress and lower quality of life, while positive beliefs foster better coping (Sambasivam & Jennifer, 2023). High self-efficacy empowers individuals to manage challenges effectively, improving emotional well-being (Simbar et al., 2018b), while strong marital adjustment provides crucial emotional support and resilience (Li et al., 2019).

The central focus for all living beings revolves around generating offspring and ensuring the continuity of their lineage (Banerjee & Mathews, 2020). Fertility stands as a fundamental necessity of existence. Within Indian tradition and culture, marriage holds sacred significance, with the expectation that its ultimate fruition is the creation of offspring. The inability to fulfill this expectation can be a profoundly distressing ordeal for the couple (Greil, 1991). While the desire for parenthood resonates universally, people's responses to childlessness vary across cultures (Bunting et al., 2013). The psychological distress stemming from being childless and its perceived

negative impact often drives couples to seek professional assistance. Research shows that infertility can profoundly affect an individual's physical and mental health, relationships, and overall life satisfaction. Its impact extends across various aspects of life, including intrapersonal, interpersonal, emotional, social, and spiritual dimensions (Gameiro, 2015). In India, numerous research endeavors have underscored the psychosocial impacts of being unable to have children (Baru & Dhingra, 2003; Lavania, 2006).

The definition of infertility differs among researchers. Differences in social and physiological characteristics of this problem has made it difficult to create a universal definition of infertility (Ganguly & Unisa, 2010). Demographers have characterized infertility as the state where a sexually active woman, not employing any contraceptive measures, does not conceive a child who is brought home (Larsen, 2005). This more or less confirms with the public perception, as people are more interested in live baby rather than mere pregnancy. Demographers consider five years as period to conceive as opposed to 12 months by clinicians (Gurunath et al., 2011). The lay public understands the word 'infertility' as inability to give birth to a biological progeny (Maill 1994). Infertility is a disorder of the reproductive system defined by the inability to conceive a clinical pregnancy despite having regular, unprotected sexual intercourse for 12 months or more (Zegers et al., 2009). In 1994, the World Health Organization (WHO) classified infertility as a "social disease". Infertility evaluation is normally undertaken only after one year of married life with continuous co habitation without the use of any contraceptive method (American society for Reproductive Medicine, 2012).

Infertility is believed to generate disability among people under the age of 60. Among the serious disabilities related to women, this is ranked as the 5th globally. Approximately 34 million women, primarily from developing nations, are believed to experience infertility. The effect of involuntary childlessness is different for each partner in a couple. Some workers consider infertility as a "Disability." If we accept the definition of disability as a deterioration of function which necessitates treatment infertility can be considered a disability (WHO, 2019). So also, there are theoretical differences as to whether infertility can be considered a disease. Justifying the idea that

infertility is a disease which necessitates medical interventions is itself a matter of dispute among different workers. Therefore, the necessity to address the specific ethical considerations raised by infertility becomes important (Maung, 2019). Infertility is not just a matter affecting quality of life; it is a medical condition of the reproductive system akin to cardiovascular disease, cancer, and metabolic disorders (Jacobson et al., 2018). Infertility, according to the World Health Organization (2019), is a disorder of the reproductive system that leads to physical and psychosocial challenges.

In many cultures globally, infertility is stigmatized, resulting in significant distress for couples experiencing it. This condition affects the quality of life in many respects affecting a person in social, emotional, and psychological levels. Infertility is a treatable health condition (Boivin et al., 2007). The advances in the field of reproductive medicine and endocrinology have brought substantial positive changes in infertility and fertility problems (WHO 2019). However, reports indicate that only 56% of couples facing infertility pursue medical assistance (Boivin et al., 2007; Nygren, 2007).

In many societies, the state of not having children is viewed as socially unacceptable, and infertility represents an unanticipated shift in one's life (Patel et al., 2018). In the past the topic of infertility and its psychosocial consequences were not discussed in scientific circles. In developing countries like India, the governmental emphasis as always been on programmes for population control with the idea of promoting economic growth and development (Bergstrom, 1992). But with globalization and the increasing number of women taking up jobs and marrying late as well as advancement in reproductive medicine has created a paradigm shift (Stanford & Hatasaka, 2002).

1.1.1 Why addressing infertility is important?

The entitlement to achieve an ideal level of physical and mental well-being, including the right to decide on the timing and number of children, is a fundamental human right. Infertility can prevent couples from realizing this right, and it is important

to address the issue in all aspects to help couples achieve their desired family planning (Zegers-Hochschild et al., 2013).

Social expectations from a couple to produce an offspring and the societal pressures thereby perpetuate grief and sorrow in the couple. Despite advancements in modern medicine and technology, a staggering 42% of married women in traditional societies still resort to traditional methods to solve their infertility problems, regardless of their education, occupation, or financial status. This highlights the persistent cultural belief that having children is a fundamental aspect of a successful marriage, and the emotional toll that infertility can take on a couple (Coskun & Çavdar, 2018).

Infertility is a growing concern today, affecting not only heterosexual couples but also individuals from diverse backgrounds such as same-sex partners, single women, cancer survivors, and those with medical conditions like HIV. It is imperative that infertility treatment should be accessible to all, regardless of their background or identity. In many societies, women are frequently held responsible for infertility, which can result in significant psychological and social consequences. To address these issues, education and awareness-raising programs are crucial in promoting understanding and breaking down gender biases and discrimination in the field of infertility. By providing equal access to treatment and support, we can create a more inclusive and equitable society for all (WHO, 2020).

1.1.2 Historical Background of Infertility

The problem of childlessness, from the idea of "barrenness" to subfertility, has been a subject of concern throughout history. Desires for progeny and the disappointments of barrenness have been depicted in myths, legends, religious texts, art, and literature. This has prompted individuals to pursue extreme measures to find a solution, leading to acceptance of changes in social relationships like adoption and divorce, spiritual practices such as pilgrimages and prayers, and ancient medical interventions in many societies (Rosenblatt et al., 1973).

Infertility has been a significant social concern since prehistoric times. In different societies, well-endowed women’s figurines are depicted in cave paintings and

sculptures to symbolize fertility, emphasizing the central role of women in this aspect. These depictions serve as evidence of the importance placed on fertility in the past and its lasting impact on society (Morice et al., 1995).

The Trobrian Islanders attributed pregnancy to spiritual forces, while Chukchi female shamans professed the ability to induce conception through the power of sacred stones. Among the Australian Ingarda peoples, pregnancy was believed to stem from consuming specific foods or communing with a revered tree, while the Batak peoples maintained that burying umbilical cords and placentas beneath a woman's dwelling was necessary for conception (Walker, 1983). In ancient Hindu culture, worship of the lingam and yoni was thought to aid in conception, with fertility believed to be enhanced by passing through apertures in trees or rocks. Remarkably, these rituals endure in certain regions to this day (Johnston, 1963). The Mahābhārata, a fourth century BCE Indian epic narrative, includes positive references to divine interventions. King Pandu of Hastinapur is faced with childlessness due to a curse and must find alternative methods of becoming a father (Bhattacharyya, 2006). Even in modern times traditional practices like rituals, amulets, herbal remedies, are being used by infertile couples often along with modern medical treatment (Burns, & Covington 2006).

Ancient medical texts from Mesopotamian and Egyptian civilizations provided insights into the tests and methods for ensuring conception (Stol & Wiggermann 2000). These texts influenced the work of Greek physician Hippocrates and other Greek medical writers (460–370 BCE) (Inhorn 1994), who included extensive discussions on the treatment of reproductive failure in their medical writings (Flemming, 2013). The ancient Indian surgeon Susrutha also described various semen defects and gynecological disorders in his medical works (Raffensperger, 2012). These early medical texts demonstrate the importance placed on reproductive health and the efforts made to understand and treat related issues.

Research into the history of infertility has spilled over to many other areas like Anthropology, medicine, social sciences, technology, population studies, ethics, law, feminism, politics as well as gender studies, sexuality, and family studies. This shows infertility as an important factor in many historical studies, showing the different

perspectives through which, this problem has evolved and can be approached (Loughran & Davis 2017).

The invention of the microscope by Anton Leeuwenhoek in 1677 and the subsequent identification of spermatozoa changed the approach to the study of fertility. The Italian Physiologist Lazzaro Spallanzani described for the first time that the male sperm and the female oocyte were the fundamental units of mammalian reproduction (Foote, R. H. 2010). The role of ovaries in menstruation was suggested in 1839 by Augustus Gendrin, thereby refuting the hither to standing belief that menses was regulated by a lunar phase (Laborie, 1995).

The field of infertility treatment experienced a groundbreaking shift in 1978 with the birth of Louise Brown in England, the first baby conceived through Assisted Reproductive Technology, commonly known as "Test Tube Babies." This work by Patrick Steptoe and Robert Edwards revolutionized the changes in reproductive medicine. Today reproduction is made possible even without sexual intercourse (Loughran & Davis 2017).

The present research endeavors to comprehend the means to rectify the historical neglect of human suffering due to infertility. As Loughran & Davis (2017) stated this remembers “all those who lived and died childless, all who were stigmatized by their failure to produce the required number or the ‘right’ children, and for all those who suffered and survived”. Motherhood has been glorified always idealized throughout history. Simultaneously, women experiencing infertility were, and are, stigmatized, socially isolated, abandoned and sometimes even murdered (Burns & Covington, 2006).

1.1.3 Incidence of Infertility in India

Around 15% of the global population of reproductive age experiences infertility. In India prevalence rate lies in between 3.9% and 16.8% for primary infertility as estimated by WHO (Patel et al., 2016; Banerjee & Mathews 2020). In 1981, the infertility rate was recorded at 4-6% (Jejeebhoy 1998; Shivaraya & Halemani 2007). Developing countries face an added disadvantage because of infertile women’s’

limited participation in seeking help (Shah & Batzer 2010). In India, there was a recorded decline in the overall fertility rate, with a decrease of 2.4% in rural regions and 1.7% in urban areas (Banerjee & Mathews, 2020). West Bengal reported the highest infertility rate at 13.9%, while Meghalaya had the lowest at 2.5%. 80% of infertile women in India sought treatment, with 33% opting for non-allopathic and traditional methods due to the high cost of modern treatment and lack of awareness (Sarkar & Gupta 2016). Results highlight that in Kerala in women, 15-49 years of age primary infertility is seen in 8.7% of married women and 1.8% secondary infertility (DLHS-3. 2010).

The focus of research in social science in India, has been mainly based on the study of the prevalence of fertility and its consequences on population growth. Nevertheless, both research efforts and governmental attention toward understanding the prevalence, underlying causes, and psychosocial challenges associated with infertility remain inadequate (Purkayastha & Sharma, 2021). The inverse relationship between education levels, living standards, and infertility has been established. The connection between education, financial stability, and infertility is due to the increased awareness and access to treatments, as well as improved lifestyles and environmental factors among urban populations (Purkayastha, & Sharma 2021).

1.1.4 Causes of Infertility

Typically, infertility can result from factors related to males, females, or both, while in certain instances, its origins remain unexplained. In 30-40% of cases infertility is caused by some pathology in women. Male infertility is a situation where the couple is unable to produce a child due to some dysfunction in the husband. This is found in about 20-30% cases. 25- 30% have causal factors identified in both partners. Nearly about 15-20% of infertility cases are due to unexplained causes (Anderson et al., 2010). There are various physiological and environmental reasons for infertility in the male and female (Sharma et al., 2013). Latest studies and diagnostic technologies do not agree with the psychogenic model of infertility. Even in unexplained infertility 78% of patients show some pelvic pathology. However, an associated hypothesis proposes that stress could serve as a causal element, making it a worthwhile area for investigation.

However, there is enough literature pointing to the psychological consequences of infertility for couples (Greil,1997; Boivin, & Gameiro, 2015).

Genetic and environmental influences, encompassing infectious or parasitic ailments, lifestyle choices, stress, delayed parenthood, and obesity, could be regarded as influential elements contributing to infertility (Larsen, 1996; Philippov et al., 1998; Covington & Burns, 2006; Schmidt et al., 2012).

The woman's age is a major contributory factor in preventing a couple achieving parenthood (Bhattacharya, 2007). Age below 30 years enhances a woman's chance of conception. (Green & Vessey, 1990) (Richthoff et al., 2007)). The semen quality in the male including the spermatozoa count is also an important factor in couple infertility (Glover et al., 1999). A sperm count of below 20 million sperm per ml in a man is a risk factor for infertility (WHO, 2016), so also untreated sexually transmitted diseases (STD) or any genitourinary infection in either partner may be a causative factor in infertility. Other contributory factors in the male can be smoking, alcoholism or wearing tight inner wares. Mumps, virus infections and undescended testis are also important contributory factors (Richthoff et al., 2007)).

Men's ignorance of the influence of life style factors in infertility may contribute to their lower fertility potential. Men's refusal to seek treatment also may be a cause for couple infertility (Kumar & Singh, 2015)

In the male low sperm count (oligospermia), Decreased motility of the sperm (asthenospermia) or total absence of sperm (azoospermia) are the major infertility factors (Kumar & Singh, 2015). Ramkumar & Krishna, 2014 has commented that late marriage in women and high levels of alcoholism among men in Kerala may be causative factor for the higher prevalence of infertility in this state in India.

Bunting et al. (2013) found that a higher prevalence of infertility is linked to delays in couples pursuing investigation and treatment, as well as to the increasing age of the wife and the discontinuation of treatment.

1.1.5 Male Factors

In the male partner childlessness can be caused by inability to ejaculate semen due to various congenital or acquired causes, hormonal causes, varicocele, or previous treatment for cancer (WHO, 2020). Environmental pollutants and toxins can reduce sperm quality, which may lead to infertility (Gore et al., 2015; Segal & Giudice, 2019).

1.1.6 Female Factors

In women childlessness can be caused by disorders in ovulation, problems like polycystic ovarian disease, uterine malformations, blockage of fallopian tube or the presence of benign uterine tumors like fibroids. Sexually transmitted diseases, pelvic inflammatory disease and / or endometriosis can affect various parts of the female reproductive system leading to infertility (WHO 2020). Environmental toxins can damage women's eggs, potentially leading to infertility (Gore et al., 2015; Segal & Giudice, 2019).

Some of these factors may differ from country-to-country. For example, the prevalence of sexually transmitted diseases and pelvic infection. Differences in the age of the populations studied also can show differences in the data published (Rutstein and Shah 2004).

1.1.7 Treatment of Infertility

For infertility cases, initial interventions involve endeavors like enhancing ovulation and/or sperm quality, or performing surgeries to eliminate obstructions, coupled with administering hormone therapy to reinstate ovulatory function. However, if these approaches prove ineffective or the underlying cause remains unidentified, Assisted Reproductive Technology (ART) emerges as the advised course of treatment. Assisted Reproductive Technology (ART) encompasses procedures such as in vitro fertilization (IVF) and intracytoplasmic sperm injection (ICSI) (Dyer et al., 2016). Treating infertility involves a complex process, necessitating multiple visits to a specialist, as well as undergoing various examinations and procedures. The likelihood of achieving pregnancy via “In Vitro Fertilization (IVF)” and “Intra Cytoplasmic Sperm

Injection (ICSI)" hinges significantly on individual patient factors and treatment-related variables, rendering the outcome unpredictable despite the utilization of advanced and costly technologies (Wadadekar et al., 2021).

1.1.8 Exploring the Psychological Effects of Infertility and Its Treatment in India

'May you be the mother of a hundred sons' used to be the conventional words of blessings showered on a woman during Hindu weddings in India in the olden days. In 1991, US journalist Elisabeth Bumiller underscored this aspect while portraying the lives of women in India during the 1980s (Bumiller, 1991). Nonetheless, policymakers in India never acknowledged childlessness as a public health concern due to the predominant focus on fertility regulation and population control (Unnithan, 2010). Presently, societal norms surrounding parenthood have sparked a widespread desire for infertility treatment, despite governmental apprehensions regarding overpopulation (Greval, 1953). In South Asian cultures, the paramount milestone on the path to complete adulthood was traditionally viewed as promptly having a child after marriage (Donner, 2016). Across numerous societies, it was customary for a husband to forsake his wife if she failed to conceive within a decade, often attributing childlessness to the belief that the woman was afflicted by malevolent spirits (Bhattacharji, 1990).

In contrast to the Western world, voluntary childlessness is almost unknown among most of the south Asian communities. Even among south Asians living in Britain, voluntary childlessness is almost unheard of in these communities according to a study by sociologists Nicky Hudson and Lorraine Culley (Hudson, & Culley, 2014). Even adoption of children is considered unacceptable among these communities (Bharadwaj, 2003). In these communities in Britain Infertile couples considered themselves as an anomalous minority (Shaw., 2005).

In 1961, the United Nations collaborated with the Government of India to conduct a study in Mysore, examining the correlation between demographic and socioeconomic factors. They observed that the societal perception during that time considered childlessness in women as a significant misfortune, sometimes leading to social ostracism (United Nations, 1961). In 1971, Gordon carried out an extensive

eight-year field study in rural Punjab, which was later followed by a thorough year-long follow-up a decade afterward. The findings from this research indicated that infertility within a couple was identified as the main factor contributing to divorce or separation (Gordon, 1971).

Many married couples in India feel immense pressure to start a family shortly after tying the knot. They endure a barrage of prying questions from relatives and society, adding to their burden. Especially women are singled out and blamed as well as stigmatized (Riessman, 2000; Mehta, & Kapadia 2008).

In her book, Lavania asserts that the longing for children is innate and universal, a common thread binding all of humanity. When unfulfilled, this desire leads to severe unhappiness (Lavania, 2006). Remaining childless voluntarily is considered unnatural and abnormal (Chancey, & Dumais 2009).

Generally infertile couples are reluctant to discuss or acknowledge their experiences for being childless (Grey, 2017). The stigmatization of infertile couples is disproportionately directed against women. Interestingly procedures to limit fertility in family planning programmes aimed at reducing population growth are also mostly directed towards women (Hodges, 2017).

At the same time infertile couples who are emotionally disturbed are vulnerable to fall prey to exploitation by institutions with unethical practices, especially those providing assisted reproductive technology (Malpani, 2000).

Historically, the problem of infertility and its psychological consequences have existed since the beginning of time. The societal understanding of infertility and its treatment has evolved. Over the past few decades, there has been a growing acknowledgment of the emotional and psychosocial requirements of these couples. The theoretical view of the psychology of reproduction has evolved in to a process of identifying the psychosocial problems of infertility and initiating useful interventions to minimize the distress and traumatic experiences. Interventions have been formulated through thorough assessment and comprehension of the psychological and environmental aspects related to infertility (Burns & Covington, 2006).

With the rapid advances in effective fertility treatment during the last few decades, the awareness, and the knowledge of availability of treatment also shows an upward swing leading to better treatment seeking behaviour (Banerjee & Mathews 2020). However, going through the treatment process can be quite emotionally burdensome. Couples, many a times stop treatment prematurely as shown by Shinoda et al. psychological stress was seen in some studies to be a major cause for poor treatment compliance (Wadadekar et al., 2021). In many parts of the world, the emotional needs of infertile couples are not well addressed to (Greil et al., 2010). The need for counseling and support have been highlighted by many researchers (Jafarzadeh-Kenarsari et al., 2015).

Before 1970s, a mental health professionals' role was to tackle an infertile patient's neurosis with the idea that this will cure the infertility problem. This idea of psychogenic infertility fell in to disfavor in 1970s. As time passed, the role of psychological caregivers evolved to encompass psychosocial evaluation, assistance, and enhancement of the patient's quality of life (Bresnick & Taymor, 1979). In the present day, the role of the counselor has gone beyond these factors and is aimed at meeting the psychosocial challenges of assisted reproductive technologies also (Covington, 1995; Boivin, & Kentenich, 2002; Burns, & Covington, 2006).

1.1.9 Importance of Psychosocial intervention in infertility

Infertility psychology delves into the emotional, social, and interpersonal dynamics of childlessness, exploring its impact on couples. In the past decades, studies had described psychological problems of infertility and tried to explain the supposed relationship between psychological issues and biological out comes. Based on these attempts were made to control psychological problems by interventions. During the 1930s, a significant portion of infertility cases lacked medical explanations. As a result, a psychogenic model of infertility emerged, viewing infertility as a psychosomatic condition. For numerous decades, this concept held sway in the realm of reproductive psychology. In the 1970s, scholars acknowledged that infertility was a notable contributor to psychological anguish. This recognition spurred heightened attention towards comprehending the emotional and societal repercussions of infertility, leading

to the formulation of the psychological sequelae model. In the 1980s, with the rapid advancement in assisted reproductive technology, more and more psychologists were integrated into the treatment of infertility. Psychologists became responsible for assessing the couple's readiness for parenthood and deliver counseling support for decision making. In the 1990s, rigorous criteria were instituted for assessing the empirical evidence of the effectiveness of treatment. This included psychological support and interventions also. In the present day the major concerns are the problems which infertile couples face in managing the physical, emotional and the financial burden of the prolonged period of treatment (Gameiro, & Boivin, 2017).

Assessing the psychosocial well-being of patients throughout different phases of infertility treatment can enhance the quality of care provided to patients. This method supports the intuition of healthcare professionals and allows both clinicians and patients to prepare for emotional challenges, ultimately mitigating adverse effects on treatment results (Verhaak et al., 2010).

Infertility related psychosocial problems and adjustment issues related to treatment are well documented by decades of research. Identification of these issues and psycho social counseling became an important part of infertility treatment today because of these research findings (Sexty et al., 2018).

Evolved from viewing infertility solely as a life-altering crisis impacting every facet of an individual's existence, the focus has shifted towards exploring effective strategies for addressing the myriad challenges posed by infertility and its treatments. The psychological support system has now evolved in to a more educational and coping skill training programme leading to a client-based approach to medical procedures and the emotional support. There has been a significant change in approach, shifting from broad interventions to customized processes that address specific individual requirements. This has created awareness among all members of the staff in a reproductive medicine unit about dealing with the couples' psychosocial issues, rather than leaving this process to the sole domain of a mental health professional (Gameiro, & Boivin, 2017).

Numerous studies emphasize the significance of addressing the psychological burden of infertility treatment and its effect on patient compliance. Results from a systematic review showed that 22% of patients cited emotional distress as a reason for non-compliance with treatment. Patients who are more susceptible to psychological distress during treatment are prone to discontinuing recommended treatment procedures. Prompt recognition of individuals prone to psychological distress is essential for fertility professionals to offer supplementary support and enhance the treatment journey. The emotional strain associated with infertility treatment is prevalent irrespective of treatment types and phases, underscoring the importance of addressing it to enhance patient adherence and overall welfare (Lopes et al., 2014).

Social support is an important factor that can influence a couple's reaction to infertility. The stigma of infertility seen in many societies prevents many patients coming out openly to discuss their problems giving raise to defective social support. This added to unsuccessful treatment cycles can lead to discontinuation of treatment prematurely. In this regard psychological support is a great help to the infertile couples to improve their mental health, to take appropriate decision regarding continuation of treatment (Huppelschoten et al., 2013).

Counselling is typically used to help people with mild to moderate anxiety or depression, those facing challenging circumstances or crises. It is also increasingly being used in healthcare settings to support people in coping with difficult events like receiving a diagnosis of a serious illness or making difficult decisions related to their healthcare, such as infertility treatment or genetic testing (Bor & Eriksen, 2018).

1.2 Psychological factors in infertility

Infertility is a significant life stressor, affecting various psychological dimensions, including illness cognition, fertility quality of life, marital adjustment, and infertility self-efficacy. These constructs were chosen for their relevance in addressing infertility's psychological challenges: illness cognition helps identify maladaptive thought patterns for targeted cognitive-behavioral interventions; self-efficacy assesses confidence in managing treatment and fosters empowerment-based strategies; marital

adjustment evaluates the impact of relational dynamics on emotional resilience and treatment adherence; and QoL provides a holistic view of infertility's effects across life domains, guiding tailored psychosocial support.

1.2.1 Illness cognition

The Bio Psychosocial approach to health and illness recognizes that even among patients with similar objective health status, there can be significant differences in adjustment. Studies have indicated that individual interpretations of health hold considerable sway over both physical and emotional consequences. The Self-regulation Model (SRM, developed by Mr. Leventhal) presents a structure for comprehending how an individual's perception of their health status correlates with the outcomes they encounter. This model suggests that cognitive representations of health threats guide coping procedures, which ultimately impact outcomes (Benyamini et al., 2004).

Illness is a state of mind rather than a physical condition (Croyle & Ditto 1990). It can be defined as what he or she perceives which is based on his or her mental or physical symptoms, which might be either minor or temporary or sometimes severe or acute that might prevent the person from leading a normal life. Hence, illness is rather the subjective perception of symptoms of the person (Cassell, 1970; Hofmann, 2002; Wikman et al., 2005). Illness is defined by Eisenberg as considerable changes in both the physical and social function of an individual (Eisenberg, 1977). Helman points out that illness is a person's subjective meaning he gives to his experiences (Helman, 1981).

Cognition can be defined as "a mental process of knowing, by which internal and external sensory input is transformed, reduced, elaborated, stored, recovered, and used. It includes activities like perceiving, thinking, remembering, planning, and making choices in daily lives" (Neisser, 2014).

Illness cognitions are the individual's understanding and perception of health threats and diseases, which impact their attitudes and behaviors towards their illness and healthcare choices (Kaptein & Broadbent 2007). These cognitions involve mental processes such as appraisal, interpretation, and recall, used by individuals to understand their health and consider potential remedies (Croyle & Ditto 1990) and can be

influenced by their emotional state. These interactions between emotion and illness cognition are many and complex (Leventhal et al., 1992). These perceptions are pivotal in how individuals react to chronic illnesses or disabilities and greatly influence the emergence of depressive symptoms. Studies show that a higher degree of helplessness among individuals with chronic health conditions is associated with poorer psychological outcomes (Sturrock et al., 2016).

Illness cognition evaluates an individual's views on their sense of powerlessness, acceptance, and the advantages derived from their encounters (Patel et al., 2018). This also explains a variety of cognitive processes, human being exhibits while responding to illness related information. Either in the presence or in the absence of physical illness, Illness cognitions are perceived conditions.

Illness perception refers to how a person understands his/her medical condition and his/her perception of its consequences as well as the controllability of the condition (Leventhal et al., 1980). Psychological distress is sometimes more when a medical condition is perceived by a person as dangerous or threatening. Such perceived distress affects a person's life style, habits and even treatment seeking ability. Satisfying quality of life depends very much on Illness cognition and cognitive representations (Evers et al., 2001; Hoving et al., 2010).

Benyamini et al. conducted a study investigating how coping strategies influence the correlation between cognition and emotion in infertility. Unfavorable views regarding infertility contribute to adopting detrimental coping mechanisms, resulting in heightened negative feelings and a decline in fertility quality of life (Benyamini et al., 2004). The individual's cognitive appraisal of being childless heavily influences the perceived stress (Mabasa, 2002) (Berg, and Wilson, 1991; Greil, 1997). Unpredictability, negativity, uncontrollability, and ambiguity are cognitions associated with infertility (Stanton and Schetter, 2013). Health beliefs and illness cognitions can affect better coping with infertility. Embracing fertility challenges with optimism, proactive problem-solving, and acknowledging one's emotions fosters effective coping mechanisms and promotes a healthy recovery. Conversely, responding with denial and avoidance tends to have adverse effects on psychological well-being. In India, there is

a lack of research exploring cognitive beliefs and evaluations associated with infertility, with limited focus on the emotional distress and grief experienced by individuals undergoing repeated treatments. Major events, like repeated IVF failures, can erode patients' confidence in the effectiveness of treatment. Additionally, the physical and emotional toll of the process is a leading factor in patients choosing to discontinue treatment (Patel et al., 2018).

Cognitions of helplessness and acceptance can predict emotional response to stressors, particularly in response to uncontrollable stressors. Feelings of helplessness stemming from a lack of control tend to amplify distress, whereas maintaining optimism and accepting fertility challenges serve as protective elements in coping with unsuccessful fertility treatments. Verhaak et al. (2005) identified supplementary factors such as neuroticism, avoidance coping mechanisms, and dissatisfaction with marital and sexual fulfillment as indicators of emotional strain subsequent to a notable stressor. On the other hand, adopting a positive attitude towards fertility difficulties and recognizing robust social backing act as safeguards against the development of anxiety and depression (Romano, 2012). Following the adjustment for personality traits and social support, research indicates that attitudes of acceptance and feelings of helplessness play a pivotal role in shaping the trajectory of depression. The ability to adapt cognitively, especially in redefining the significance of being unable to conceive, emerges as crucial for prolonged coping with significant health challenges associated with infertility (Verhaak et al., 2005).

Infertile couples often refrain from pursuing recommended treatments due to the psychological challenges they face, including pre-treatment anxiety and depression, feelings of helplessness, difficulty accepting infertility and childlessness, and a perceived lack of social support. Patients exhibiting elevated levels of hopelessness and acknowledgment of childlessness might demonstrate varying degrees of adherence to treatment recommendations. A paradoxical situation is often noticed. Patients with higher levels of distress and feeling of helplessness may find it difficult to continue treatment because of this distress. At the same time patients with higher levels of acceptance of a childfree life. May decide not to continue treatment after a certain stage.

The strong correlation between the refusal to accept infertility and feelings of helplessness implies that both factors can contribute to a feeling of aimlessness when unable to have children. According to Lopes et al. (2014), pessimistic views regarding infertility and being without children can undermine patients' capacity to autonomously assess their present state of well-being in comparison to the possible advantages of becoming parents.

Demographic and diagnostic factors are not good predictors of maladjustment. On the contrary, maladjustment tends to be linked more closely with unsuccessful treatment outcomes and a range of psychosocial elements, such as dissatisfaction within marriage, absence of social backing, sensations of helplessness throughout treatment, and challenges in coming to terms with infertility or childlessness post-failed treatment. Psychosocial factors exhibit greater adaptability compared to demographic or diagnostic factors. Different factors may affect adjustment at various stages of treatment. Coping strategies do not seem to affect adjustment trajectories, but routine psychosocial care can help build self-efficacy and encourage effective coping strategies for individuals who exhibit a sense of helplessness towards treatment (Gameiro et al., 2016).

Longer the infertility duration, less will be the social support for women. Higher acceptance of infertility in both partners were found to be linked to discontinuation of treatment. This points to the dyadic role of couples deciding discontinuation treatment, with some couples choosing to do so positively while others may feel unsupported and negative. The challenge is identifying which couples need support and which have made a positive decision. Tailored interventions could benefit couples who feel overwhelmed by treatment but still want to conceive, while those who have made a positive decision should not be pressured into continuing. Screening for psychosocial vulnerability could help identify couples who need additional support (Van Dongen et al., 2015).

The discontinuation of fertility treatments negatively impacted women's mental health and overall quality of life. Women who exhibited elevated levels of acceptance and perceived advantages regarding infertility encountered reduced adverse effects,

whereas those with heightened feelings of helplessness faced a more pronounced negative impact. Acceptance emerged as the primary predictor of well-being. To enhance mental health outcomes and provide effective psychological support for infertility, interventions should focus on bolstering social support, fostering acceptance of infertility, and addressing avoidance behaviors related to infertility. Acceptance and Commitment Therapy (ACT) is an effective intervention for chronic pain and can be helpful for infertility-related distress (Gordon & Balsom, 2020).

1.2.2 Self-Efficacy

Self-efficacy is defined as "an individual's judgment of his or her capabilities to organize and execute a course of action" (Kim et al., 2017). Self-efficacy refers to an individual's confidence in their capacity to complete a task or reach a goal. According to Bandura (1998), the stronger one's belief in their abilities, the greater their motivation to exert effort towards achieving their desired results.

Self-efficacy serves as a secondary assessment, boosting an individual's belief in their capability to effectively apply specific coping strategies. This can enhance their overall resilience to stressors and improve their capacity to perform the tasks necessary to deal with challenging situations (Kavanagh, 1986). Self-efficacy is influenced by experiences of mastery, observation of others, social persuasion, and emotional/physical states. Positive experiences and beliefs strengthen self-efficacy, which in turn affects an individual's thoughts, emotions, and behaviors through cognitive, motivational, affective, and decision-making processes (Bandura, 1977).

People possessing high self-efficacy exhibit trust in their problem-solving skills. They are inclined to tackle challenging objectives more vigorously, persist through adversities, and effectively resolve issues. On the contrary, individuals with diminished self-efficacy often concentrate on obstacles, exhibit less dedication to their objectives, and may encounter adverse emotions such as anxiety and distress. Self-efficacy beliefs can show an impact on how people think, feel, and behave. The notion of self-efficacy has been explored in diverse health domains and is linked to individuals' perceptions of their capacity to solve problems. Strong levels of self-efficacy are linked with favorable

health results and play a significant role in promoting overall health (Bandura, 1994). Individuals with robust self-efficacy perceive challenging tasks as opportunities and are dedicated to achieving them. The once with low self-efficacy tend to see these challenges as threats (Yong, 2010).

According to Karimian and Hejazi (2020), the presence of self-efficacy can positively influence the correlation between quality of life, emotional maturity, and the inclination towards embracing new behaviors. Self-efficacy refers to the ability of an individual to effectively manage a specific situation. Believing in one's capability to succeed is crucial for successfully managing health. It significantly impacts an individual's thoughts, actions, and emotions. In reproductive health biological indicators also can be influenced by self-efficacy (Pasha et al., 2013).

The degree of decisional conflict correlates with self-efficacy, as reduced conflict tends to result in improved decision-making and heightened self-efficacy. Consequently, this enhancement in self-efficacy contributes to improved health outcomes (O'Connor et al., 2002). Self-efficacy also positively influences the reduction of anxiety and depression symptoms. It is linked to healthy behaviors and is crucial in lifestyle interventions. Individuals possessing high self-efficacy typically exhibit healthier behaviors and experience a more optimistic emotional state when contrasted with those having low self-efficacy (Fu et al., 2016).

"In the context of infertility self-efficacy," refers to a person's belief in their ability to manage and overcome the challenges related to infertility treatment. It measures their confidence in performing adaptive coping behaviors, such as maintaining a positive attitude, staying relaxed while waiting for test results, and handling mood swings related to hormonal treatments. The concept assumes that high self-efficacy should lead to positive emotional outcomes, persistence in treatment, and achieving a family-building resolution. The construct of "infertility self-efficacy" developed by Cousineau and colleagues is closely related to coping as well as self-efficacy. Coping refers to strategies used in handling stressful threats, which involve cognitive activity and appraisal of threat leading to activation of coping responses. The infertility self-efficacy construct reflects the close tie between cognitive appraisal and

coping response, and is a combination of self-efficacy beliefs and coping behavior. Backing this assertion is a principal component analysis which unveiled a solitary component named "cognitive affect regulation," explaining over fifty percent of the variability in outcomes (Cousineau et al., 2006).

The concept of "infertility self-efficacy" is important for improving the reproductive health of infertile couples. This psychological construct refers to individuals' belief in their strength in managing challenging situations and achieve their goals. Individuals who show high levels of self-efficacy have greater control over their environment and are better equipped to handle difficult circumstances (Bashtian et al., 2018). Women receiving infertility treatment encounter elevated levels of stress and distress, both generally and particularly in connection with their fertility challenges. This stress is negatively correlated with their confidence in managing the demands of treatment, also known as infertility self-efficacy (Nelson, 2010).

The psychological impact of infertility can vary depending on the cognitive evaluation and coping skills of the individual. One's belief in their own abilities can affect the extent of anxiety experienced in challenging situations. In infertility cases, self-efficacy pertains to the patient's perception of their capability to manage the emotional aspects associated with infertility treatment. Individuals with high self-efficacy tend to have greater emotional stability and are more persistent in seeking treatment (Khadivzadeh et al., 2018).

People who possess high levels of self-efficacy typically approach infertility with optimism and resilience. Both men and women exhibiting strong self-efficacy are inclined to trust in infertility treatments and perceive the challenge of infertility as manageable rather than overwhelming. They commonly hold a positive attitude towards medical procedures such as routine injections, blood and semen analyses, and transvaginal ultrasound scans (Kim et al., 2017). Research suggests that feelings of confidence, resilience, and optimism may increase the likelihood of producing a greater number of fertilized eggs and improve the effectiveness of embryo transfer (Klonoff-Cohen & Natarajan, 2004).

Patients experiencing infertility, yet possessing elevated levels of self-efficacy in managing their condition, often exhibit a more favorable emotional state. This positivity enables them to persist with medical treatment and explore alternative options for building a family. Self-efficacy, as related to fertility issues, refers to the belief a patient has of his ability to cope with the cognitive, emotional, and behavioral aspects of infidelity and its treatment process (Cousineau et al., 2006). It involves a range of self-regulation processes and evaluates the capacity to effectively handle different situations (Galhardo et al., 2012).

High self-efficacy promotes positive emotional state and which develops an urge in infertility treatment and for them psychological interventions will become more helpful. This helps them use their cognitive skills to control emotions. Greater self-efficacy helps to improves emotional stability and hence they will become insistent on treatment. They will have better coping skills by personal resources. Self-efficacy helps managing illness, symptoms and functional limitations and thus helps infertile people to become calm. As self-efficacy improves healthy behaviors, thus increasing the probability of getting pregnant. For improving self-efficacy, training can be provided which includes familiarity with reproductive physiology and different fertility treatment protocols (Sani, & Tamannaeifar, 2017).

Infertility represents a major public health issue, affecting nearly 9% of couples globally. It has a detrimental impact on their mental and emotional well-being, leading to a decrease in overall quality of life. Various factors contribute to the quality of life for individuals struggling with infertility, with self-efficacy being a particularly significant one. This factor is especially important for patients in developing countries like India (Maroufizadeh et al., 2021).

Self-efficacy, or confidence in one's abilities, holds considerable sway over reproductive health, especially in women. High self-efficacy is linked to a more positive emotional state, which can be helpful when dealing with infertility. Psychological interventions can enhance self-efficacy and provide support to women during infertility treatment. Cognitive policy is crucial in managing infertility (Pasha et al., 2013), and psychosocial support programs can have a positive impact on women with infertility by

increasing their self-efficacy, adjustment levels, and overall well-being (Arslan-Özkan et al., 2014). Faramarzi et al. (2014) suggest that psychological interventions can improve self-efficacy and assist individuals in managing infertility.

Individuals who exhibit higher levels of confidence in managing infertility and employ fewer avoidance strategies as coping mechanisms generally experience an enhanced quality of life throughout the infertility journey. Identifying these factors can help healthcare professionals identify couples who require more emotional support during infertility treatment (Andrei et al., 2021). Clients who experience low self-efficacy, poor emotional well-being, and difficulties in their social lives may require more help to cope with infertility. However, having a close relationship with their partner may also be a crucial factor their readiness to take part in couples' infertility counseling (Salvatori et al., 2021).

Persistence and problem-solving play a crucial role in boosting self-efficacy, which is essential for minimizing the negative effects of stressful situations, such as infertility. Infertile women often struggle with low self-efficacy due to various factors, which can affect their mental health and wellbeing negatively. Therapies aimed at increasing self-efficacy help improve their self-esteem, reduce stress, enhance mindfulness, emotional intelligence, psycho social well-being, and mental health. According to Vazirnia et al. (2021), both Integrated Behavioral Couple Therapy and Emotional Couple Therapy have been shown to enhance the well-being of infertile couples, particularly in terms of their self-efficacy regarding infertility.

Offering health behavior training aimed at enhancing fertility support to women undergoing fertility treatment results in a rise in adoption of healthy lifestyle habits and levels of self-efficacy concerning infertility. From this viewpoint, healthcare practitioners can design educational programs aimed at promoting healthy lifestyle habits and enhancing self-confidence in managing infertility as part of the care they provide (Altiparmak & Aksoy Derya, 2018)

1.2.3 Quality of life (QOL)

World Health Organization (WHO, 1998) define quality of life as "as an individual's perception of their life in the context of their socio-cultural values". In other words, QOL is a subjective experience deeply connected to cultural, social, and environmental domains. The World Health Organization Quality of Life questionnaire (WHOQOL) is divided into four main domains: physical well-being, mental health, social relationships, and environmental factors. Physical health includes aspects like overall daily life quality, dependence on medication, mobility, management of chronic pain and discomfort, sleep patterns, and the ability to work. Psychological factors, on the other hand, encompass elements like body image, appearance, emotional states, self-worth, spirituality, and cognitive abilities. The third domain encompasses aspects of relationships, social support, and sexual well-being. The fourth domain pertains to the environment, encompassing financial status, physical safety, health, social welfare, and personal freedom (WHO, 2004).

The concept of quality of life has evolved into a crucial measure for evaluating individual well-being, guiding decision-making, and assessing public health in medical research. It covers diverse aspects like physical and mental well-being, financial situation, individual beliefs, and engagements with environmental factors (Amiri et al., 2017). It is a comprehensive concept that can be defined in various ways, but experts commonly agree that it is multi-dimensional and can be evaluated from both objective and subjective viewpoints (Nedjat et al., 2010).

Incorporating the assessment of quality of life into infertility treatment is vital, given its substantial influence on patients. Consistent findings in psychosocial research reveal a notable prevalence of negative responses to infertility and its therapies. These responses impact overall contentment, welfare, treatment outcomes, inclination to persist with treatment, and the assessment of treatment efficacy (Boivin et al., 2011).

Infertility can create multiple problems for a couple, including biological, economic, psycho-social, ethical, and cultural challenges, all of which can significantly reduce their quality of life. Infertility can present a significant crisis, threatening a

couple's future goals and diminishing their overall quality of life. It can disrupt their ability to build a family and cause treatment to intrude upon their personal lives. Quality of life pertains to an individual's ability to operate at their typical level of engagement, whether with or without slight adjustments to daily routines. The infertile couple may struggle with negative feelings, leading to a lack of congruence in their sexual, marital, psychological, and social living, making it necessary to assess their quality of life as a crucial part of their treatment (Ramkumar, & Krishna 2014).

Infertility is not just a problem related to women's reproductive health, but it also has significant bio-psycho-social impacts, affecting the quality of life of couples. Research indicates that approximately one in ten couples experience infertility. Infertility constitutes a significant life crisis for both men and women due to the emotional strain, financial burdens, and societal expectations intertwined with it. Its ramifications extend widely to individuals, families, and society, touching upon economic, ethical, biological, and socio-cultural realms. Thus, the evaluation of quality of life becomes progressively significant in comprehending the holistic effects of infertility on couples (Amiri et al., 2017).

The health-related quality of life (QoL) holds significance for couples experiencing infertility, as it illuminates the diverse impacts—physical, psychological, and social—of this condition. Understanding these effects can facilitate the design of appropriate treatments for affected couples. Despite the availability of different treatments for infertility, the concerns about QoL in infertile couples have not reduced significantly due to the complex relationship between infertility and psychological status (Keramat et al., 2013). According to Esmaeilzadeh et al. (2015), infertility may elevate the risk of psychological complications, potentially leading to adverse effects on an individual's quality of life. Infertility and its treatment have significant implications in the field of psychology.

The Institute of Medicine outlined six key objectives for outstanding healthcare "safety, effectiveness, timeliness, efficiency, equity, and patient-centeredness". Nevertheless, the emphasis on quality metrics primarily centered around safety and effectiveness, often overlooking the critical aspect of patient-centeredness. Patient-

centered care refers to healthcare that honors and addresses the unique preferences and requirements of each patient, guided by their personal values. Providing patient-centered care is crucial because it strengthens compassionate relationships, improves health outcomes, reduces costs, and boosts patients' quality of life (Huppelschoten et al., 2012).

The World Health Organization characterizes quality of life as "the way individuals perceive their standing in society and cultural norms." Indian couples facing infertility experience an impact on their quality of life due to societal pressures and the stigma linked with infertility. Due to the importance of parenthood in Indian society, infertile couples face social and family pressure. Infertility is a complex and difficult issue that can lead to psychological, emotional, financial, and physical challenges due to the diagnostic and treatment procedures (Banerjee & Mathews 2020).

FertiQoL, a tool crafted to assess the well-being of individuals grappling with fertility challenges, irrespective of their gender, cultural context, or particular fertility issues. Rooted in health psychology principles, FertiQoL concentrates on aspects of well-being tailored to fertility concerns (Sexty et al., 2018).

Infertility may result in social distress and psychological challenges, encompassing issues like depression, anxiety, social seclusion, and sexual dysfunction. The Fertility Related Quality of Life (FertiQOL) questionnaire assesses the impact of fertility concerns on various aspects of a person's life. It is uncertain whether all infertile couples undergo identical distress levels, as variables like socioeconomic status and non-medical circumstances could affect stress levels and alterations in quality of life. Recognizing the elements linked to improved or diminished health-related quality of life (QOL) is crucial for suggesting and evaluating interventions for individuals dealing with infertility. Additionally, social factors contribute significantly to attitudes and encounters with infertility (Namdar et al., 2017).

Experiencing infertility can lead to significant unhappiness in a marriage, particularly for women. Repeated attempts at pregnancy can exacerbate these feelings,

potentially leading to marital distress. As couples become more distant from each other, their overall quality of life may suffer as well (Banerjee & Mathews 2020).

While discussing the link between infertility, its treatment, and treatment outcomes, it is often highlighted that some couples may face failure of medical treatment. How they adapt to this situation of biological childlessness determines their long-term life satisfaction and life's quality. Healthcare providers need to recognize these obstacles and evaluate how infertility and potential treatment setbacks affect patients' well-being to deliver tailored care. Quality of life encompasses a multifaceted notion, involving "an individual's subjective assessment of their circumstances concerning aspirations, anticipations, and apprehensions, among other elements" (Wadadekar et al., 2021).

The experience of infertility is intensely stressful and can lead to profound distress for couples, especially female partners. Infertility can significantly impact a patient's quality of life and may reduce the effectiveness of fertility treatments. Evaluating quality of life, incorporating tools like the FertiQoL questionnaire, plays a crucial role in addressing issues related to infertility and enhancing psychological well-being. Infertility affects both partners, but women may be more affected due to societal factors and gender role attitudes. Such circumstances may elevate the likelihood of experiencing mental and emotional disorders, including depression and anxiety, while also impacting levels of marital contentment. This situation whether they live in rural and urban areas does not decrease the women's burden of stigma due to childlessness (Dong & Zhou 2016).

Although male and female infertility factors occur with similar frequency, women often bear a larger share of the treatment and emotional stress. Even when male infertility is the cause, procedures like IUI and IVF still require women to undergo invasive and uncomfortable treatments, adding a significant psychological burden. Women experiencing infertility frequently express diminished self-esteem, feelings of depression, anxiety, and reduced satisfaction with life. Research shows that 30-40% of women undergoing infertility evaluations experience clinically significant levels of depression or anxiety. Women receiving fertility treatments experience comparable

levels of depression, anxiety, and diminished quality of life to those undergoing cancer treatments or cardiac rehabilitation (Gordon & Balsom, 2020).

The experience of infertility may lead to emotions of disillusionment, irritation, and can adversely affect the self-worth, physical perception, and psychological well-being of a couple. The process of infertility treatment is time-consuming and can have a significant effect on the couple's physical, psychological, and economic well-being. Couples facing infertility might encounter social, environmental, and physiological challenges that impact their quality of life concerning health. Additionally, the repercussions of infertility could persist throughout pregnancy, leading to extended hospital stays and an increased likelihood of preterm delivery. In such scenarios, men typically experience a higher quality of life compared to their female counterparts (Domeyer et al., 2017).

Healthcare areas such as oncology, rheumatic diseases, other chronic diseases as well as infertility, require more patient-centered approach due to the high emotional issues and intensive treatment periods. In the case of fertility care, couples undergo a long-lasting period of treatment that includes different stages and cycles of treatment, medications, lab tests, and waiting for results. The physical and psychological burden of this period impacts the patients' quality of life, impairing their psychosocial well-being, sexual satisfaction, and relationships. The high impact of infertility treatment leads to about 23% of couples ending treatment prematurely. Hence, it is imperative for each clinic to enhance its focus on patient-centered care to enhance the overall experience of patients (Huppelschoten et al., 2012).

Addressing the needs of infertile couples necessitates a comprehensive approach that considers their quality of life. This is crucial because both infertility and its treatment exert adverse psychological effects on couples, impacting their overall well-being, life satisfaction, and marital contentment, as evidenced by studies such as Maroufizadeh et al. (2018) and Foroudifard et al. (2020). Infertility correlates with heightened stress levels, strains in relationships, and diminished emotional and social capabilities. Quality of life encompasses multiple facets such as emotional health, social interactions, physical well-being, environmental factors, and personal convictions

(Aarts et al., 2011). Novel infertility therapies should be assessed from a patient's perspective to improve patient outcomes (Kitchen et al., 2017). Grasping the factors influencing the quality of life among individuals dealing with fertility challenges can enable healthcare providers to introduce tailored interventions and care approaches, thereby enhancing the quality of life for these couples (Siddharth et al., 2020).

Research has identified several factors that predict both the physical and mental components of fertility-related quality of life. These factors include low income, young age, low educational level, long duration of infertility, and the number of IVF or ICSI procedures. It was also found that the emotional well-being of couples undergoing assisted reproduction techniques is significantly affected. Couples who experienced lower life quality and marital satisfaction may even end up getting divorced. Therefore, psychological intervention is crucial to help and support couples during the infertility treatment and until successful pregnancy is achieved (Domeyer et al., 2017).

Several factors, including depression, stress related to infertility, marital adjustment, resilience, and family support, have a direct impact on a person's quality of life (Kim & Shin, 2013). The lack of children, caused by factors beyond one's control, can lead to a reduced quality of life and negatively impact the health of individuals, families, and society at large. The salutogenetic model developed by Antonovsky emphasizes the importance of comprehensibility, meaningfulness, and manageability in maintaining and improving health and quality of life. Health encompasses various dimensions, among which quality of life stands as a vital component. It refers to the level of satisfaction and wellness experienced by individuals or communities, taking into account both physical and psychological elements (Dupuy, 1984). Well-being, as reflected in emotional states, is crucial in describing psychological general well-being. Individuals experiencing involuntary childlessness typically exhibit a diminished quality of life compared to those with children, while parenthood generally enhances overall well-being. Expanding the availability of IVF treatments within public healthcare systems may enhance the well-being of couples facing involuntary infertility. Additionally, it could yield further advantages such as bolstering the birth

rate and alleviating the strain of an aging population on both the economy and healthcare infrastructure (Johansson, 2010).

1.2.4 Marital Adjustment

"Marital adjustment is defined as the condition in which there is usually a feeling of pleasure and contentment in husband and wife and with each other." (Hashmi et al, 2007). Measuring marital adjustment poses a challenge due to its abstract nature. It hinges on conflict resolution and satisfaction, particularly within the initial five years of marriage. The variables that affect marital adjustment fall in to a few major domains of communication, sexual relationship, leisure, division of household tasks, time together, external network and finance (Vangelisti & Huston, 1944).

The process of modifying, adopting, or altering an individual's or a couple's style of behavior and interaction in order to enhance relationship satisfaction is referred to as marital adjustment (Bali et al., 2010; Asghari et al., 2021). Marital satisfaction will not be a serious problem if the partners are able to understand their spouse's attributes as their self-view. Martial adjustment can be defined as a "dynamic concept that changes over time" and it depends upon how they deal with various issues (Larson and Holman, 2002).

The presence of a fulfilling sexual relationship is essential for a healthy and stable marriage. Both partners should have a balance in their sexual desires to ensure happiness and success in their relationship. Ignoring sexual instincts often results in marital discord, and sexual dissatisfaction is a leading cause of conflict in marriages. Studies have shown that up to 80% of marital problems stem from sexual dissatisfaction. Therefore, a healthy sexual relationship between partners is crucial for a successful and happy marriage (Karamidehkordi & Roudsari 2014).

Marital adjustment is an important factor in developing positive emotions and expanding resources in a relationship. When a couple is happy and satisfied with each other, it can lead to affection, satisfaction, happiness, and appreciation. Marital adjustment can be assessed through mutual affection, care, acceptance, and consensus. Good marital adjustment can increase trust, love, and loyalty in a family. Yet,

difficulties in marital adjustment can forecast psychological strain, elevating susceptibility to depression, additional psychological ailments, and potentially divorce. There are studies which show that childlessness can decrease marital adjustment, while others show that going through infertility treatment can strengthen marital ties by promoting communication and intimacy between partners. Overall, marital adjustment has a major role in maintaining a healthy and happy relationship (Ghafouri et al., 2016).

Marital adjustment shows a significant correlation with intrinsic religious orientation, yet infertile women typically exhibit lower levels of marital adjustment. Marital adjustment is a major factor in the mental health of couples, as it affects their ability to share problems with family members and form a peaceful community. Marital maladjustment, on the other hand, can create insecure attachments among children and lead to family problems. Emotional displays, the personalities of couples, and infertility serve as indicators for marital adjustment or discord. Additionally, religious beliefs, influencing various facets of human existence, including familial dynamics, emerge as significant contributors to marital harmony, as noted by Mirghafourvand et al. (2018).

Despite changes in attitudes towards sexual behavior over the years, fertility remains incredibly important, and children play a vital role in cementing a marriage. Infertility can make a person feel as though they have lost control of their life, impacting their self-confidence, health, and leading to doubts about their sense of manhood or womanhood. The high costs of treatment, societal repercussions, and fear of missing the spouse or destroying the family can result in multiple psychological complications including frustration, disappointment, isolation, and a loss of marital adjustment. Couples who are well-adjusted tend to have a more satisfying relationship, communicate well with family and friends, and enjoy sexual intimacy. Marital adjustment is an essential process that includes marital satisfaction, dyadic cohesion, consensus on important matters, affection, and sharing intimacies. Infertility negatively affects gender concepts, life quality, marital adjustment, and sexual relationships. Couples struggling with infertility can face many challenges and problems, and it can be difficult to maintain a healthy relationship (Najafi et al., 2015).

Expecting a child is normal when couples start their marital life, but childlessness can cause serious psychological problems. In spite of the great advances in the science of reproduction, infertility is still a crisis in life that affects different domains of couples' lives. Children are a significant part of most people's identity and the meaning of life. Infertile couples who desire biological offspring experience deep tension and distress, leading to adjustment issues in marital life. Marital adjustment includes marital life satisfaction, commitment, agreement, and emotional expression. Well-adjusted couples who enjoy togetherness with friends and families, solve problems together and have a satisfactory sex life have higher satisfaction in life. The satisfaction of infertile couples in their marital and sexual lives is influenced by factors such as the duration of infertility, its cause and type, age, length of marriage, education level, income, and social status. Traditional social interactions for examining and treating infertility can cause significant psychological distress that can affect couples' general health, social interactions, performance of daily routine and general life quality (Soleimani et al., 2015).

The perspectives of couples regarding their desired number of children play a significant role in their marital adjustment, which involves cultivating a mutually fulfilling bond between husband and wife. Marital satisfaction varies among couples, with some experiencing higher levels of contentment than others. Generally, smaller family sizes are associated with better marital adjustment, but there is an exception for childless women who may have lower adjustment levels than those with one child. Couples who are successful in controlling their fertility according to their desires tend to have better marital adjustment (Reed, 1947).

In many marriages, the birth of a child is a significant expectation, with conception and child-rearing seen as natural outcomes of marital intimacy. Infertility adds a heavy emotional weight to the couple affected, especially when societal and familial expectations to continue the family line come into play. Assisted reproductive technology can exacerbate the physical, psychological, and financial toll on couples, intensifying the stress of infertility. Research indicates that this stress is associated with heightened marital discord, diminished sexual confidence, and reduced frequency of

sexual activity. Those grappling with infertility commonly express feelings of inadequacy and diminished self-worth (Monga et al., 2004).

The impact of infertility on marital relationships can be substantial, influenced by social, psychological, and gender-related factors. When both partners share the stress of infertility, the marital relationship is less likely to be affected. Additionally, when both partners equally share the desire to become a parent, there is generally greater marital satisfaction. Nonetheless, adverse attitudes from spouses and their families may escalate anxiety and depression among women experiencing infertility. Conversely, reduced stress related to infertility can enhance marital contentment (Tüzer et al., 2010). When men express their desire to have a child and openly communicate about fertility problems, it can reduce problems in the marital relationship. A long-standing and strong relationship can protect couples from the burdens associated with infertility, particularly relationship concerns (Cserepes et al., 2013).

A happy marital relationship is crucial for overall happiness and well-being, while a poor-quality relationship can lead to various family and community issues. Infertility can directly or indirectly affect couples' lives, either by impacting marital satisfaction or causing dysfunction in marital relationships. The presence of marital difficulties and discord is frequently linked with infertility, potentially leading to significant ramifications on the mental and social welfare of individuals affected by it. The marital relationship is widely regarded as the cornerstone of support during infertility treatment. Improved marital adjustment correlates with reduced levels of stress, depression, and anxiety (Iordachescu et al., 2021).

Women facing infertility often report lower levels of marital satisfaction and overall quality of life compared to those without fertility challenges. The constant attribution of a spouse as a reason for infertility and the pressure on oneself or spouse due to infertility can be strong predictors of a poorer quality of marital relationship. Infertility is also linked to a higher risk of divorce, with research showing an inverse relationship between marital satisfaction and psychological distress. Women in relationships with abusive partners are at a heightened risk of facing stress-related issues and emotional challenges, which can detrimentally impact their overall

satisfaction within the marriage. A inverse relationship exists between the quality of marital life and resilience, suggesting that a decline in marital satisfaction is linked to reduced resilience. Additionally, women who reported experiencing any violence were more likely to report a poorer marital relationship, higher distress, and lower resilience (Satheesan & Satyaranayana, 2018). Marital adjustment challenges and a lack of support are significant indicators of psychological distress in couples facing primary infertility. Marital adaptation may serve as a safeguard against psychological strain amid infertility circumstances (Qadir et al., 2015).

Researchers have studied the effects of infertility on marital functioning. While some studies have reported deterioration in marital functioning, others have found that infertility treatment can lead to improved communication and greater intimacy. This seems to be largely influenced by cultural factors. While the impact of infertility on sexual function remains unclear, evidence indicates that men and women may respond differently to the stress associated with infertility. Certain studies suggest that women might be more susceptible to experiencing marital distress related to sexual matters. Research on how genders respond to infertility has yielded inconclusive results. Sociologists argue that society perpetuates the idea that a marriage is incomplete without children, leading to stigmatization of childless couples. Finally, some studies suggest that the participation of both partners in infertility treatment is important for maintaining a healthy marital relationship (Benazon et al., 1992).

Infertile women reported having more loving and satisfying marriages than mothers and voluntarily childless women. However, they also reported feeling a sense of crisis and incompleteness due to their inability to have a child. Despite this, long-term infertile couples can have affectionate and close marital relationships. Studies suggests that parents and voluntarily childless women have similar levels of marital quality. The higher levels of personal and marital adjustment among infertile women may be due to their survivor status after undergoing years of infertility treatments (Callan, 1987).

Asghari et al. (2021) found that couples dealing with infertility often report lower levels of marital satisfaction compared to fertile couples. However, the impact of

infertility and its treatment on the marital relationship remains unclear, with some studies highlighting negative effects, others suggesting positive outcomes, and some finding no significant impact. The disparities in research findings on marital satisfaction may be due to demographic, economic, social, and differences in the cultural background of the population studied. The impact of infertility on marital and individual adjustment can vary, potentially influenced by the coping strategies individuals employ. Among these, the use of avoidance coping strategies has been identified as the strongest predictor of reduced marital satisfaction. Additionally, coping mechanisms such as accepting responsibility, distancing, and self-control have also been linked to lower levels of marital adjustment. Difficulties in communication were linked to decreased marital contentment and increased stress related to infertility, underscoring the significance of proficient communication between partners among couples experiencing infertility. Men often experience distress regarding infertility, primarily because of how it affects their wives and impacts their marital relationship. A key factor in men's emotional adjustment lies in their ability to support their partners, express their own stress, and seek support. This proactive approach can help alleviate the stress of infertility. In contrast, infertile women often find it easier to communicate their feelings and seek support naturally. But women's communication strategies and efforts to help their partners cope did not significantly affect their own or their partners (Chaves et al., 2018).

Further research indicates that infertility may not inherently diminish marital satisfaction. Rather, coping with the challenges of infertility could potentially enhance marital contentment and foster better communication between partners. Nonetheless, heightened levels of stress linked to infertility might forecast reduced couple satisfaction and a decline in overall marital quality. Research shows that the stress associated with infertility is closely connected to various aspects of marital satisfaction, such as communication, intimacy, sexual fulfillment, and overall relationship adjustment. Couples who share similar levels of distress related to infertility generally have better marital adjustment than those where partners perceive this stress differently. Utilizing avoidance coping mechanisms stands out as the primary indicator of a decrease in marital satisfaction. Interestingly, men's marital adjustment is more affected

by their own coping strategies, while women's adjustment is more influenced by how their partners perceive the situation (Molgora et al., 2019).

People have different ways of spending their leisure time, and being childless can affect this area of a couple's life also. There are studies to show that couples become closer emotionally due to infertility. This means that while infertility can be stressful, it can also lead to a closer emotional connection between partners. Studies have also shown a reduction in communication between spouses among fertile couples. However, for poor, uneducated women, the inability to have children can lead to divorce or remarriage by the husband. In general, the absence of children can influence marital adjustment positively or negatively (Bali et al., 2010).

Research has also found that infertility-related stress can lead to increased conflict within marriages. Women typically report greater marital adjustment than men, but marital dissatisfaction may increase as treatment progresses. Studies of fertile and infertile couples have shown no significant difference in dyadic adjustment and marital satisfaction, except for one study where infertile individuals reported higher satisfaction. However, a recent study found that infertile women undergoing IVF treatment reported lower marital satisfaction than mothers at routine gynecologic examinations. However, research shows that being childless does not necessarily lead to a decrease in overall quality of life. In fact, it can foster personal development, enhance marital happiness, and boost social desirability scores (Monga et al., 2004).

Infertility can lead to interpersonal stressors for couples, causing them to isolate themselves and rely heavily on each other for support. Sexual satisfaction can be impaired due to the stress of infertility in both partners. Research shows that the quality of a marital relationship can predict stress associated with infertility, and enhancing marital adjustment can help reduce this stress. Couples experiencing infertility frequently express diminished marital contentment, with no notable distinctions between genders. Additionally, the origin of infertility and the phase of fertility intervention may exacerbate marital tension, while the sociocultural environment can sway the choice to terminate a marriage (Ying et al., 2015).

The pressure from society and family to conceive, along with demanding treatment regimens and the intrusion of medical professionals into their personal lives, adversely affect the relationships and sexual health of couples experiencing infertility (Valsangkar et al., 2011). Infertile women who experience better sexual function and have a good marital relationship are likely to have better mental health and feel more optimistic about infertility treatment. Research underscores the significance of tackling sexual and marital concerns within infertility therapies as a means to enhance the holistic welfare of women experiencing infertility (Raisi Dehkordi, 2016).

Couples experiencing comparable levels of social stress from infertility typically express greater marital satisfaction than those with varying perceptions of stress. Moreover, women in couples sharing similar desires for parenthood tend to report higher marital satisfaction than those where the male partner expresses a stronger desire for parenthood. Stress stemming from infertility and alignment in attitudes regarding parenthood can notably impact the level of marital adjustment and satisfaction experienced by both men and women within couples. Couples who find alignment in these domains often express greater contentment and adaptability, whereas those facing discrepancies or varying stress levels may encounter reduced levels of marital satisfaction and adjustment. Interestingly, marital contentment among infertile couples matches or surpasses that of fertile couples, especially within the initial three years of undergoing infertility treatment. However, after the third year of treatment, levels of marital adjustment tend to decrease, potentially due to under-reporting of existing marital distress or other factors (Peterson et al., 2003).

Infertile couples may have similar perceptions of their marital adjustment, but arrive at those views differently. Accepting a childless lifestyle is associated with greater marital adjustment for men, but infertility causes stress and undermines marital adjustment for both spouses. Women often experience lower levels of marital and sexual satisfaction than men. Additionally, infertility impacts both genders disparately, leading to diminished self-esteem and dissatisfaction within marriages. Professionals working with infertile couples should assess how partners view each other and interpret

differences, and recommend open discussions about infertility-related issues (Sun, 2000).

Communication between husband and wife is considered a critical factor for a successful marital adjustment. Couples must adjust their preferences, interests, and aims of life to share love and give confidence to each other. Emotional intelligence is a significant predictor of marital adjustment. The financial situation of a family can have a significant effect on the marital adjustment of infertile couples, largely due to the high costs of infertility treatments. Women with higher levels of education and emotional intelligence tend to handle marital difficulties more effectively than those with lower educational levels. Personal characteristics, pre-marital and post-marital factors, and the desire for having children after marriage are also essential predictors of marital adjustment. Repeated failures of infertility treatments can further damage the relationship of spouses. There is need for good emotional intelligence and strength on the part of couples to tackle these problems effectively (Jalil & Muazzam, 2013). The partner who is diagnosed with infertility may fear abandonment by the other partner, who may seek a fertile partner to have children with. In some cases, the partner who is infertile may even pressure the other partner to get a divorce (Dubey & Singh 2014).

According to Ni (2021), enhancing marital harmony, fostering robust social networks, and cultivating supportive relationships could prove beneficial in bolstering the optimism of women experiencing infertility and undergoing IVF-ET procedures. Undergoing repeated assisted reproduction treatments may cause a significant decrease in marital adjustment. Identifying the factors that contribute to marital issues and a reduced quality of life is crucial for providing effective supportive care. Having insight into the foundational aspects of marital adjustment can be instrumental in family counseling and health strategizing to elevate the quality of relationships and life for couples. By fostering a deeper comprehension of the dynamics within marital relationships and facilitating interpersonal adaptations through targeted interventions to address root issues, the well-being of infertile couples can be significantly improved (Asghari et al., 2021). Discovering a constructive significance in infertility, referred to as meaning-based coping, plays a pivotal role in mitigating individual, marital, and

societal challenges stemming from infertility in women. Meaning-based coping serves as a key indicator for improved outcomes in navigating infertility-related struggles (Schmidt et al., 2005).

The characteristics of well-adjusted couples who gain great satisfaction from their marriage show positive views of their spouse's habits. These couples enjoy communicating with family and friends and derive immense sexual pleasure from their relationship. On the other hand, marital distress is mostly caused by negative emotions and attachment injuries, which can cause problems for couples struggling with infertility. Psychosocial assistance has the potential to enhance clients' sense of self-value, promote openness in self-expression, and counteract detrimental communication tendencies, ultimately resulting in a reduction of conflicts within marriages and an enhancement of overall marital harmony (Najafi et al., 2015).

Most couples experiencing infertility view it as a problem that affects both partners, rather than an individual problem. The infertility of one spouse affects the other in an interpersonal way, casing greater marital problems, as seen by both partners. Differences in the way couples view infertility can lead to tension and anger, as couples typically go through the stages of grief. Counselors can help infertile couples at each stage of the grieving process to resolve marital difficulties associated with infertility. Certain research indicates that despite these hurdles, couples facing infertility may experience higher-than-average levels of marital contentment. Infertility has the potential to foster increased closeness between partners, facilitate communication, and present opportunities for joint problem-solving (Callan, 1987; Peterson et al., 2003).

Marital satisfaction encompasses the joy and contentment felt by both partners within a marriage. Marital satisfaction is positively related to psychological well-being and success in life, and negatively related to mental illness like depression. A satisfying marital relationship can act as a stress buffer, providing material and spiritual support to each other under high-stress conditions. For women experiencing infertility, a fulfilling marriage can greatly benefit their mental well-being, potentially counteracting the adverse effects of stress. Although satisfaction in marriage could ease the effects of social and relational concerns on mental well-being, it might not alleviate the

difficulties associated with opting for a child-free lifestyle. Family therapy approaches that address marital satisfaction, with husband-and-wife as a team, can be particularly effective in improving mental health in infertility (Li et al., 2018).

Behavioral communication training can improve marital adjustment among infertile couples. Marital adjustment also involves complying with each other's tastes, personality traits, establishing rules of behavior, and forming interactional patterns. It has multiple dimensions, including consistency, happiness, solidarity, and commitment. Infertility can negatively impact these areas of married life including intimacy, sexuality, relationships, and conflicts. Cognitive-communication skills training can help decrease negative emotions, reduce conflict, and improve communication and emotional intimacy. The promotion of empathy, communication skills, and recognizing negative thoughts and self-talk can provide infertile couples with a better married life. Emotion-focused marital therapy can significantly strengthen the relationship between spouses experiencing distress in their relationships (Dargahi et al., 2018).

1.3 Rationale of the Study

The desire for biological children is a common aspiration among many married couples, often considered a societal norm in certain communities (Erdem & Apay, 2014). According to the WHO, “infertility problems are found in about 48.5% of couples in the population (WHO 2015). Research also shows that 10.5% of women experience secondary infertility, which refers to difficulty conceiving after having one child, while 2% face primary infertility, meaning they have not been able to conceive a child (Mascarenhas et al., 2012). The prevalence of childlessness in India is reported to be between 3.9 to 16.8 %. Effective treatment is needed to manage infertility problems in India considering the large number of infertile couples (Ombelet 2011). Studies show that infertility treatment has a significant effect on an individual's quality of life (Sharma et al., 2013). Moreover, infertility adversely affects marriage, relationships, and psychological well-being. Both men and women are affected emotionally by this condition. Apart from the various social psychological, economic, and physical

implications, infertility management and care often remain a neglected public health issue. This is the case with most of the low-income countries with population control pressures. Recently there is a paradigm shift in that there is improvement in areas of infertility prevention, care, and treatment (NHPOI, 2016). Therefore, it is necessary to conduct research and investigate the psycho social factors related to infertility. Illness cognition has a significant role in emotional adjustment of couples undergoing infertility treatment (Patel et al., 2018). The researcher aims to examine the impact of illness cognition and self-efficacy on marital adjustment and quality of life in couples undergoing fertility treatment".

1.4 Significance of the Present Study

Infertility treatment can be overwhelming for patients, often causing psychological stress that may lead them to discontinue the process prematurely. Early identification of susceptible couples at an early-stage infertility investigation is crucial in offering additional care to prevent higher levels of stress during treatment. If patients understand their psychological risk levels they may willingly seek or accept professional help. The clinical staff can provide care accordingly. A psycho social support system will be useful in understanding patients' vulnerabilities at the time of the first interview in the clinic. This can be useful particularly in getting the patient prepared for more complicated treatments such as IVF or ICSI. Help in decision making may be necessary for patients who have high levels of helplessness and low levels of acceptance.

Infertility impacts approximately 15% of couples globally, yet investigations concerning this matter are not conducted in Kerala. Infertile couples undergo a great deal of emotional stress. Infertility significantly affects psychosocial well-being, sexual life, and relationships. Distress and depression set in right from the diagnosis of infertility and subsequent treatment worsens their emotional life. This negatively affects their quality of life. Research suggests a link between "cognitive beliefs and appraisals in infertility," but studies on this topic, particularly in the context of infertility in India, are limited. In the Indian setup, it is found particularly that the treatment

repeaters' emotional trauma and grief are often neglected. The study aims to assess illness cognition, marital adjustment, self-efficacy, and quality of life among individuals experiencing infertility. Based on the level of illness cognition, marital adjustment, self-efficacy, and quality of life, infertile individuals can use various strategies to improve their lives. This study aims to provide the necessary inputs to practicing psychologists so that they can formulate strategies and effective interventions. This study will explore the under-researched impact of infertility treatment on couples' quality of life, marital adjustment, self-efficacy, and illness cognition in Kerala.

1.5 Theoretical Rationale and Framework

1.5.1 Infertility and Psychological Stress

Infertility is a complex medical condition that impacts multiple aspects of a couple's lives, including their emotional, social, and psychological well-being. Studies highlight that infertility, a condition experienced by 10-15% of couples worldwide, often causes distress and may influence various dimensions of life such as quality of life, self-efficacy, and marital adjustment (Greil et al., 2010). The prolonged, often emotionally taxing nature of infertility treatments further compounds the psychological burden. In the context of Kerala, where societal expectations about parenthood are strong, infertility may contribute significantly to psychological stress, exacerbating its effects on QoL.

To better understand these dynamics, the current study applies several psychological models and theories:

1.5.2 Illness Cognition and its Role in Coping with Infertility

Illness cognition refers to how individuals perceive and interpret their illness, which subsequently affects their emotional and behavioral responses (Leventhal et al., 1980). In the context of infertility, illness cognition plays a crucial role in shaping how couples perceive their diagnosis, treatment, and the likelihood of successful conception. The Illness Cognition Model (Evers et al., 2001) postulates that individuals' cognitive

representations of their illness affect how they cope and adjust to the illness experience. This model is based on the Self-Regulation Model of Illness by Leventhal et al. (1980), which highlights that individuals create cognitive and emotional representations of their illness, which in turn influence their coping strategies. The primary illness cognitions include:

Helplessness: A belief that infertility controls one's life, leading to feelings of despair.

Acceptance: Adjusting to the reality of infertility and engaging in treatment processes.

Perceived Benefits: Seeing positive aspects or personal growth from the infertility experience.

These illness cognitions influence coping mechanisms, emotional well-being, and overall QoL. Infertility can provoke a range of cognitive reactions that impact both an individual's emotional well-being and their relationships, especially in terms of marital adjustment.

1.5.3 Self-Efficacy and Coping with Infertility Stress

The concept of Self-Efficacy, introduced by Bandura (1977) as part of his Social Cognitive Theory, "refers to an individual's belief in their ability to exert control over challenging situations". In the context of infertility, the "Infertility Self-Efficacy Model" (Cousineau et al., 2006) emphasizes how confident individuals are in their ability to cope with the emotional and physical stresses associated with infertility treatment.

Couples with higher levels of self-efficacy are more likely to actively engage in treatment, seek social support, and maintain a positive outlook, which can enhance their marital adjustment and overall quality of life. On the other hand, low self-efficacy can lead to feelings of helplessness and heightened stress, negatively affecting both individual well-being and relationship dynamics.

1.5.4. Marital Adjustment in the Context of Infertility

Marital Adjustment Theory posits that successful adjustment in marriage is characterized by communication, problem-solving, and mutual emotional support (Spanier, 1976). Infertility often introduces stress that can challenge these aspects of marital life. “The Vulnerability-Stress-Adaptation (VSA) Model” (Karney & Bradbury, 1995) provides a framework to understand how couples adapt to stressors like infertility. According to this model, individual vulnerabilities (e.g., illness cognition and self-efficacy) interact with external stressors (e.g., infertility) and adaptive processes (e.g., communication and support) to determine marital outcomes. The Marital Adjustment Questionnaire (MAQ), developed by Pramod Kumar and Kanchana Rohtagi in 2018, evaluates the degree of marital satisfaction and adjustment in couples. Studies indicate that improved marital adjustment is linked to a higher quality of life, with couples in stronger relationships being more capable of handling the challenges associated with infertility treatment (Domar et al., 1993).

Research shows that infertility can either strengthen marital bonds (through increased support and joint coping) or weaken them (through blame, conflict, and emotional withdrawal). Therefore, the study will examine how couples' perceptions of infertility and their adaptive coping strategies influence marital satisfaction and adjustment.

1.5.5. Quality of Life (QoL) and Fertility-Specific Concerns

Quality of life (QoL) is a multifaceted concept that includes aspects of physical, emotional, social, and psychological well-being (World Health Organization, 1995). The FertiQol Framework, created by Boivin et al. (2011), is a fertility-specific QoL tool designed to address the distinct challenges experienced by couples undergoing infertility treatment. The framework evaluates core dimensions such as emotional, relational, social, and treatment-related aspects of QoL.

In the context of infertility, QoL is deeply affected by the illness perceptions (e.g., helplessness or acceptance), the couple’s marital relationship, and their ability to cope with stress (via self-efficacy). This study utilizes the FertiQol tool to evaluate the

subjective well-being of couples, examining the impact of infertility on different aspects of their lives, such as marital satisfaction, emotional resilience, and social integration.

1.5.6. Biopsychosocial Framework

The Biopsychosocial Model (Engel, 1977) integrates biological, psychological, and social factors to understand how individuals experience illness and respond to treatment. This model is particularly relevant for infertility, a condition that has both biological causes and profound psychological and social implications. Infertility affects self-esteem, identity, social relationships, and emotional well-being, requiring a multidimensional approach to study its impact.

In this research, the biopsychosocial model will help in understanding the interactions between infertility (biological), illness cognition and self-efficacy (psychological), and marital adjustment and QoL (social). By viewing infertility treatment through this lens, the study will explore the intricate web of factors that influence couples' lived experiences.

This study draws on a variety of theoretical models—Illness Cognition Model, Self-Efficacy Theory, Marital Adjustment Theory, FertiQol Framework, and the Biopsychosocial Model- to explore how couples in Kerala experience and cope with infertility. These frameworks offer a thorough understanding of the psychological and relational factors that influence their quality of life, self-efficacy, and marital satisfaction during their treatment process. By integrating these perspectives, this research aims to illuminate the complex interactions between cognitive, emotional, and social dimensions in the infertility experience, contributing valuable insights to both academic literature and clinical practice.

CHAPTER - II

REVIEW OF LITERATURE

According to Aveyard, (2014) review of literature is a "comprehensive study and interpretation of literature that addresses a specific topic". Review of literature is the study of previous researches related to the topic under investigation. Literature review will help the researcher to avoid repetition. Review of literature is study to get an understanding about the work and their findings that have already been found in the selected are of research. It also helps the researcher to identify research gap in the area of research. It addition it throws light on various research methods, measures, subject and approaches employed by the other researchers. The researcher has reviewed various studies related Fertility Quality of life, particularly those studies which include variables which are investigated in the current study. In this section, there are different types of studies conducted on infertile population based on demographic and psycho social variables. It also helps to understand tools and measures used for measuring dependent and independent variables with scientific interpretation.

2.1 Studies related to Illness Cognition

Azizi Ziabari et al. (2024) investigated how "illness cognitions mediate the relationship between infertility stigma and fertility quality of life (FertiQoL) among women experiencing infertility". Using a descriptive-correlational study design, the research involved 300 women seeking treatment at infertility clinics in Mashhad. The participants completed standardized questionnaires assessing infertility stigma, illness cognitions, and FertiQoL. The findings indicated that although the direct effect of infertility stigma on FertiQoL was not significant, illness cognitions played a significant mediating role in this relationship. Adaptive illness cognitions, such as acceptance and positive reinterpretation, improved FertiQoL, whereas maladaptive cognitions exacerbated the negative effects of stigma on quality of life. These results suggest that psychological interventions aimed at reframing illness beliefs could mitigate the adverse effects of stigma and enhance coping mechanisms among women facing

infertility. The study underscores the importance of addressing psychological variables in infertility treatment to improve overall well-being.

Illness representations significantly influence how individuals conceptualize and respond to health challenges, including infertility. Deninotti, Vigouroux, and Charbonnier (2024), a cross-sectional study was conducted to examine how infertility is perceived and represented among three distinct groups of women: those currently experiencing infertility, those with past infertility experience, and those who have never experienced infertility. The study utilized the Brief Illness Perception Questionnaire to measure cognitive and emotional perceptions among 668 participants recruited via social media forums. These findings illuminate the dynamic and context-specific nature of infertility perceptions. For instance, women actively navigating infertility seem to prioritize practical and controllable causes, potentially as a coping mechanism to mitigate distress. Conversely, women reflecting on past infertility experiences exhibit a broader attribution framework, reflecting a more comprehensive understanding of its long-term impact. This highlights the importance of designing interventions and information campaigns that are customized to meet the unique needs and perspectives of each group. The study's findings have important implications for developing public health campaigns and psychological interventions.

Grochowalska et al. (2024) delves into the often-overlooked domain of mental health in individuals grappling with inborn errors of immunity (IEI). The study utilized a cross-sectional design to assess the prevalence and intensity of anxiety symptoms among adult Polish patients diagnosed with IEI. Data were meticulously gathered from 105 individuals, utilizing various standardized assessment tools including “the Hospital Anxiety and Depression Scale, the Brief Illness Perception Questionnaire (B-IPQ), the Illness Cognition Questionnaire (ICQ), and the Pittsburgh Sleep Quality Index (PSQI),” accompanied by an extensive survey encompassing overall health status and demographic particulars. The findings underscore the pervasiveness of anxiety within this cohort, with 36.2% exhibiting anxiety symptoms, while 13.3% experienced severe anxiety and 22.9% reported moderate anxiety. The study illuminates the intricate interplay between emotional and cognitive representations of illness and anxiety

manifestation. Patients with more negative illness perceptions, increased feelings of helplessness, lower levels of illness acceptance, and a reduced sense of perceived benefits were more likely to experience heightened anxiety.

Sambasivam and Jennifer (2023) examine the emotional and social challenges faced by women undergoing infertility treatment, focusing on their experiences of helplessness, fatigue, and coping mechanisms. Using a qualitative phenomenological approach, the researchers conducted in-depth interviews with ten women who had experienced infertility for more than a year. Participants were chosen through purposive sampling. The data, collected through probing open-ended questions. Women reported significant stress due to financial and emotional constraints, compounded by inadequate family support. These factors often led to feelings of hopelessness and treatment fatigue. Participants utilized a mix of spiritual practices, social withdrawal, and mental engagement to cope with their struggles. Emotional concealment was also prevalent as a means of managing societal pressures. Participants utilized a mix of spiritual practices, social withdrawal, and mental engagement to cope with their struggles. Emotional concealment was also prevalent as a means of managing societal pressures. The study emphasizes the significance of family support and the development of effective coping strategies to improve the mental health and quality of life for women in this group.

DeShazo et al. (2023) investigates how preparing for an athletic challenge influences the way individuals with chronic disabilities perceive illness. The study involved 220 participants with chronic disabilities, including 151 individuals with spinal cord disorders. These participants underwent a five-month training program for the Hand bike Battle, culminating in their participation in a mountain time trial event. The researchers used the IC Questionnaire to evaluate various dimensions, including helplessness, acceptance, and perceived benefits, at three different time points: before the training (T1), immediately after the training (T2), and four months later (T3). The study's findings showed notable improvements in specific dimensions of IC throughout the training program. Participants reported a decrease in feelings of helplessness and an increase in perceived benefits from T1 to T2. Surprisingly, the decrease in feelings of

helplessness endured until T3, showcasing a sustained beneficial impact. Moreover, shifts in helplessness were correlated with self-confidence, mental well-being, and the extent of lesion completion, independent of disability type, lesion location, gender, or age.

Hamama-Raz et al. (2023) delves into the intricate the interplay among family dynamics, perceptions of illness, and obstacles to medication adherence in adolescents and emerging adults who have received kidney transplants, alongside their parents. Utilizing a dyadic approach, the research investigated 59 sets of adolescents and emerging adults, aged 11 to 26, who had received kidney transplants, in addition to their parents. Participants shared their views on illness cognition, family relationships, and perceived obstacles to medication adherence via self-report questionnaires. The main discovery of the study reveals that family conflicts play a moderating role in the connection between parents' sense of helplessness regarding illness and the obstacles faced by adolescents and emerging adults in adhering to medication. In particular, the way adolescents and emerging adults view family conflicts intensifies how their parents' beliefs about illness affect their own struggles with sticking to medication regimens. On the flip side, the degree of family cohesion had a direct impact on the obstacles to medication adherence for this group.

Hoekstra et al. (2022) delve into the crucial realm of treatment adherence among long-term sick-listed workers, shedding light on its significance in facilitating return to work, particularly for individuals seeking disability benefits. Their study, a cross-sectional survey involving 561 long-term sick-listed workers, aims to unravel the complexities surrounding adherence to medical and occupational advice and its interplay with various factors such as sociodemographic characteristics, coping strategies, illness perceptions, and perceived health. The findings of this study unveil a nuanced landscape of treatment adherence among the target population. Despite a considerable proportion reporting their ability to comply with physicians' recommendations, a notable portion struggled with the implementation of suggested actions. This underscores the multifaceted nature of adherence, where mere acknowledgment of advice does not necessarily translate into effective action.

Nuraeni and colleagues (2021) undertook a correlational investigation to explore the link between how patients perceive illness and depression among 106 individuals receiving treatment for coronary heart disease in West Java, Indonesia. The research utilized the "Beck Depression Inventory-II" to assess depression levels and the "Illness Cognition Questionnaire" to gauge perceptions of illness. Findings revealed that while the majority of respondents did not exhibit depression, a notable proportion experienced mild, moderate, or major depression. In the realm of understanding illness, patients showed the highest scores in the perceived benefits dimension, followed by acceptance, and then helplessness. Importantly, helplessness emerged as significantly associated with depression, all items in the dimension of helplessness show a noteworthy correlation with depression.

Gordon and Balsom (2020) investigate the psychological effects caused by the halting fertility treatments amidst the COVID-19 pandemic. Researchers enlisted 92 women residing in Canada and the United States, fertility treatments that were canceled, through social media platforms. The participants filled out surveys evaluating their depressive symptoms, perceptions of the impact on mental health, and changes in quality of life resulting from treatment suspensions. The study explored various personality traits, aspects of social support, illness perceptions, and coping strategies as potential factors influencing psychological outcomes. The findings indicated that over fifty percent of the participants exhibited significant levels of depressive symptoms as per clinical standards. The individuals observed a significant drop in their general quality of life, coupled with a decrease in mental well-being linked to treatment interruptions. Nonetheless, the research identified various psychosocial factors that can offer women support in managing these challenges. These elements comprised reduced defensive pessimism, increased acceptance of infertility, enhanced quality of social support, greater propensity to seek social support, and decreased avoidance of reminders related to infertility.

Foroudifard et al. (2020) explored how "cognitive emotion regulation strategies influence anxiety and depression in infertile women". Conducted in Tehran, Iran, the research involved 240 participants. The researchers employed two questionnaires: "the

Cognitive Emotion Regulation Questionnaire and the Hospital Anxiety and Depression Scale." Their findings indicated that "adaptive strategies, including positive refocusing, planning, reappraisal, and perspective-taking, were linked to lower levels of anxiety and depression." Interestingly, the acceptance strategy did not demonstrate this connection. Conversely, maladaptive strategies like self-blame, rumination, catastrophizing, and blame-shifting were linked to increased anxiety and depression. These findings suggest that cognitive emotion regulation plays a vital role in managing emotional responses and could potentially reduce the risk of anxiety and depression in women experiencing infertility.

Patel and colleagues (2018) investigate how illness cognitions, anxiety, and depression influence individuals undergoing fertility treatments, employing a dyadic perspective to examine both men and women. To gather data, the authors utilized several tools, including the "Fertility Problem Inventory, Mini International Neuropsychiatric Interview (MINI), Illness Cognition Questionnaire and Hamilton Anxiety and Depression Scale." The research revealed that women experiencing infertility exhibited higher levels of emotional distress, anxiety, and depression compared to men facing the same challenges. Gender differences were also noted in how helplessness and acceptance of infertility were perceived, with both partners regarding infertility as a detrimental experience. The findings indicate that pessimistic thoughts and emotional disruptions may increase the challenges couples face when pursuing assisted conception treatments.

Kitchen et al. (2017) directed their attention towards assessing "patient-reported outcome (PRO)" measures for the evaluation of quality of life (QoL) in studies related to female infertility. The researchers carried out an exhaustive review of the literature, pinpointing 78 distinct Patient-Reported Outcome (PRO) measures evaluating aspects such as Quality of Life, treatment satisfaction, or mental health in studies addressing interventional approaches to female infertility. The article offered a thorough assessment of the validation evidence concerning five specific PRO measures: "Fertility Quality of Life (FertiQoL), Fertility Problem Inventory (FPI), Fertility Problem Stress (FPS), Infertility Questionnaire (IFQ), and the Illness Cognitions

Questionnaire adapted for Infertility (ICQ-I).” The researchers discovered that none of the Patient-Reported Outcome (PRO) measures satisfied all validation criteria. The review highlights the importance of selecting appropriate PRO measures in infertility-related studies to ensure accurate measurement of patient outcomes. The authors provide valuable insights into the strengths and limitations of the identified PRO measures, emphasizing the need for further research to fill in any evidence discrepancies and ensure the trustworthiness of assessments regarding patient outcomes.

Sturrock et al. (2016) investigated the illness cognitions and coping self-efficacy. 529 participants across Australia involved in the study. It was single group cross sectional study. Participants measured by PHQ-9, CSE Scale, and Illness Cognition Questionnaire. Results show that lack of acceptance and helplessness because of low vision low vision caused depressive symptoms in them.

Hudson et al. (2016) made a study in patients with type 2 diabetes to understand how self-care is affected by illness cognitions and combined effects of negative emotions. The study employed a longitudinal observational design and involved a sample of 154 adults with type 2 diabetes. These scales are administered for data collection “Diabetes Wellbeing Questionnaire, Illness Perceptions Questionnaire-Revised; Beliefs about Medicines Questionnaire, Summary of Diabetes Self-Care Activities Scale.” Results revel that Negative emotions does not have a directly influence on diabetes self-care also personal care was not related to emotions.

Nicolaas et al. (2016) conducted a study on parents of children with cancer to understand psychometric properties of Illness Cognition Questionnaire and family adjustment. The study involved 128 parents of children with lymphoblastic leukemia, as well as 114 families with children undergoing treatment for cancer. The researchers employed both the Parent version of the Measures of “Illness Cognition Questionnaire and the Hospital Anxiety and Depression Scale” in their study. In this study psychologically distressed parents showed more helplessness.

Lopes and colleagues (2014) embarked on a cross-sectional investigation delving into the correlation between psychological maladjustment and adherence to fertility treatment in Portugal. The study sought to authenticate the Portuguese iteration of SCREENIVF, a screening instrument utilized for detecting individuals susceptible to psychological maladjustment during fertility treatment. The researchers enlisted 291 female and 92 male participants undergoing various stages of fertility treatment at infertility clinics in Portugal. The research discovered that the "Portuguese adaptation of the SCREENIVF" demonstrates validity and reliability in evaluating emotional well-being and quality of life in women undergoing different fertility treatments. However, the SCREENIVF was not found to be useful for identifying couples who may be non-compliant. Patients who scores were higher in helplessness domain of illness cognition and low in the acceptance domain were found to be at a lower level for compliance with treatment, indicating that these patients may have to be helped more in taking autonomous decisions regarding treatment.

Verhoof et al. (2014) conducted a study on "young adults with chronic illness since childhood to explore the role of illness cognitions in their psychosocial well-being". It was cross-sectional study in 377 adults with disability from childhood. Illness Cognition Questionnaire, RAND-36 (HRQoL) and HADS were tools used for the study. The study would help to develop psychological interventions to improve psychological wellbeing and adaptation to society in the sample.

Jin and colleagues (2013) sought to explore the psychological conditions of Chinese women experiencing infertility who were pursuing "in vitro fertilization (IVF)" treatment, as well as the resulting IVF outcomes. The study utilized a cohort design and collected data from Women unable to conceive who filled out brief questionnaires on the day of their egg retrieval. The surveys encompassed inquiries about their infertility timeline, educational attainment, sources of stress, and psychological well-being evaluated through the "Zung Self-Rating Depression Scale, Zung Self-Rating Anxiety Scale, and Illness Cognition Questionnaire." Embryologists and clinicians provided the data on IVF outcomes. The research revealed that over half of the women had struggled with infertility for more than five years. Women possessing

higher levels of education tended to seek treatment at earlier stages and exhibited lower rates of depressive symptoms when compared to their less-educated counterparts. The research also noted a notable correlation between adverse emotions and the results of in vitro fertilization (IVF).

Romano and colleagues (2012) sought to explore the psychological characteristics and emotional reactions among women with unexplained infertility undergoing in vitro fertilization (IVF). The study included two groups of women: those with explained infertility (EIF, n=63) and those with unexplained infertility (UIF, n=42). The study's results showed that there were negligible differences between the two groups across all measured time points. This included the "Minnesota Multiphasic Personality Inventory-2" validity and clinical scales, "Illness Cognitions, the Life Orientation Test," and various situational measures. However, some differences indicated that women with EIF had a more adaptive, better-functioning defensive system. The study's authors concluded that "there were no clinically significant differences in personality traits or levels of depression and anxiety between women with EIF and UIF during an IVF cycle". Moreover, they discovered no notable distinction in the levels of helplessness, acceptance, or optimism among the two cohorts of women who experienced unsuccessful fertility treatment. The authors highlight that, although the exact cause of infertility remains unclear, it does not seem to lead to negative thoughts or significant pessimism in these women.

Hoving et al. (2010) conducted a study on how Illness is perceived and the participation in their work. Extensive research was conducted by systematically exploring the bibliographic databases Medline, PsycINFO, and Embase. The study on the patients with somatic diseases or complaints highlights that work participation is majorly affected by illness perception, though there is no clear statistics regarding the strength of the relationship. If proper intervention is provided for individuals with maladaptive illness perceptions, the study says that promising developments can be made in improving work participation.

Verhaak and colleagues (2010) undertook a study to assess the effectiveness of SCREENIVF, a screening tool, in pinpointing emotional distress among women undergoing in vitro fertilization (IVF). The study included 279 women undergoing their first cycle of IVF treatment. They participated in SCREENIVF assessments before treatment and again 3-4 weeks following the pregnancy test. The findings revealed that SCREENIVF effectively categorized 75% of patients as either prone or not prone to emotional issues. Additionally, the research found that 34% of participants were prone to emotional problems, with anxiety, depression, helplessness, acceptance, and social support identified as the most significant risk factors. Out of the women surveyed, 24% showed clinically significant levels of anxiety and/or depression. Among these women, 80% had negative results on their pregnancy tests. The researchers inferred that SCREENIVF serves as a viable instrument for pinpointing women susceptible to emotional difficulties. Moreover, they suggested that these identified individuals may find value in additional psychological interventions.

Benyamini et al. (2009) study explored the dyadic approach to understanding how women and men perceive infertility and navigate its psychological impacts. The research encompassed two distinct groups: Sample I and Sample II, distinguished by their treatment stages. Sample I consisted of 72 couples attending an infertility clinic for their first consultation, while Sample II comprised 49 couples undergoing treatment at various stages. Each participant completed the Illness Perception Questionnaire to evaluate their views on the timeline, consequences, and controllability of their fertility challenges. They also completed the Infertility-Specific Distress and Well-being Scales. Researchers conducted dyadic analyses using the "Actor-Partner Interdependence Model (APIM)." The study found differences between partners in their perceptions of infertility and their levels of distress. The psychological adaptation of each partner was associated with their perception of the fertility issue. During initial couple visits, the combined perceptions of consequences from both partners were directly linked to their distress levels. Additionally, perceptions of controllability specifically influenced women's distress. The study highlights the need for healthcare

professionals to take a dyadic approach to infertility treatment, which could potentially improve couples' overall well-being and reduce distress.

Verhaak et al. (2007) explore identifying women at risk of encountering emotional challenges after undergoing IVF treatment. The authors highlight that while the majority of women adapt well to IVF, a notable percentage (20 to 30 percent) experience emotional difficulties following unsuccessful treatment. To address this issue, the authors conducted a longitudinal study with 512 women undergoing IVF at eight fertility clinics in the Netherlands. The researchers pinpointed pre-existing distress, feelings of helplessness about fertility issues, reduced acceptance of childlessness, and insufficient social support as factors contributing to emotional challenges following unsuccessful IVF treatments. The authors conducted pre-treatment assessments using abbreviated versions of the “Spielberger State and Trait Anxiety Inventory, the Beck Depression Inventory, the Illness Cognition Questionnaire, and a social support inventory” to pinpoint women at risk of emotional difficulties following IVF. Women were deemed "at risk" if they exhibited clinically significant issues in at least one of the five risk factors. The research findings indicate that the risk factors evaluated before treatment accounted for a substantial proportion of the variation in anxiety and depression levels after treatment. Specifically, the distress experienced prior to treatment was the primary factor responsible for the majority of variances in both anxiety and depression, while the other risk factors played a comparatively smaller role. The researchers discovered that 34% of the women were categorized as "at risk," with 47% of this group experiencing emotional issues post-IVF, in contrast to only 11% of women not classified as at risk.

Verhaak et al. (2006) undertook a longitudinal investigation aiming to assess the efficacy of a brief screening instrument in anticipating emotional distress among women following in vitro fertilization (IVF). The study encompassed 355 women who commenced IVF treatment. Before receiving treatment, participants filled out surveys designed to evaluate a range of psychological factors, including state anxiety, depression, perceptions of helplessness and acceptance regarding infertility, and social support. Follow-up assessments of anxiety and depression were conducted six weeks

after treatment. The researchers' analysis found that the pre-treatment assessed risk factors accounted for 45% of the variance in post-treatment anxiety levels and 33% of the variance in post-treatment depression levels. The screening tool identified 34% of participants as being at risk, with 47% of these individuals reporting emotional difficulties following IVF, in contrast to just 11% of those not flagged as at risk. The tool showed a sensitivity of 68% and a specificity of 77%, correctly classifying 74% of participants as either 'at risk' or 'not at risk'.

Verhaak and colleagues (2005) set out to forecast the emotional reactions following unsuccessful fertility treatment within a group of 187 women who were not pregnant. The researchers employed an extensive model incorporating personality traits, stress-related thoughts, coping mechanisms, and social support to forecast emotional reactions following unsuccessful fertility treatments. The research employed a range of instruments including a standard questionnaire, “the Dutch adaptation of the Eysenck Personality Questionnaire, the Illness Cognitions Questionnaire, the Utrecht Coping List,” and a general scale for assessing marital satisfaction to evaluate vulnerability factors prior to commencing treatment. The study's findings emphasized neuroticism as a primary vulnerability factor influencing emotional responses to significant stressors, such as unsuccessful fertility treatments. Additionally, it identified feelings of helplessness and marital dissatisfaction as further risks, while highlighting acceptance and perceived social support as protective factors against post-treatment anxiety and depression.

Verhaak et al. (2005) initiated a longitudinal study to delve into the emotional experiences of women and their partners during various stages of in vitro fertilization (IVF) treatment. They thoroughly explored the elements shaping the course of this emotional reaction, covering the periods preceding, during, and following the treatment. The research involved 148 women and 71 partners who were undergoing IVF treatment. Before starting treatment, they completed self-report questionnaires addressing marital dynamics, anxiety, social support, , personality traits, coping mechanisms, and depression. The study utilized the “State and Trait Anxiety Inventory, Beck Depression Inventory, Eysenck Personality Questionnaire, Illness Cognitions

Questionnaire, general marital satisfaction scale, and the Inventory for Social Support and Coping." The research findings revealed that women experienced increased anxiety and depression following a treatment setback, with these levels decreasing once successful treatment outcomes were achieved. In contrast, men did not show any changes in anxiety or depression levels after treatment, irrespective of its success or failure. Over the six-month period subsequent to unsuccessful treatment, women displayed no improvement, with over 20% exhibiting subclinical manifestations of anxiety and/or depression during follow-up. The investigation additionally revealed that the trajectory of emotional response was influenced by personality traits, the interpretation of fertility issues, and levels of social support. Once personality traits and social support were factored in, it was found that perceptions of acceptance and helplessness played a pivotal role in shaping the trajectory of depression. The authors stressed the significance of cognitive adaptation in reshaping one's outlook to cope with unsuccessful IVF. This adaptation was evident in heightened levels of acceptance, correlating with a more positive adjustment to the failed treatment. On the flip side, experiencing a higher degree of helplessness, characterized by the inability to regain control, was associated with worse outcomes.

Lord and Robertson (2005) aimed to identify the factors predicting psychological distress in patients preparing for in vitro fertilization (IVF) treatment. Using the Self-Regulation Model proposed by Leventhal et al. as a conceptual framework, the researchers explored how patient assessment and coping mechanisms impact psychological distress in this demographic. Their findings revealed that perceptions of illness and coping strategies were key predictors of anxiety and depression levels. The research cohort comprised 50 patients visiting assisted conception units. Each participant completed a demographic questionnaire, the "Illness Perception Questionnaire—Revised, the Brief COPE, and the Hospital Anxiety and Depression Scale." The study's findings revealed that, on average, anxiety and depression scores remained below clinically significant levels. However, it is noteworthy that 42% of patients did register scores indicating clinical levels of anxiety. Furthermore, the hierarchical multiple regression analysis revealed that illness

perceptions and coping strategies were significant predictors of psychological issues, including depression and anxiety. In particular, the researchers discovered that patients who viewed their illness as enduring and beyond their control tended to undergo more psychological distress. Moreover, those who employed adaptive coping mechanisms, like proactive problem-solving and optimistic reinterpretation, were less prone to psychological distress.

In 2004, Benyamini et al. delved into examining the connections among cognitive perceptions of infertility, coping mechanisms, and emotional results in women undergoing infertility treatment. The research was rooted in Leventhal and colleagues' "Self-regulation Model (SRM)," which suggests that how we mentally perceive a health threat influences how we cope with it, subsequently impacting both our physical and emotional well-being. The study consisted of 310 women taking treatment for infertility, who completed questionnaires assessing their cognitive perceptions of infertility, coping strategies, and emotional outcomes. The study's findings provided strong evidence for both direct and indirect links between thoughts and feelings, emphasizing the importance of exploring illness perceptions and addressing both positive and negative emotions in research and therapeutic settings.

Hagger and Orbell (2003) conduct a thorough meta-analysis on the "Common-Sense Model (CSM)" of illness representations, delving into the interconnected dynamics among illness perceptions, coping mechanisms, and resultant health outcomes. The review included 45 empirical studies that adopted the CSM framework developed by Leventhal, Meyer, and Nerenz in 1980. The results of the meta-analysis revealed that there is a notable connection between a heightened sense of illness identity and the use of coping strategies like avoidance and emotional expression. Moreover, how much control individuals believe they have over their illness is closely associated with employing cognitive reappraisal, emotional expression, and problem-solving coping methods. Beliefs about the illness being intensely symptomatic, enduring over time, and leading to severe outcomes showed strong associations with the tendency to avoid confronting it and using emotional expression as coping mechanisms. The meta-analysis uncovered a correlation between perceiving the illness as treatable or

manageable and favorable outcomes, including better psychological well-being, enhanced social functioning, and greater vitality. Additionally, this perception was associated with lower levels of psychological distress and disease severity. In contrast, negative associations were found between the illness's impact, its timing, and self-perception, and psychological health, social roles, and energy levels. Through meta-analytical scrutiny, there's support for the potential predictability of how illness beliefs and coping approaches relate to health results. The findings support the usefulness of the CSM framework in understanding how individuals make sense of their illness and cope with its consequences. The article provides valuable insights for clinicians and researchers in designing interventions to improve patients' illness representations and promote better health outcomes.

In Williams et al.'s (2003) study, the focus lies on the connection between “self-assessed health (SAH)” and the subconscious handling of health-related data. Their research comprised two distinct studies, each designed to probe this correlation. The first study involved 170 undergraduate students and utilized a modified Stroop task. Results revealed that individuals with lower subjective health assessments showed increased cognitive associations between illness-related information and their self-perception. The second study, which involved 57 undergraduate students and employed a self-referent encoding task, further affirmed the specific link between SAH and the automatic processing of health-related information. In summary, these studies offer proof that variations in subjective assessment of health are mirrored in the way individuals process health-related information schematically. The discoveries carry significance in comprehending the cognitive roots of self-perceived health, indicating that the subconscious processing of health-related data could play a pivotal role in individuals' evaluations of their well-being. The studies contribute to the literature on health cognition and have potential implications for health interventions and education.

Evers and colleagues (2001) examine the role of illness cognition as a mediator between stress and illness, particularly in the context of chronic diseases. They observe a scarcity of conceptualizations and tools capturing both negative and positive coping mechanisms in facing persistent stressors like chronic illnesses. In response, they

introduce three core illness cognitions: helplessness, acceptance, and perceived benefits. These concepts represent distinct strategies for reassessing the challenging nature of chronic conditions. Feelings of helplessness highlight the negative connotations of the illness, while acceptance reduces these negative associations, and recognizing perceived benefits injects a positive perspective into the experience of the illness. To evaluate various cognitions in diverse chronic conditions, the researchers devised a self-assessment tool called the "Illness Cognition Questionnaire." The results confirm the accurate and consistent assessment of these cognitions in patients with rheumatoid arthritis and multiple sclerosis. Furthermore, the findings underscore the detrimental effect of helplessness, while highlighting the beneficial role of acceptance and recognition of positive outcomes in enhancing both the physical and psychological well-being of individuals living with chronic illnesses.

The reviewed studies provide critical insights into the psychological dimensions of various health conditions, particularly focusing on illness perceptions, coping mechanisms, and their impact on quality of life. While these studies highlight the significant role of cognitive and emotional processes in health outcomes, several methodological limitations emerge. The predominant use of cross-sectional designs restricts the ability to draw causal inferences, and the reliance on self-reported data introduces potential biases that limit the generalizability of findings. Furthermore, many studies lack cultural sensitivity, often overlooking the influence of sociocultural factors on illness cognitions and coping strategies, which diminishes the broader applicability of their results to diverse populations. Although the studies demonstrate associations between illness beliefs and mental health outcomes, they fail to address the temporal dynamics that longitudinal or experimental designs could offer. Additionally, the narrow sampling in several studies, often limited to culturally homogeneous or small groups, restricts the ability to extrapolate findings to wider populations. Emotional struggles, stigma experiences, and coping strategies are well-documented, but the underlying influences of family systems, gender roles, and societal expectations remain underexplored.

Despite these limitations, the studies make significant contributions to understanding psychosocial factors affecting health behaviors and emotional well-being. Future research should move beyond descriptive associations and adopt more robust methodologies, such as longitudinal and intervention-based designs. A greater focus on culturally sensitive frameworks and the development of psychometrically strong, context-specific tools is essential to more effectively capture the complexities of illness perceptions and coping processes across diverse populations.

2.2 Studies related to Self-efficacy

Self-efficacy plays a critical role in coping with infertility, influencing psychological resilience and the ability to manage infertility-related stress. Xu et al. (2024) made significant contributions to this field by developing and validating a "Chinese version of the Infertility Self-Efficacy (ISE) Scale", tailored to assess the self-efficacy of Chinese infertile women. Their study emphasized the importance of culturally sensitive tools for evaluating psychological constructs in diverse populations. The ISE scale underwent a thorough translation and adaptation process, which involved forward and backward translations, consultations with experts, cognitive interviews, and a pilot study. This meticulous approach ensured the cultural and linguistic appropriateness of the instrument. A sample of 515 infertile women was used to validate the scale through exploratory and confirmatory factor analyses. The results demonstrated high content validity (0.96), with a one-factor model showing excellent fit indices (e.g., CFI = 0.953, TLI = 0.939). Additionally, the reliability metrics were robust "Cronbach's alpha coefficient (0.980), split-half reliability (0.972), and test-retest reliability (0.848)," indicating consistency and stability over time. This study highlights the ISE scale's effectiveness as a reliable and valid tool for evaluating infertility self-efficacy. By offering a culturally adapted tool, Xu et al. provided a means to evaluate psychological resilience among Chinese women facing infertility. Their findings highlight the potential for such tools to guide targeted interventions aimed at enhancing self-efficacy, thereby improving mental health and coping strategies.

Recent studies have extensively explored the interaction between self-efficacy, social support, and family dynamics in male infertility patients. Hu et al. (2024) provided valuable insights into how these factors collectively influence psychological outcomes such as anxiety. The study, conducted with 202 male infertility patients, found a significant prevalence of anxiety (67.8%) and highlighted the essential influence of family function on mental health. Using structural equation modeling, the research showed that family function affects anxiety both directly and indirectly, through factors such as self-efficacy and social support. The chain mediation effect showed a sequential influence: improved family function enhances social support, which in turn bolsters self-efficacy, ultimately reducing anxiety. These findings highlight the interplay between psychological and social factors in male infertility. The results underscore that self-efficacy and social support are crucial mediators, highlighting the significance of interventions focused on these areas. Enhancing family support systems and strengthening self-efficacy can mitigate anxiety and improve overall psychological well-being. This aligns with the broader literature emphasizing self-efficacy as a critical component in managing stress and fostering resilience among individuals facing infertility.

Carolino et al. (2024) explored “KindMap, an innovative e-mental health tool” designed for individuals experiencing infertility. The intervention combines mindfulness, self-compassion, and Acceptance and Commitment Therapy (ACT) components, aiming to improve well-being and strengthen infertility-related self-efficacy. The two-arm feasibility randomised controlled trial (RCT) demonstrated that KindMap holds potential in enhancing participants' perception of self-efficacy alongside reductions in depression, anxiety, and infertility-related stress. The study underscores the importance of addressing emotion regulation and psychological flexibility as mechanisms of change, directly impacting individuals’ ability to manage infertility challenges effectively. Overall, the integration of e-mental health solutions like KindMap into clinical practice offers a promising avenue for promoting infertility-related self-efficacy. Further research is warranted to establish their efficacy on a larger scale and across diverse demographics, enabling comprehensive frameworks for

therapeutic interventions. This aligns with global and regional digital healthcare strategies, contributing to sustainable and inclusive mental health services.

Aslan and Fata (2023) conducted a comparative study to assess the levels of stigma, infertility self-efficacy, and fertility preparedness among infertile couples in two provinces of Turkey. The research was structured as a descriptive, cross-sectional study, aimed at comparing data from the provinces of Mardin and Bursa. The research incorporated a range of measurement tools, such as the Personal Information Form, "Infertility Stigma Scale, Infertility Self-Efficacy Scale, and Fertility Preparedness Scale." Data were gathered to evaluate different aspects of stigma, self-efficacy, and preparedness among infertile couples in the two provinces. They revealed distinct variations among provinces, where Mardin, representing the eastern region, displayed heightened stigma levels and diminished self-efficacy and readiness for fertility, contrasting with Bursa. Furthermore, the research pinpointed a detrimental association between stigma and both self-efficacy and fertility readiness in both provinces: as stigma intensified, self-efficacy and readiness declined.

In his 2023 work, Pandya delves into the compelling realm of online mindfulness-based interventions (OMI), demonstrating their efficacy in alleviating stress and anxiety. Furthermore, he emphasizes the importance of mindfulness care in strengthening the confidence and resilience of South Asian women undergoing in vitro fertilization (IVF) treatment, particularly in enhancing their ability to cope with infertility challenges. Using a thorough waitlist control design study, the author reveals how mindfulness interventions have the power to positively impact the mental health of this vulnerable group, highlighting its potential for transformation. The research, involving individuals aged between 32 and 41, utilizes a robust approach. It involves conducting 20 weekly OMI sessions for the intervention group, while the control group does not receive any intervention. The data, collected through online questionnaires in English, provide insightful revelations regarding the efficacy of the OMI in fostering positive psychological outcomes. The findings underscore the profound impact of the OMI, with the intervention group demonstrating significantly lower levels of anxiety and stress coupled with heightened levels of self-efficacy and resilience post-test. This

marked improvement, indicated by statistical significance ($p < .05$) and effect sizes (Hedges' $g = -0.78$ to 0.65), highlights the pivotal role of mindfulness interventions in addressing the psychosocial challenges encountered by women navigating the complexities of IVF treatment.

Jafari et al. (2023) investigate the relationship between self-efficacy and psychological distress in women facing infertility. The study recruited 205 infertile women using convenience sampling at the Milad Infertility Research Center in Mashhad, Iran. Information was collected through a demographic survey along with the "Tara Infertility Self-Efficacy Questionnaire" and the "Akios Infertility Distress Questionnaire." The research employed a descriptive correlational study design, and statistical analysis involved employing Pearson and Spearman correlation coefficient tests. A noteworthy correlation emerged between self-efficacy and the distress linked to infertility ($P = 0.001$), indicating that increased self-efficacy levels corresponded with diminished distress regarding infertility. However, the study found no significant correlation between self-efficacy and infertility-related distress when considering factors such as women's age, education, length of marriage, duration of infertility, or length of infertility treatment. The findings underscore the significance of counseling initiatives within fertility clinics as a means to enhance the self-efficacy of women facing infertility challenges.

Thanscheidt and colleagues (2023) embarked on a study delving into the psychological dimensions of infertility, utilizing an Actor-Partner Interdependence Analysis (APIM) framework. The research aimed to explore psychological risk factors and self-efficacy among couples undergoing fertility treatment in Germany, Austria, and Switzerland. 721 women and men from five fertility centers were recruited for the study. They were requested to fill out the "SCREENIVF-R questionnaire," which aimed to identify psychological risk factors linked to increased emotional distress. Furthermore, participants were requested to fill out the "Infertility Self-Efficacy (ISE) scale." The information gathered from 320 couples underwent analysis using paired t-tests and the "Actor-Partner Interdependence Model (APIM)." The findings unveiled gender contrasts in psychological risk factors, indicating that women typically display

higher risk scores than men in areas such as depressiveness, anxiety, lack of acceptance, and helplessness. It is noteworthy that self-efficacy showed a shielding influence on an individual's risk factors across various domains. Additionally, an inverse relationship was found between men's self-efficacy and women's experiences of depression and helplessness, suggesting that higher self-efficacy in men may alleviate emotional distress in their female partners. On the other hand, a positive correlation was observed between women's self-efficacy and the acceptance and availability of social support in men (partner effect, woman → man), implying that women's self-efficacy could improve the well-being of their male partners.

Yanık and Kavak Budak (2022) undertook research aimed at exploring the potential advantages of psychoeducation rooted in positive psychotherapy (PPT) for women undergoing infertility treatment. The research trial utilized a randomized control design and included 64 women undergoing infertility treatment. Half of the participants were allocated to the experimental group, where they received eight sessions of PPT-based training, while the remaining half comprised the control group, receiving no intervention. The research results reveal a significant contrast in stigma and self-efficacy levels between the experimental and control groups post PPT-based training, with a p-value of .001. These findings suggest that PPT-based interventions can effectively improve mental health outcomes, including stigma and self-efficacy levels. The research underscores the significance of incorporating mental health support alongside physical interventions in infertility treatment.

Heravan and Rashki (2022) conducted a study investigating the relationship between depression, anxiety, and stress with childbirth self-efficacy in nulliparous pregnant women. Utilizing a descriptive-predictive correlation design, the researchers gathered data from 323 nulliparous pregnant women who were referred to health centers in Zahedan city between 2020 and 2021. Data collection involved the utilization of the “Individual questionnaire, Lowe childbirth self-efficacy questionnaire, and DASS21 scale.” The study's results showed no significant direct connection between confidence in childbirth and levels of depression, anxiety, or stress. Furthermore, the regression analysis demonstrated that none of these factors had a significance level

below 0.05, indicating they were not predictive variables for childbirth self-efficacy. As a result, the research findings indicate that first-time pregnant women's confidence in managing childbirth does not show a significant correlation with their levels of depression, anxiety, or stress.

Brown (2022) conducted research aimed at elucidating the correlation among stigma related to female infertility, cognitive processes in women, and their coping mechanisms. The research involved women aged 18 to 45 who had struggled with infertility for a minimum of 12 months. It was carried out via online platforms, utilizing tools such as the "Infertility Stigma Scale, Infertility Self-Efficacy Scale and Inventory of Cognitive Distortions." The study findings unveiled a robust link between the stigma surrounding infertility and women's thought processes. As cognitive distortions in women escalated, so did the burden of infertility stigma. On the flip side, the stigma surrounding infertility declined as women's self-efficacy increased. Interestingly, the length of time experiencing infertility was not closely linked to this stigma; it only saw a slight uptick with longer durations of infertility.

Al-Kareem and his team in 2022 embarked on assessing the levels of self-efficacy among women grappling with infertility in Al-Hilla City, Iraq. They utilized a targeted non-probability sampling method to recruit 107 women facing infertility as participants for their research. Most individuals involved in the study were under the age of 30 and lived in urban locales. The study utilized the "Infertility Self-Efficacy Scale questionnaire." The study findings revealed that infertile women generally exhibited low levels of self-efficacy. Furthermore, a notable correlation existed between self-efficacy and all examined factors, barring age and educational attainment.

Parwez and Banaras (2022) explored the impact of infertility, including both primary and secondary forms, on women's self-efficacy and coping strategies as they face the challenges associated with fertility. A cohort of 100 women participated in the study, evenly divided between those experiencing primary infertility and those with secondary infertility. Data collection took place across various gynecological clinics, hospitals, and among the general population. The researchers utilized a demographic

questionnaire alongside measures of Coping Strategy Inventory (CSI) and Infertility Self-Efficacy (ISE). The study uncovered that woman encountering secondary infertility demonstrated greater levels of self-efficacy in contrast to those dealing with primary infertility. Additionally, it indicated that women with elevated self-efficacy tended to employ more adaptive coping mechanisms in contrast to those with lower self-efficacy. The research offers significant findings regarding how primary and secondary infertility affect women's self-efficacy and coping mechanisms. These findings highlight the importance of focusing on the psychological well-being of women facing infertility and stress the need for personalized interventions to improve self-efficacy and coping strategies.

Vazirnia and colleagues (2021) initiated a study aiming to explore how "Integrative Behavioral Couple Therapy (IBCT)" impacts sexual satisfaction, dyadic adjustment, and infertility self-efficacy among couples experiencing infertility. Employing a multiple-baseline design, the researchers conducted a single-case experimental investigation. The research centered around couples facing infertility who sought help from infertility centers located in Ahvaz City, Iran, throughout 2019. Three pairs of individuals were chosen through convenience sampling methodology to participate in IBCT sessions. The study employed the “Sexual Satisfaction Questionnaire, the Dyadic Adjustment Scale, and the Infertility Self-Efficacy Scale” as its instruments for measurement. The research findings indicated that IBCT had a significant, positive effect on self-confidence in managing infertility, relationship harmony, and satisfaction with sexual intimacy among couples dealing with infertility challenges. The article presents compelling evidence supporting the efficacy of IBCT in enhancing the psychological and marital welfare of couples facing infertility challenges.

Maroufizadeh and colleagues (2021) explored the connection between self-efficacy and quality of life (QoL) in couples undergoing fertility treatment, with a particular emphasis on infertility-related challenges. The study employed a cross-sectional design, gathering data from couples facing infertility in Tehran, Iran, during the period of August to September 2017. The study assessed the quality of life of

couples using the "Fertility Quality of Life (FertiQoL)" tool, while their self-efficacy was evaluated through the "Infertility Self-Efficacy Scale (ISE)." The findings demonstrated that the self-efficacy levels of infertile couples had a significant impact on their quality of life. Specifically, couples with higher self-efficacy scores reported better QoL than those with lower scores. The study concluded that psychological interventions aimed at enhancing self-efficacy and QoL in the realm of infertility, it's essential to approach treatment by considering the couple as a unified entity.

Juniarto and his team (2021) aimed to investigate the interconnectedness of self-efficacy regarding infertility, life satisfaction, and overall well-being in individuals confronting infertility. Their research took place at two private clinics in Central Java, Indonesia, employing a prospective analytical observational design with a cross-sectional approach. In this study, Infertility Self-Efficacy, assessed through ISES-SF, was the independent variable, whereas Satisfaction with Life, gauged via SWLS, and Well-Being, evaluated through WBI, served as the dependent variables. The study's findings showed a significant correlation between infertility self-efficacy and both life satisfaction ($p<0.001$) and well-being ($p<0.001$). This research adds valuable insights to the field of infertility by underscoring the significance of self-efficacy among those facing infertility challenges. Healthcare practitioners specializing in infertility can benefit from this study's findings, gaining valuable insights to better support their patients.

In their 2021 research, Chu and colleagues explored how “perceived social support influences the life satisfaction of women grappling with infertility. They administered an online survey to 290 infertile women in mainland China, aiming to assess elements like life satisfaction, self-compassion, infertility self-efficacy, and perceived social support. The research discovered that self-compassion acted as a mediator, linking perceived social support to life satisfaction. Furthermore, it was found that the relationship between perceived social support and self-compassion was influenced by infertility self-efficacy”. In other words, “perceived social support had a notably stronger impact on self-compassion among infertile women with elevated levels of infertility self-efficacy.”

Hosseini and colleagues (2021) explored the impact of gender on social support, resilience, and self-efficacy among infertile Iranian couples, employing a dyadic approach in their study. The research adopted a cross-sectional approach and included 180 couples receiving fertility treatment at the Royan Institute in Tehran, Iran, throughout August and September 2017. Self-efficacy, resilience, and social support were assessed by tools. The study found that wives demonstrated reduced levels of self-efficacy in managing infertility and resilience, yet they exhibited higher levels of social support in comparison to their husbands. Gender differences were observable across all MSPSS subscales except for the Friend subscale. These findings indicate that the challenges of infertility may have a more significant impact on women than on men.

Salvatori et al. (2021) center their study on the psychological variables that could impact the choice of couples grappling with infertility to seek counseling. The research employs a cross-sectional design and enrolls 184 patients as the sample. This study delves into three primary psychological factors: dyadic adjustment, infertility self-efficacy and fertility quality of life. Tools used- "Fertility Quality of Life (FERTIQoL) scale, the Dyadic Adjustment Scale (DAS) and Infertility Self-Efficacy Scale." The study's findings suggest that low self-efficacy, poor emotional well-being, and impaired social life may lead to a greater need for help and a higher likelihood of accepting couples' infertility counselling. However, the research also underscores how a strong bond with a partner can influence men to be more open to counseling.

Andrei and colleagues (2021) undertook a cross-sectional investigation delving into emotional responses to infertility diagnoses. Their research sought to explore the determinants affecting coping strategies, self-efficacy, and quality of life among both genders navigating infertility, whether attributed to anatomical or non-anatomical factors. The investigation enrolled 133 individuals undergoing preparations for infertility treatment at the IVF and Infertility Unit of S. Orsola University Hospital in Bologna, Italy. Participants completed surveys assessing their self-efficacy in managing infertility, the coping strategies they employed, and the effect of fertility-related challenges on their overall quality of life. The findings uncovered notable variances based on gender and diagnosis. Female participants scored lower than their

male counterparts on both the “Infertility Self-efficacy Scale” and several subscales of the “Fertility Quality of Life,” including global, emotional, and mind-body aspects. In the “Brief COPE scale,” women demonstrated better performance than men in both emotion-focused and socially supportive coping strategies. Additionally, hierarchical multiple regression analyses revealed that a higher quality of life was associated with greater self-efficacy and a reduced reliance on avoidance coping strategies, irrespective of gender or the causes of infertility.

In 2020, Khalid and Dawood undertook a study to investigate how psychological distress, social support, cognitive coping, and self-efficacy are interrelated in women experiencing infertility. This cross-sectional study involved 158 infertile women recruited from six hospitals. Various measures were employed, including the “Depression Anxiety Stress Scale, the Multidimensional Scale of Perceived Social Support, the Coping Strategies Questionnaire, and the Infertility Self-Efficacy Scale.” Active-distractive coping, active-practical coping, self-efficacy and social support all contribute to reducing psychological distress associated with infertility. Thus, fostering societal acceptance and diminishing negative attitudes toward infertility requires the development of targeted programs, particularly aimed at addressing these issues.

Karimian & Hejazi (2019) in a study entitled, “The mediating role of self-efficacy in the relationship between quality of life and emotional maturity with a tendency to childbearing in married women in Zanjan.” Descriptive-correlation study method was used in this research with 300 women selected through random cluster sampling. Measures of World Health Quality of Life, Savabi's Fertility, Scherrer's Self-Efficacy, and Rad, Sink, and Baharawa's Emotional Maturity were used. This study clearly demonstrates that the self-efficacy of married women can directly enhance the connection between quality of life and emotional maturity regarding adoption.

In 2018, Altiparmak and Derya conducted a quasi-experimental study using a pre-test and post-test design to evaluate the impact of fertility-supporting health training on self-efficacy and the adoption of healthy lifestyle behaviors. The study included 62

women in each group. The study utilized the Infertility Self-Efficacy Scale and Healthy Lifestyle Behavior Scale II to gauge the impact. This study reveals that women undergoing infertility treatment show a keen interest in participating in training programs focused on healthy lifestyle behaviors and enhancing self-efficacy perceptions, indicating potential for improvement in these areas.

Arslan-Özkan and colleagues (2014) explored how nursing care rooted in the Theory of Human Caring influenced distress related to infertility, as well as adjustments and perceived self-efficacy levels. In this randomized controlled trial, a sample of 105 women was selected. Data collection utilized the "Turkish-Fertility Adjustment Scale, the Turkish-Infertility Self-Efficacy Scale Short Form, and the Infertility Distress Scale." It was found that applying nursing care grounded in the theory of human caring helped alleviate the negative impacts of infertility in individuals undergoing fertility treatments. This method contributed to an increase in their self-confidence and adaptation levels, as demonstrated by the research findings.

Faramarzi et al. (2014) conducted a study to explore the relationship between infertility self-efficacy and behavioral health scales in women experiencing infertility. The researchers employed a cross-sectional approach, recruiting 89 women facing infertility and grappling with mild to moderate depression, sourced from the "Fatemeh Zahra Infertility and Reproductive Health Research Center". These individuals underwent assessment using the "Self-efficacy Inventory (ISE)" along with various behavioral health assessments such as "Fertility Problem Infertility (FPI), Cattle Anxiety Scale (CAS), the Beck Depression Inventory (BDI), and GHQ." The research revealed that a significant majority of participants, totaling 53.9%, displayed considerable confidence in their ability to cope with infertility. Additionally, 41.6% expressed a moderate level of confidence, with merely 4.5% revealing low confidence levels. The average ISE score among all participants fell within the moderate range (6.18 ± 1.39). Notably, the lowest mean score was recorded for the statement "Accepting that my best efforts may not alter my/our infertility." The authors found a significant relationship between ISE scores and job and residency of infertile women, with employed and urban women having higher levels of self-efficacy. On the flip side,

older women, individuals with advanced education, and those experiencing longer periods of infertility exhibited reduced self-efficacy. These discoveries indicate a connection between diminished self-confidence and heightened levels of depression, anxiety, and concerns regarding fertility.

Pasha et al. (2013) sought to assess the relative effectiveness of pharmacological and nonpharmacological interventions in enhancing infertility self-efficacy in women facing infertility challenges. The research enlisted 89 infertile women from a reproductive health research center and distributed them randomly across three groups: antidepressant therapy using "fluoxetine," "cognitive-behavioral therapy (CBT)," and a control group. Before and after the intervention, participants filled out the "Beck Depression Inventory (BDI) and the Infertility Self-efficacy Inventory (ISE)." The results indicated that both "cognitive-behavioral therapy (CBT)" and "Fluoxetine" resulted in significant elevations in average ISE scores compared to the control group. However, the cognitive behaviors demonstrated a significantly greater increase in the ISE score compared to the fluoxetine group. Findings indicated that the intervention resulted in higher infertility self-efficacy when contrasted with the control group. Both fluoxetine and cognitive behavior therapy (CBT) significantly reduced the average Beck Depression Inventory scores compared to the control group. Remarkably, the reduction in the CBT group was greater than that in the fluoxetine group. These results indicate that CBT stands out for its effectiveness in enhancing self-efficacy among women dealing with infertility.

Galhardo et al. (2013) examined the effectiveness of a mindfulness-based program for infertility (MBPI) in improving the psychological well-being of women experiencing infertility. The study adopted a controlled clinical trial design, recruiting 55 infertile women who underwent the MBPI, while assigning 37 infertile women to a control group. Standardized assessments were employed to gauge levels of infertility self-efficacy, entrapment, depression, self-compassion, state anxiety, mindfulness, defeat, experiential avoidance, as well as internal and external shame both prior to and following engagement in the MBPI. The research findings showed that, at the outset, the MBPI group and the control group exhibited similar characteristics. Yet, as the

program concluded, women participating in the MBPI program demonstrated notable reductions in depressive symptoms, along with decreased feelings of shame, entrapment, and defeat. In contrast, participants showed significant improvements in their mindfulness skills and self-efficacy in managing infertility. Notably, women in the control group showed no significant changes in psychological aspects, with the exception of a reduction in self-criticism. The research findings suggest that enhancing mindfulness, acceptance skills, and cognitive decentering from thoughts and emotions can empower women to perceive negative inner states differently, reducing their involvement with them and consequently alleviating psychological distress.

The reviewed studies provide valuable insights into the psychological impacts of infertility, focusing on self-efficacy, stigma, and coping mechanisms. However, several methodological limitations, such as small sample sizes, cross-sectional designs, and sampling biases, hinder the ability to generalize findings and infer causal relationships. For instance, cultural and regional differences pose challenges to the applicability of findings to broader populations, while concerns about the feasibility and cultural relevance of interventions like mindfulness-based therapies and e-mental health tools were raised. Additionally, many studies reveal important correlations but are limited by their cross-sectional nature, emphasizing the need for longitudinal research to explore the temporal dynamics of stigma and self-efficacy. Small sample sizes in randomized controlled trials and the use of convenience sampling also reduce the robustness of the findings.

In conclusion, while these studies contribute to understanding the psychological dimensions of infertility, future research should focus on larger, more diverse samples, longitudinal designs, and a deeper exploration of cultural and gender factors to enhance the generalizability and applicability of the findings. Further investigation into nonpharmacological interventions like CBT is also needed to improve psychological support for individuals facing infertility.

2.3 Studies related to Marital Adjustment

The marital adjustment of couples undergoing “in vitro fertilization-embryo transfer (IVF-ET)” is influenced by fertility stress and the mechanisms they employ to cope with these challenges. Song et al. (2024) investigated the complex relationships among fertility stress, dyadic coping, and marital quality in couples undergoing IVF-ET, utilizing the "actor-partner interdependence model (APIM)." Their findings revealed significant disparities in stress levels and coping mechanisms between partners, with wives experiencing higher fertility stress and lower dyadic coping and marital quality compared to husbands.Fertility stress negatively impacts marital quality, primarily mediated through dyadic coping strategies. The study identified actor effects where an individual's fertility stress directly influenced their own marital quality via their coping mechanisms ($\beta = -0.188$, $p < 0.05$ for wives; $\beta = -0.109$, $p < 0.05$ for husbands). Partner effects were also observed, with wives' fertility-related stress significantly influencing their husbands' marital quality through both personal and shared coping mechanisms ($\beta = -0.055$, $p < 0.01$; $\beta = 0.157$, $p < 0.01$). These findings underscore the interconnected nature of spousal experiences during fertility treatment.This research aligns with broader studies on marital adjustment, which emphasize the importance of spousal support and shared coping in mitigating stress and fostering relationship satisfaction during stressful life events.

The marital adjustment of women undergoing artificial insemination by donor (AID) due to male irreversible azoospermia is closely tied to their psychological well-being, particularly in long-term contexts. Wu et al. (2024) conducted a six-year longitudinal study in China to explore the evolving relationship between marital quality and depression among women, emphasizing significant stressors and protective factors. The study found that marital quality played a crucial role in mental health, with greater marital satisfaction linked to a decrease in depressive symptoms over time. Women who reported strong marital bonds and effective communication with their spouses experienced better psychological resilience, even in the face of challenges associated with donor insemination. Conversely, marital dissatisfaction was closely linked to heightened depression, underscoring the importance of marital harmony in mitigating

psychological distress. Factors such as social stigma surrounding infertility and the use of donor sperm compounded these challenges, emphasizing the need for strong spousal support to buffer these external pressures.

The marital adjustment of IVF patients is significantly influenced by the psychosocial support they receive, particularly through communication and disclosure processes. Montgomery et al. (2023) explored how IVF patients in Canada build social support by disclosing fertility-related and non-fertility-related information, shedding light on the communication dynamics between patients and peers. Their findings highlight the critical role of disclosure in fostering social support, which, in turn, impacts marital adjustment. The study revealed that IVF patients share a wide range of information with peers, including details about treatment protocols, emotional and financial challenges, and marital issues. Notably, patients disclosed information about their condition and treatment openly but were more likely to distance themselves from others during the post-embryo transfer waiting period, avoiding further emotional discussions. This tendency to withdraw during highly stressful periods underscores the importance of timing and context in disclosure, with patients preferring digital communication for its perceived anonymity and convenience. The study highlights the importance of developing tailored support strategies to meet the evolving needs of IVF patients, with a strong emphasis on respecting their disclosure preferences and communication boundaries.

Santona and colleagues (2023) investigate how sexuality, dyadic adjustment, and attachment intertwine among infertile men and women. The research involved 129 individuals grappling with infertility, with 47.3% being female and 52.7% male, and an average age of 39 years among them. Data was gathered using an impromptu questionnaire alongside the “Dyadic Adjustment Scale (DAS),” the Experiences in Close “Relationship-Revised (ECR-R),” and the “Multidimensional Sexuality Questionnaire (MSQ).” The findings suggest that factors associated with infertility play a significant role in shaping sexual anxiety among men grappling with infertility issues. In infertile women, research indicates that dyadic adjustment is a key factor in predicting sexual satisfaction. Moreover, anxious attachment tends to reduce sexual

self-regulation, while avoidant attachment decreases sexual apprehension. On the flip side, among men experiencing infertility, robust dyadic harmony correlates with increased sexual contentment, whereas leaning towards avoidant attachment predicts higher degrees of self-regulation in sexual matters. However, no significant correlation was found between attachment, dyadic adjustment, and sexual anxiety in infertile men.

Biçakçi and Türk (2023) delve into the intricate dynamics of marriage compatibility, particularly focusing on the disparities between infertile and fertile women. Conducted as a descriptive study, the cross-sectional study encompassed a total of 96 women, evenly split between infertile and fertile participants. Employing the snowball method for data collection, the researchers utilized a questionnaire form alongside the Marital Adjustment Scale (MAS) to gauge various dimensions of marital adjustment. Key findings highlight notable differences in marital satisfaction and views on parenthood between infertile and fertile women. A significantly higher percentage of fertile women reported marital happiness, while both groups strongly emphasized the role of children in achieving marital contentment. Interestingly, feelings of worthlessness were markedly more prevalent among infertile women, underscoring the psychological toll of infertility on personal well-being.

Baran et al. (2023) embark on a comprehensive exploration of the intricate interplay between women's health risks during pregnancy and marital satisfaction and adjustment. This study, which examines 202 pregnant women, seeks to understand how pregnancy-related health risks influence marital dynamics. It utilizes reliable metrics like The Satisfaction with Marriage Scale and The Revised Dyadic Adjustment Scale for comprehensive analysis. The research, carried out within a gynecology and obstetrics hospital, provides valuable understandings about the intricate connection between pregnancy health and marital happiness. The results reveal intriguing trends, showing significant differences in marital satisfaction and relationship adjustment between women classified as having high-risk pregnancies and those considered healthy. The research offers a nuanced perspective on how pregnancy health risks intersect with marital dynamics, questioning conventional beliefs and opening new avenues for future investigation.

In their study, Razavi and Salehiyan (2022) delved into how perceived stress relates to sexual satisfaction and marital adjustment among couples undergoing infertility treatment in Tehran. The authors used a descriptive-correlational research design and collected data from 170 couples who had sought infertility treatment at Amin Infertility Center in Tehran. The research employed three standardized questionnaires—specifically, the Spanier Marital Adjustment Scale, the Larson Sexual Satisfaction Scale, and the Perceived Stress Scale—to gather data. The study findings revealed a significant negative correlation between perceived stress and marital adjustment, including essential aspects such as mutual solidarity, mutual agreement, and the expression of love. Likewise, there was a notable inverse correlation between perceived stress and sexual satisfaction, encompassing its various facets such as sexual attitude, sexual adjustment, and quality of sexual life. Essentially, as perceived stress levels decreased, both marital adjustment and sexual satisfaction showed improvement.

Alirezaei et al. (2022) undertook a thorough examination, employing a systematic review and meta-analysis, to explore how counseling interventions influence the marital and sexual satisfaction of couples grappling with infertility. This comprehensive analysis encompassed thirteen randomized clinical trials, involving 230 individual infertile women and 512 infertile couples. Adhering to the guidelines outlined in the "Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)" checklist, the study conducted a comprehensive evaluation of the risk of bias using the Cochrane Risk of Bias Tool. The outcomes revealed a noteworthy enhancement in both marital and sexual satisfaction among infertile couples who underwent counseling interventions. Employing a random-effects model, researchers calculated the combined effect estimate, with summary measures presented as a 95% confidence interval and percentage of heterogeneity. The research suggests that counseling and psychological interventions are highly recommended to support the emotional health of couples facing infertility challenges.

Hadi Sichani and Sajjadian (2022) sought to explore how marital adjustment serves as a mediator in the connection between stress due to infertility and emotional distress among women facing infertility. This research was conducted at the Infertility

Clinic of Esfahan, involving a cohort of 183 infertile women who utilized four research instruments. These included “Newton's Fertility Problem Inventory, Spinner's Marital Adjustment Inventory, Spielberger's State-Trait Anxiety Inventory, and Beck's Depression Inventory.” The research revealed that marital satisfaction acts as a partial mediator in the connection between stress from infertility and emotional distress in women facing infertility issues. Findings suggest that infertility-related stress contributes to heightened emotional distress, with marital satisfaction playing a crucial role in either amplifying or mitigating this effect. This implies that fostering a harmonious equilibrium within marriage might serve as a safeguard, lessening the adverse effects of stress related to infertility on one's mental health.

Wang (2022) endeavors to explore how pre-parenthood infertility distress influences the trajectory of marital instability and its implications for child outcomes within adoptive families. The research employs a prospective longitudinal approach, involving 461 adoptive families who have faced infertility struggles in their history. The research outcomes indicate that the pre-parenthood distress related to infertility experienced by adoptive mothers can be a precursor to marital instability and overreactive parenting. These issues may subsequently manifest in adolescent externalizing problems. The research uncovers inverted U-shaped patterns of marital instability for both mothers and fathers. Interestingly, mothers experiencing infertility distress show a correlation with heightened marital instability, particularly displaying a more rapid escalation in instability by the time the child reaches 4.5 years of age. The findings underscore the significance of partner support in lessening the link between distress caused by infertility and marital instability among mothers.

Chamorro et al. (2021) investigated the relationship between marital satisfaction, the psychosocial impact of infertility, and anxiety tendencies. Examining 87 couples, the research uncovered significant gender differences in the influence of depression, anxiety, and quality of life on marital satisfaction. This study adds to the body of literature on infertility and its effects on marital relationships, emphasizing the importance of a holistic approach to psychosocial care that addresses the interconnected experiences of couples. The findings could provide valuable insights for creating

strategies to support the mental health and well-being of couples facing infertility challenges.

Fard and colleagues (2021) undertook an investigation aimed at examining how sexual self-concept, family resilience, infertility stress, and marital adjustment interrelate among infertile women. Employing a correlational approach alongside structural equation modeling, they scrutinized data gathered from 244 infertile women undergoing infertility treatment in Iran. The study used several validated instruments to measure the study variables, including the Multidimensional Sexual Self-Concept Questionnaire, Family Resilience Assessment Scale, Fertility Problem Inventory, and Dyadic Adjustment Scale. It was shown that sexual self-concept, family resilience, and infertility stress were significant predictors of marital adjustment. Moreover, the research findings indicated that infertility stress's influence on marital adjustment was mediated by both sexual self-concept and family resilience. It demonstrated that higher levels of sexual self-concept and family resilience were associated with greater marital adjustment, whereas increased infertility stress was linked to lower marital adjustment.

Eghtedar et al. (2021) aimed to explore the complex interplay between marital adjustment, infertility-related factors, demographic characteristics, and the quality of life (QoL) in couples experiencing infertility. Their study involved 131 women and 79 men recruited from an infertility center in East Azerbaijan, utilizing a convenience sampling approach. To collect data, the researchers employed Spiner's Marital Adjustment Questionnaire in conjunction with a Quality-of-Life Questionnaire. The findings indicated that marital satisfaction, gender, and insurance coverage were significant predictors of quality of life in couples facing infertility, accounting for 78% of the observed variance. On average, female participants were 35.74 years old (±6.11), while male participants had an average age of 32.45 years (±5.72). The study's findings suggest that addressing marital adjustment, gender, and insurance factors may be crucial in improving QoL among infertile couples.

Bahmani and colleagues (2021) investigated how life skills training affected the marital adjustment of infertile women. Employing an interventional approach, the researchers enlisted 90 women grappling with infertility, referred to an infertility clinic

for evaluation, diagnosis, and therapy. The Spanier questionnaire served as the main instrument for data collection, assessing marital satisfaction, unity, concordance, love expression, and adaptation both prior to and following the intervention. After participating in the educational program, the intervention group showed significantly higher scores in marital satisfaction, unity, expression of love, and overall adjustment compared to the control group. Researchers determined that it is feasible to develop and execute training programs aimed at enhancing marital satisfaction among infertile couples.

Gică and colleagues (2021) endeavored to delve into the responses and adaptations of couples facing infertility diagnosis while also examining the interplay among social support, marital adjustment, and emotional disorders. within this context. The researchers employed a non-experimental correlational descriptive study design, employing cross-sectional analysis. They utilized questionnaires and quantitative data collection methods with a sample of 76 couples undergoing infertility treatment at different reproductive medicine clinics across Romania from 2018 to 2019. The surveys encompassed assessments of socio-demographic details, the "Interpersonal Support Evaluation List-12, infertility traits, the Fertility Problem Inventory, the Dyadic Adjustment Scale, Beck's Depression Inventory and the State-Trait Anxiety Inventory." Findings revealed a substantial psychological toll on couples due to infertility, with distress levels increasing alongside the duration of infertility. Women appeared to experience greater susceptibility to the psychological impacts of infertility in contrast to men, as indicated by elevated scores on assessments measuring distress, depression, and anxiety associated with infertility. The research found a negative correlation between marital adjustment scores and emotional disorders, indicating that couples with higher emotional distress were more likely to report lower levels of marital satisfaction.

Halıcı and Saatçi (2021) explored the connection between men's marital adjustment and their use of violence toward female partners in couples undergoing infertility treatment. A total of 286 male participants were recruited from the Infertility Outpatient Clinic at the Department of Obstetrics and Gynecology, Cukurova

University Faculty of Medicine, between June and October 2017. Information was collected through the utilization of the Sociodemographic Data Form, "Conflict Tactic Scale-2," and “Marital Adjustment Scale.” The findings revealed that a notable proportion of men (93.4%) admitted to perpetrating violence against their partners, with psychological violence emerging as the predominant form. The research found no significant correlation between men's overall violence and any of the sociodemographic variables analyzed. However, the study did find that men who had good marital adjustment were less likely to practice violence towards their partners. The study also highlighted a significant relationship between marital satisfaction and sociodemographic factors, including occupation, prior experiences with infertility treatments, and marital status.

Park and Shin (2021) endeavored to construct a predictive framework for evaluating the standard of living among men experiencing infertility. Their investigation involved gathering data from 242 infertile male outpatients across three infertility clinics affiliated with general hospital urology departments. Over a seven-month period spanning from February to August 2016, participants completed self-reported questionnaires to facilitate data collection. The research focused on evaluating various factors such as financial and social support, depression, marital adjustment, spirituality, and infertility-related stress. This was done using a variety of instruments, including the Fertility Problem Inventory, Beck Depression Inventory, Spirituality Assessment Scale, Dyadic Adjustment Scale, and Park’s Scale for financial and social support. The study found that stress related to infertility, depression, and spirituality were statistically significant factors affecting the quality of life in men dealing with infertility. Marital adjustment and social support did not show statistical significance. Together, the variables explained 84.1% of the variance. The study shows a negative correlation between stress related to infertility and depression, while demonstrating a positive relationship between spirituality and quality of life in infertile men.

Zeren and colleagues (2019) explore the intricate relationship between infertility treatment, dyadic adjustment, and the quality of life for couples. Their study employs a descriptive, cross-sectional design, involving 209 male and 213 female

participants undergoing infertility treatment. Data was gathered via an initial information form covering socio-demographic details, alongside the “FertiQol Scale” and the “Dyadic Adjustment Scale.” The study results revealed significant effects of gender and marital status on dyadic adjustment and quality of life ($p < 0.05$). Furthermore, income status was found to independently influence dyadic adjustment ($p < 0.05$). The study also uncovered a significant link between dyadic adjustment scores and quality of life scores ($p < 0.001$). This indicates that couples grappling with infertility issues may encounter hurdles not only in their relationships but also in their overall quality of life.

Li and his team (2019) aimed to investigate the impact of infertility stress on the psychological well-being of Chinese women undergoing infertility treatments, while also examining the potential moderating effect of marital adjustment in this relationship. The research involved 286 Chinese women receiving medical care for fertility issues at two state-owned hospitals. They filled out the “5-item Mental Health Inventory (MHI-5), the Fertility Problem Inventory (FPI), a questionnaire comprising the 7-item Dyadic Adjustment Scale (DAS),” and demographic details such as age. The research uncovered a significant link between stress induced by infertility and the mental well-being of women experiencing fertility challenges. In particular, the mental well-being of these women exhibited a noteworthy adverse relationship with both the comprehensive FPI score and distinct areas like Social Concern, Relationship Concern, and Rejection of Child-Free Lifestyle. The results indicate that stress linked to infertility may negatively affect the mental well-being of women experiencing infertility in mainland China.

Roosta and his team (2019) conducted a study investigating the connection between cognitive emotional regulation strategies and marital adjustment within infertile couples. The study encompassed a sample size of 122 couples. The tools used in the study were “Spanier's Dyadic Adjustment Scale and Cognitive Emotion Regulation Questionnaire.” The research revealed a connection between cognitive-emotional regulation strategies and marital satisfaction among couples facing

infertility. This underscores the importance of having psychologists available at infertility centers to provide crucial support and counseling.

Chaves and his team (2019) aim to examine the impact of dyadic coping on the marital and emotional adjustment of couples facing infertility. The research employed a cross-sectional approach, involving 134 participants. The study included 67 couples experiencing infertility. They were tasked with completing several questionnaires, including the "Hospital Anxiety and Depression Scale, the Dyadic Adjustment Scale—Revised, The Dyadic Coping Inventory, and the Fertility Problem Inventory." The research suggests that infertility impacts the quality of relationships indirectly, via how both men and women perceive and engage in coping strategies together. Men's coping efforts affect themselves, while women's efforts impact their partners. Furthermore, research indicates that the emotional adjustment of infertile couples is influenced by infertility stress, especially through its impact on depressive symptoms. This process is further facilitated by men employing dyadic coping strategies. These findings highlight the importance of men utilizing dyadic coping strategies, not only to improve marital adjustment between couples but also to foster emotional well-being in men.

Sobhani et al. (2018) conducted research on "Effectiveness of Cognitive Behavioral Therapy based on body image on sexual satisfaction and marital adjustment of married infertile women". This study adopted a quasi-experimental framework, integrating pretest, posttest, and follow-up assessments along with a control group. The study was carried out with a sample of 30 women experiencing infertility. The tools used in the study were Sexual Satisfaction Scale, Dyadic adjustment scale. It was found in the study that Cognitive behavior therapy of body image helped improve self confidence in sexual relationships and sexual satisfaction. It was also found that their marital adjustment got better.

In 2018, Kim and colleagues explored the relationship between quality of life, depression, marital adjustment, and infertility stress in couples facing infertility. Using a cross-sectional methodology, the research examined 121 infertile couples, employing four separate questionnaires: "the Beck Depression Inventory, Revised Dyadic Adjustment Scale, Fertility Problem Inventory, and Fertility Quality of Life." The study

uncovered gender differences in stress levels related to infertility, depression, and quality of life. It highlighted that infertility stress notably affected the quality of life for both individuals within infertile couples, showcasing both individual and mutual repercussions. Marital adjustment significantly impacted wives' quality of life, while it did not show the same effect for husbands. Depression impacted the quality of life for both wives, affecting not only their own experiences but also those of their partners. However, for husbands, its impact was limited to their own quality of life.

Khakpour and her team (2017) embarked on a study aiming to investigate the impact of the Fordyce happiness model on marital adjustment and hardiness within couples experiencing infertility. Using a semi-experimental approach, the researchers selected 20 infertile couples from Quchan and Faruj cities. The pairs were then randomly assigned to either the experimental cohort or the control cohort for the study. The experimental group took part in a 14-session psycho-educational program centered on happiness, based on the Fordyce happiness model. Alternatively, the control group did not receive any intervention. Results from the study showed that the Fordyce happiness model notably enhanced both hardiness and marital adjustment among the experimental group compared to those in the control group. The authors utilized repeated measures analysis of variance to evaluate how the test interacted with each dependent variable, assessing them individually. They discovered a significant impact of group dynamics and testing time on all dependent variables. Additionally, a statistically significant difference emerged between pre-test and post-test scores for both variables, with post-test scores showing a favorable increase.

In 2015, Qadir and his team launched a cross-sectional study to explore the connection between marital adjustment, social support, and psychological distress in Pakistani women experiencing primary infertility. The study comprised interviews with 177 women, employing a Self-Reporting Questionnaire alongside the “Locke-Wallace Marital Adjustment Test” and the “Multidimensional Scale of Perceived Social Support.” It was discovered that a significant portion, specifically 37.3 percent, of the women were grappling with psychological distress, indicating a notable prevalence of this condition within the sample group. The results from the logistic regression analysis

reveal that, regardless of demographic factors, both marital adjustment and social support are negatively correlated with psychological distress in Pakistani women experiencing primary infertility. This highlights the crucial importance of social support and marital harmony in promoting the psychological well-being of these women.

Najafi and colleagues (2015) explore how “Emotionally Focused Therapy (EFT-C)” could bolster the quality of life and marital harmony for infertile couples navigating through marital challenges. The study utilized a semi-experimental pre- and post-test design, selecting 30 infertile couples through purposive sampling. The couples were then randomly assigned to two groups, each consisting of 15 couples. The research employed questionnaires to evaluate the quality of life, sexual satisfaction, and marital adjustment in both the sample and control groups. After this assessment, the sample group underwent 10 sessions of EFT-C, whereas the control group received no intervention. The results revealed a significant influence of EFT-C on both marital adjustment and quality of life. The introduction of EFT-C led to significant improvements in the physical, psychological, and social well-being of infertile couples, creating a more supportive and compassionate social environment for them.

Ferreira and colleagues (2015) investigate how infertility and adjustments in fertility impact marital satisfaction. The study involves 106 women being followed at the reproductive medicine unit of the Center of Portugal. The data collection is through a questionnaire that includes a socio-demographic component, obstetric history, personal history, and two scales- Fertility Adjustment Scale and Evaluation Scale regarding Marital Life Satisfaction. The findings suggest that age, prior pregnancies, and attendance at medical services all play a role in influencing fertility adjustment. Specifically, age and existence of previous pregnancies influence "Total Adjustment", and the number of services one attends influences "Life on Hold". On the other hand, marital satisfaction is influenced by education level and the beginning of infertility treatments, specifically on "Sexuality".

In 2014, Luk and Loke conducted a systematic review to explore how infertility affects couples' psychological well-being, marital dynamics, sexual relationships, and

overall quality of life. The study sought to offer an in-depth exploration into the multifaceted effects of infertility on couples' lives, leveraging evidence sourced from articles spanning the years 2000 to 2014 and cataloged in databases like MEDLINE, PsycINFO, and CINHAL Plus. There's a wealth of consistent evidence indicating that infertility adversely affects the psychological well-being of couples. Although certain research indicates that infertility may harm marital relationships, the evidence remains inconclusive. Infertility seems to adversely affect sexual relationships within couples, with results indicating reduced sexual satisfaction and intimacy. The review presents a nuanced perspective on how infertility affects the overall quality of life. By conducting thorough analysis, it provides valuable perspectives on the complex and diverse effects infertility exerts on couples' lives.

Karamidehkordi and Roudsari (2014) explored how marital adjustment, sexual function, and body image interrelate among women experiencing infertility. This correlational study was conducted in Iran in 2011. The study involved 130 infertile women, recruited with a convenient sampling method. The research employed trustworthy questionnaires, such as “Spanier Dyadic Adjustment Scale (DAS), Rosen Female Sexual Function Index (FSFI), and the adapted Younesi Body Image Questionnaire.” The research identified a clear link between overall body image perception and various aspects of sexual function, such as arousal, desire, vaginal lubrication, orgasm, satisfaction, and discomfort during intercourse. Moreover, a distinct correlation surfaced between an individual's holistic body perception and multiple facets of marital harmony, including mutual understanding, contentment, stability, and the articulation of feelings within the familial realm. These results indicate that greater body satisfaction correlates with enhanced sexual well-being and marital harmony among women facing infertility.

Cserepes and colleagues (2013) initiated a preliminary investigation aimed at examining how gender roles, motives for having children, marital adjustment and subjective well-being contribute to stress related to infertility. The research focused on Hungarian men and women seeking fertility assistance at a specialized unit. The research employed a range of instruments including the Masculinity–Femininity Scale,

The Leipzig Questionnaire, Beck Depression Inventory, Life Meaning Subscale, General Health Questionnaire, The Fertility Problem Inventory and Dyadic Adjustment Scale to gather data from a cohort of 53 participants. The research uncovered that stress related to infertility, social worries, and overall health problems exerted a more significant influence on women compared to men. Women experiencing infertility displayed elevated femininity scores but lower general health scores in contrast to the control group. On the other hand, infertile men were found to consider deeper meanings of life than infertile women or the control group. The study also revealed that femininity, traditional gender role concepts, general health, and marital relationship were the strongest predictors of stress caused by infertility.

In 2011, Valsangkar and his team conducted a study to explore how infertility affects women's satisfaction in marriage and sexuality, as well as its broader implications for their overall health-related quality of life. The study employed a cross-sectional controlled design conducted in a hospital setting. Data were collected from 106 women seeking assistance at tertiary infertility centers, meeting the criteria for primary infertility. Additionally, 212 control subjects were included from the medical outpatient department within the same centers. Data were gathered via a semi-structured questionnaire encompassing details on infertility, socio-demographic traits, and acceptability of treatment. The study employed the FertiQol, abbreviated sexual functioning questionnaire and abbreviated dyadic adjustment scale as its tools. Results indicated that both body mass index and socioeconomic status emerged as significant influencers of infertility. Fertility-boosting routines and adoption ranked highest in acceptability, whereas sperm, egg, embryo donation, and surrogate motherhood garnered the least approval. Logistic regression analysis highlighted infertility's notable impact on marital adjustment and sexual functioning, demonstrating a decline in average scores on the FertiQol scale resembling typical normative data trends. The authors assert that comprehensive treatment for infertility should encompass effective counseling, reassurance, and interventions aimed at mitigating its effect on the well-being of marriage and sexuality, along with the overall quality of life.

In 2010, Tüzer and colleagues initiated an investigation delving into the correlation between emotional symptoms and marital contentment among couples encountering infertility, specifically emphasizing gender disparities. The research comprised an examination of 60 primary infertile couples. Their evaluation utilized the “Dyadic Adjustment Scale, State and Trait Anxiety Inventory, and Beck Depression Inventory.” The study investigated the correlation between infertility and the scores of both men and women. Multiple regression analysis was employed to explore the relationships between emotional symptoms and marital adjustment. The findings highlight significant gender differences in the expression of affection and in sexual satisfaction levels, as measured by the "Dyadic Adjustment Scale." Additionally, researchers noted that various aspects of marital adjustment can act as indicators for anxiety and depressive symptoms in infertile men, particularly in cases where the infertility originates from male factors.

The reviewed studies on marital adjustment during infertility treatments provide valuable insights but are hindered by several methodological limitations. Longitudinal studies offer valuable time-based insights but face challenges like sample attrition and shifting societal attitudes, which can impact marital satisfaction. Self-reported data in many studies introduce biases such as social desirability and memory recall, which can distort findings. Comparative analyses across different studies would help identify common coping mechanisms, and integrating attachment theory would offer a more comprehensive understanding of the marital dynamics during infertility treatments. Furthermore, while cultural variations, particularly the stigma surrounding infertility, are acknowledged, they have not been explored in sufficient depth, limiting the generalizability of the findings. Counseling interventions are valuable, but understanding the barriers to their implementation in healthcare settings could enrich the discussion. More research is needed to explore causal relationships between marital quality and psychological well-being, particularly focusing on the role of spousal support and coping strategies.

In the context of infertility's psychological impact, several studies offer useful insights but are constrained by limitations such as cross-sectional designs, small sample sizes,

and reliance on self-reported data. For example, studies that link infertility stress to marital adjustment face challenges with potential biases introduced by self-reports. Other studies that identify key predictors of marital satisfaction or emotional distress are also limited by cross-sectional designs, which prevent conclusions about causality. The small sample size in some studies further limits the generalizability of findings. There is a need for more nuanced exploration of the cultural and social factors influencing marital satisfaction and emotional distress. Additionally, while coping strategies are recognized as important, future research should consider individual differences in their effectiveness. The lack of control groups in certain studies weakens the validity of the findings. Overall, while the studies reviewed provide important insights, future research should address the methodological limitations by incorporating larger and more diverse sample sizes, longitudinal designs, and socio-economic factors to provide a more comprehensive understanding of infertility's impact on marital adjustment and psychological well-being.

2.4 Studies related to Quality of Life

Bueno-Sánchez and colleagues (2024) explore the complex relationship among infertility diagnosis, adherence to gender norms, and the significant psychosocial ramifications on the well-being of infertile couples in Spain. The cross-sectional study serves a twofold aim: firstly, to explore whether the sex-specific dimension of infertility diagnosis influences the quality of life for couples affected, and secondly, to assess the influence of adherence to gender norms on their psychosocial well-being. Using "the Conformity to Feminine and Masculine Norms Inventories" alongside the "Fertility Quality of Life Questionnaire (FertiQoL)," the investigators examined data from 219 Spanish couples grappling with infertility, encompassing a total of 438 individuals. The findings of this study unveil captivating understandings regarding the complex dynamics of psychosocial impacts originating from infertility. Regardless of adherence to traditional gender roles or the source of the infertility diagnosis, women consistently report diminished levels of self-perceived quality of life. This notable difference highlights the inherent psychosocial fragility experienced by women dealing with

infertility, emphasizing their increased vulnerability to negative emotional and relational consequences.

Yadav and colleagues (2024) explore the complex relationship among infertility, women's emotional distress, and quality of life (QOL). Their study, conducted at a tertiary care facility in North India, sheds light on the often-overlooked psychological dimensions of infertility in discussions. The researchers used the "Depression, Anxiety, and Stress (DASS)" and the "Fertility Quality of Life (FertiQOL)" questionnaires to evaluate the emotional distress and well-being of 115 women experiencing infertility. Their findings unveiled a somber truth: a considerable portion of the participants reported a diminished quality of life alongside significant emotional turmoil. The study highlights a significant toll on women's psychological well-being due to infertility, as evidenced by notable distress levels indicated by mean FertiQOL and DASS scores. A notable finding reveals a clear inverse relationship between emotional distress and quality of life (QOL). As QOL declines, emotional distress intensifies, underscoring their intertwined nature in the realm of infertility. Additionally, the research pinpointed sociodemographic and clinical factors that notably influence both emotional distress and QOL, underscoring the intricate impact of infertility.

Al-Mendalawi (2024) provides an in-depth evaluation of Kumari et al.'s (2023) study on the quality of life (QoL) related to reproduction in infertile couples in India. Kumari et al.'s findings highlight a significant gender disparity in fertility-related quality of life (QoL), with women generally reporting a lower QoL than men. Consequently, the authors recommended psychological counseling and support specifically tailored for females seeking infertility treatment. However, Al-Mendalawi raises a pertinent limitation regarding the methodology employed in the study. The research employed the "Fertility Quality of Life (FertiQoL) tool" to assess how fertility challenges affect individuals' quality of life (QoL). However, it did not clarify whether it used the international version or a validated local version of the tool. This oversight raises doubts about the reliability and accuracy of the study results, given that the suitability of the FertiQoL tool may differ among various demographics. The FertiQoL

tool is widely recognized for its reliability and effectiveness in measuring fertility-related QoL across diverse populations. However, its successful implementation requires validation for specific demographic groups. Different versions of the FertiQoL tool tailored to specific populations have been created and confirmed for application in healthcare settings and research.

Suleiman et al. (2023) investigate the intricate issue of infertility and its impact on the quality of life (QoL) of female patients undergoing treatment at the infertility clinic at Mnazi Mmoja Hospital in Zanzibar. The research utilizes a hospital-based cross-sectional methodology, investigating 340 infertile women by employing the FertiQoL tool to assess their quality of life (QoL) alongside related factors. The findings unveil a nuanced picture. The average QoL score stands at 70.6 ± 10.0 on a scale of 0 to 100, indicating a moderate level of QoL among the participants. However, the study uncovers significant associations between QoL and various factors. Education emerges as a beacon of hope, as QoL increases significantly with higher educational attainment. The study also highlights the varying impact of infertility causes, showing that women with female-specific causes or a combination of female and male partner factors experience a significant decline in quality of life (QoL) compared to those with male partner-related issues. Furthermore, the distinction between primary and secondary infertility surfaces as a critical factor. Women grappling with secondary infertility exhibit a lower QoL compared to those with primary infertility. This disparity underscores the unique emotional and psychological burden associated with secondary infertility, which warrants tailored interventions.

Minthami and colleagues (2023) delve into the intricate landscape of quality of life (QoL) for women dealing with infertility. Acknowledging the diverse facets of Quality of Life (QoL), the authors utilize the FertiQoL tool to delve into the emotional, physical, relational, and societal aspects of well-being. This study takes place within a single-center, cross-sectional design conducted over a two-year period at a hospital. It involves 209 female patients receiving care at the facility. The findings of the research highlight the substantial impact of infertility on various aspects of women's lives. Through statistical analyses, the researchers establish significant associations between

socio-demographic determinants and QoL scores, unveiling nuanced interplays between factors such as socioeconomic status, religion, residence, and family type. Particularly noteworthy are the negative correlations identified between age group and infertility duration with total mean scores of Core FertiQoL, underscoring the enduring toll of infertility on emotional and psychological well-being.Central to the study's conclusions is the revelation of lower QoL among women contending with fertility issues, as evidenced by FertiQoL assessments.

In their 2023 study, Yerra et al. meticulously conducted a mixed-methods inquiry, exploring the intricate correlation between psychological stress and quality of life (QoL) among women grappling with infertility. Taking place at a tertiary health center, the research team comprising members from the ESIC Medical College, Hyderabad, Telangana, initiated a quest to explore the intricate experiences of women facing infertility from December 2020 to August 2021. The quantitative aspect of the research involved 274 participants who satisfied the inclusion criteria, while the qualitative component focused on in-depth interviews with 10 women who had previously undergone infertility treatment. Using the “Perceived Stress Scale (PSS)” and the “Modified FertiQoL (Core)” instruments, the study thoroughly explored the relationship between psychological stress and quality of life (QoL), offering insights into the difficulties women encounter in their pursuit of fertility. The findings, as elucidated by the authors, paint a poignant picture of the psychological turmoil endured by infertile women. The participants, averaging 29.17 years old with an infertility duration of 6.17 years, faced notable stress levels, reflected in their elevated mean PSS score of 21.07 ± 4.350. Concurrently, the Core FertiQoL scores depicted a concerning trend of diminished QoL, with a mean of 49.20 ± 7.232. The negative correlations discovered between PSS scores and several aspects of FertiQoL, such as the emotional and mind–body subscales, were particularly significant. The study highlighted a notable negative relationship between PSS scores and quality of life, especially among women over the age of 30 and those who have been experiencing infertility for more than five years.

Adeleye et al. (2022) investigated the impact of online video education (LOVE) on enhancing self-efficacy, quality of life, and perceived stress among patients undergoing fertility treatments. The study included 368 patients, with 257 completing the research. Participants were randomly assigned to one of two groups: the intervention group, which watched educational videos about fertility medications, and the control group, which received standard care. The researchers assessed the impact of the videos on scores from the “Fertility Quality of Life Treatment (FertiQoL-T), the Infertility Self-Efficacy Scale (ISES) and the Perceived Stress Scale (PSS).” The study's results indicated that while educational videos didn't significantly impact psychological well-being, they notably boosted confidence in medication administration and reduced medication errors. The study indicates that online video education may be an effective tool in enhancing patient confidence in administering medication during fertility treatments.

Maeda and his research team (2022) endeavored to explore the correlation between working conditions and the quality of life related to fertility among women in Japan. Their research employed a cross-sectional survey methodology, enlisting 721 participants through an internet-based social research panel. Participants filled out online surveys to evaluate their fertility-related quality of life using the "FertiQoL scale" and to assess their job stress levels based on the demand-control-support model. The research results unveiled a clear connection between specific work conditions and the quality of fertility-related life for both females and their significant others. Significantly, easy access to time off, reasonable workloads, and a nurturing workplace atmosphere were pinpointed as crucial elements that improve the quality of life concerning fertility. These factors help improve the management of work responsibilities and fertility treatments, resulting in an overall improvement in the quality of life in this area. Conversely, research has indicated that occupational stress can detrimentally affect the quality of life related to fertility.

In their 2022 study, De Rose and colleagues explore how the length of infertility affects the psychological well-being and quality of life of couples struggling with infertility. This study included 442 women facing infertility, all of whom participated

in completing the “Fertility Quality of Life Questionnaire (FertiQoL).” The researchers found that prolonged periods of infertility have a considerable impact on the quality of life and psychological well-being of women. Their findings underscore the importance of providing psychological support, particularly to individuals experiencing prolonged infertility, to improve their overall well-being and psychological wellness.

Hernandez Hernandez and colleagues (2022) explore the impact of poor ovarian response (POR) on the quality of life and sexual function of women undergoing in vitro fertilization (IVF) treatment. The study, carried out in Bologna, Italy, comprises 70 women experiencing poor ovarian response (POR). The research utilizes the “Female Sexual Distress Scale-Revised (FSDSR)” to gauge sexual dysfunction and employs the “Fertility Quality of Life (FertiQOL)” questionnaire to assess quality of life. The findings suggest that diminished ovarian reserve and patient age have minimal impact on the quality of life and sexual distress experienced by individuals identified as poor ovarian responders. Instead, social, and sexual concerns are more critical in these patients, particularly those with longer durations of infertility and previous failed IVF attempts. The authors propose that healthcare providers consider these factors when caring for patients with POR.

In 2022, Damayanti and her team conducted research to evaluate the psychological well-being of Indonesian individuals experiencing infertility. They utilized the Indonesian online version of the "Fertility Quality of Life (FertiQoL)" survey for their study. This cross-sectional study included 214 participants from various regions of Indonesia, all of whom were over 18 years old and faced fertility challenges. The study found that age, education, and medical conditions were significant sociodemographic factors that impacted FertiQoL scores. Age influenced the “Mind/Body, Social, Core FertiQoL, and Total FertiQoL subscales,” while education was a factor in shaping the Environment and Tolerability subscales. Medical conditions had an impact on the Environment subscale. Moreover, the study revealed that 32.72% of people facing infertility also contend with mental health conditions, with 16.36% experiencing depression and anxiety each.

In their 2022 study, Suleimenova and her team examined the quality of life of women undergoing in vitro fertilization (IVF) treatment in Kazakhstan, using the FertiQoL tool.Their cross-sectional study, encompassing 500 participants, unveiled that variable such as infertility duration, age, and socioeconomic status detrimentally influenced women's quality of life. Conversely, governmental subsidies for infertility treatment were found to enhance women's well-being. Moreover, research indicates that the healthcare expenditure to GDP ratio might correlate with women's overall satisfaction levels.

Makara-Studzińska and her team (2022) aim to evaluate the quality of life of men undergoing infertility treatment in Poland. The researchers employed a cross-sectional study design and used the "Fertility Quality of Life tool," the "World Health Organization Quality of Life questionnaire," along with a questionnaire created by the authors to collect data. The research involved 1200 men receiving infertility treatment. Results indicated that men whose partners underwent treatment without assisted reproductive technology (ART) reported significantly lower quality of life (QoL) compared to those whose partners underwent intrauterine insemination (IUI). Furthermore, the treatment men received and the particular reproductive challenges they faced both played significant roles in shaping their quality of life. Notably, those undergoing non-ART treatment, residing in rural areas, and having a higher body mass index (BMI) were correlated with diminished quality of life.

Çambel and Akköz Çevik (2022) aimed to determine the prevalence of violence in intimate relationships and families among women seeking treatment at an infertility clinic. Their study explored the connection between this violence and its impact on the overall quality of life of women. The study utilized a cohort of 125 female participants who underwent infertility treatment at Gaziantep University Hospital, Gynecology Outpatient Department, during the period from June to September 2019. Data collection involved three distinct tools: the "Fertility Quality of Life Questionnaire (FertiQoL)" and the "Questionnaire form", the "Infertile Women's Exposure to Violence Determination Scale (IWEVDS)." The study findings indicated that a notable portion of women visiting infertility clinics encountered intimate partner or familial violence,

with 36.8% of participants disclosing instances of such violence. The research revealed a significant negative correlation between the IWEVDS score and the quality of life in women who have experienced violence. This implies that as women were exposed to more violence, their quality of life worsened. The study's discoveries also unveiled insights about women subjected to violence exhibited diminished FertiQoL scores, suggesting a detrimental influence of violence on their quality of life concerning fertility.

In 2022, Hassan and his team explored the relationship between the quality of infertility care services and the emotional health of South Asian women undergoing fertility treatments. Their study, a descriptive, cross-sectional, correlational analysis, involved 350 women receiving fertility treatments at private reproductive healthcare facilities in Quetta, Pakistan. The research examined the effectiveness of infertility treatment by utilizing the 10-item treatment module of the FertiQol tool, while emotional well-being was gauged through the COPE Inventory tools. The findings revealed that individuals who exhibited high tolerance towards treatment tended to employ positive reframing, an effective emotion-focused coping strategy. On the flip side, individuals with a low tolerance for treatment often leaned towards coping strategies that involve avoidance, like disengaging from activities or expressing frustration through venting. Furthermore, the conducive environment provided by infertility treatment facilitated women in employing problem-solving coping strategies like planning and active engagement. These findings hold particular importance within the South-Asian cultural milieu, where social, cultural, and economic influences greatly impact infertility treatment.

Elsous and colleagues (2021) aim to investigate the quality of life among infertile couples living in the “Gaza Strip, Palestine.” Employing a cross-sectional study design, the researchers opted for convenient sampling to recruit 383 infertile couples for their investigation. The researchers utilized the “Fertility Quality of Life Questionnaire” to collect data. Results indicate that males achieved higher FertiQoL scores, including its subscales, compared to females. Furthermore, a direct relationship was noted between FertiQoL scores and increased educational attainment. On the other

hand, an inverse correlation was found with factors such as age, length of marriage, duration of infertility, and the number of IVF attempts. The authors propose that regular psychological evaluations and counseling should be standard practice for infertile women, acknowledging the various factors influencing the standard of their living.

Kargol and Zemlianykh (2021) explore the emotional and behavioral aspects of stress linked to infertility, focusing on women facing this challenge. Researchers use a variety of research instruments, including Beck's Anxiety Scale, Beck's Depression Scale, FertiQoL J. Boivin questionnaire, R. Leahy Scale of Emotional Schemes Questionnaire (LESS II), and the COPE coping strategies questionnaire, to study anxiety, depression, coping strategies, emotional schemes, and the psychological element of the lifestyle quality. The study involved 33 women experiencing infertility (main group) and 33 women without infertility who were not currently planning a pregnancy. The study findings indicate that women facing infertility encountered inadequate satisfaction with their quality of life. They subjectively reported emotional distress, insufficient social support, and some dissatisfaction with their marital relations.

Bayoumi and colleagues (2021) aimed to evaluate the quality of life (QoL) of Sudanese patients attending a fertility clinic by using the fertility quality of life tool. The study employed an explanatory sequential design, combining surveys and interviews, and involved 102 participants. The findings revealed that infertility significantly impaired the quality of life of the patients, with women experiencing a more pronounced negative impact than men. Cognitive assessment, social support, and stress are recognized as key factors that significantly impact the well-being of individuals facing infertility. The study emphasizes the significance of providing comprehensive support, encompassing both social and professional aid, to individuals grappling with infertility, thereby augmenting their overall well-being.

Shin et al. (2021) explored the complex interplay between depressive symptoms, quality of life, and social support among Korean women dealing with infertility. The research employed a cross-sectional, descriptive approach, enrolling 186

adult women. These individuals employed the “Patient Health Questionnaire 9” for evaluating depression symptoms, the “Fertility Quality of Life (FertiQOL) scale,” and the “Multidimensional Scale of Perceived Social Support.” The results shows that women facing infertility alongside symptoms of depression tended to exhibit lower scores on the FertiQOL scale. Factors such as the duration between infertility diagnosis and data gathering, historical and ongoing treatments, financial strain, and the extent to which infertility hindered daily activities notably influenced participants' FertiQOL scores.

Szigeti and colleagues (2020) center their research on validating the FertiQoL questionnaire within a cohort of Hungarian women experiencing infertility challenges. 320 women who were facing infertility took part in the study, completing both the FertiQoL questionnaire and the Beck Depression Inventory (BDI). The research revealed a negative correlation between depression levels and fertility-specific quality of life. Additionally, it was discovered that the BDI categories (mild, moderate, etc.) align with notably different ranges of FertiQoL scores. This correlation might indicate a clinically significant threshold on the Core FertiQoL scale. The research findings also indicated that specific elements correlated with an enhanced quality of life concerning fertility. These factors include experiencing secondary infertility, residing in rural areas, and being in a pre-treatment phase. These discoveries suggest that the happiness and mental health of women experiencing infertility could be impacted by various personal and environmental factors.

Jones et al. (2020) in studying acceptability of social egg freezing (SEF) did a cross sectional survey with Fertility Quality of Life scale. Ninety-four women participated in SEF procedures from January 2008 to October 2019. According to the authors, SEF was found to be mostly well-tolerated, resulting in favorable FertiQoL scores in comparison to infertile women undergoing IVF treatments. The authors also pointed out that although individuals with SEF retain their physiological fertility, their social situation renders them unable to conceive, underscoring the necessity for extra support, counseling, and supervision throughout their journey.

In Tehran, Sani and Tamannaeifar (2017) conducted a comparative study to assess and compare the quality of life (QOL), self-efficacy, and resilience between 60 infertile women and 60 fertile women. Findings revealed that infertile women show low levels of QOL, self-efficacy and resilience than fertile women.

In 2017, Amiri and colleagues conducted a study in Iran to examine the quality of life among women, comparing those who were fertile with those who were infertile. This cross-sectional study, conducted in 2013, included 1,528 participants. Among them, 511 were identified as infertile, while 1017 were deemed fertile. In this research, it was discovered that women without children tended to exhibit lower scores in both mental and general health compared to their counterparts who were fertile.

S. Lagter et al. (2015) examined the quality of life in a specific subset of the population, emphasizing factors such as obesity grade, type 2 diabetes, metabolic syndrome, and inflammation. Sample of 13,686 people with obesity participated. Cohort Study design used in this research and RAND 36-Item Health Survey version 1.0 was self-filled by participants. The result shows that the increased levels of obesity and Type 2 related to lower HR-QOL, especially in the case of physical functions.

Huppelschoten et al. (2013) conducted a study exploring the quality of life (QOL) and emotional experiences of infertile women and their partners. The research, conducted as a cross-sectional study involving 1,620 women and their partners, revealed that women who were unable to conceive experienced lower levels of quality of life (QOL) and emotional well-being compared to their partners.

Keramat et al. (2013) carried out a cross-sectional study to assess the quality of life and the factors associated with it among 385 infertile couples in Iran. The researchers utilized several scales for data collection, including “the Iseng Test, the Social Support Scale by Cassidy and Long, the Lindaberg Questionnaire, WHO-QoL-BREF, and FertiQoL.” The findings reveal a significant relationship between quality of life (QOL) and factors like marital satisfaction, sexual satisfaction, social support, and self-esteem.

In their 2008 study, Lau and colleagues examined the perceptions and responses to infertility and its impact on the well-being of a group of Chinese couples facing infertility. This cross-sectional research involved 192 couples seeking fertility assistance at a clinic in China. Gender-based disparities were also examined in the study. Findings revealed that more than 30% of couples felt unable to thrive together, with 80% expressing a strong desire for parenthood. Additionally, over 60% experienced self-imposed or spousal pressure regarding infertility issues, while more than half of the participants reported feeling pressured in their sexual experiences. Furthermore, 37.5% of females and 19.8% of males held the belief that infertility causes shame for women who cannot conceive.

In 2004, Artazcoz and colleagues embarked on a study exploring how gender disparities intersect with mental health in relation to employability. Their aim was to investigate the impacts of gender, familial roles, and social class on this dynamic. The sample size of 3881 employed and 638 unemployed workers. In this cross-sectional survey research data was gathered from the sample. The self-reported information contained morbidity, health status, health-related behaviors, and effective use of health care services. It includes socio demographic data also. The result suggested that unemployment affected the mental health of men where as it had less effect on women.

Foster et al. (2003) conducted a study to evaluate QOL in adults with juvenile idiopathic arthritis. The study involved 82 patients who participated. The research employed the "Health Assessment Questionnaire (HAQ) and the Short Form 36-item Health Profile (SF-36)." Additionally, the questionnaire served as a measure of educational attainment and occupational standing. The result shows that most of the patients had been suffering from the illness in adulthood. Patients diagnosed with "juvenile idiopathic arthritis (JIA)" found their overall health and quality of life greatly affected, while their physical functioning largely remained intact.

In 2000, Burgess and his team initiated a study aimed at investigating the correlation between personality traits, coping strategies, social support, and the health-related quality of life of individuals living with HIV infections. The participants were

HIV seropositive individuals at all disease stages from three sample (a) gay/ bisexual men from UK, (b) infected drug users from UK, (c) infecting drug users from Italy. Questionnaires of QoL, personality, coping style and social support were completed by participants. The result shows that health status was modestly associated with the physical but not the psychological QOL.

The reviewed studies provide valuable insights into the psychological and social impacts of infertility, particularly emphasizing the emotional distress and reduced quality of life (QoL) experienced by individuals, especially women. However, many studies overlook the cultural, socioeconomic, and gender factors that shape these experiences. For instance, the role of cultural norms in influencing emotional distress could be explored more deeply. While sociodemographic factors like education and infertility duration have been examined, factors such as employment status or family dynamics remain underexplored, despite their potential for providing more nuanced insights. Methodologically, several studies face limitations, such as small sample sizes and lack of follow-up data, which restrict the generalizability of the findings. Additionally, many studies fail to consider the intersectionality of different factors, such as the interaction between work-related stressors and cultural or socioeconomic conditions. The exclusion of male partners' experiences, particularly in studies that focus on female infertility, further narrows the scope of understanding. Future research would benefit from including both partners' perspectives and adopting longitudinal designs to provide a more holistic view.

Moreover, while some studies introduce innovative ideas like educational interventions and the role of work-related stress, these factors are often examined in isolation, without considering how they interact with broader cultural or socioeconomic variables. Additionally, more attention should be given to the long-term psychological effects of infertility and its treatment, particularly in terms of intimate partner violence and emotional health. In conclusion, while these studies offer important contributions to understanding the complex psychological and social impacts of infertility, there is a clear need for more comprehensive research. Future studies should explore cultural,

economic, and gender dynamics more deeply and include diverse samples to ensure a more inclusive understanding of infertility's impact on individuals and couples.

2.5 Research Gap

Socially marriages occur between families rather than between individuals. Therefore, the socio cultural and family related impact on infertile couples needs detailed study. All over Europe and the USA it is mandatory to have a trained infertility counselor in every infertility clinic. But in India trained infertility counselors are almost nonexistent. The Indian social norms consider the infertile couple as unacceptable due to which they face a lot of emotional disturbances and which will eventually affect the quality of life. Different societies have different norms and taboos to address the infertile couple.

Due to significant regional disparities in the comprehension of infertility and its consequences, it is imperative to undertake research that is socially and culturally attuned. In Kerala, there is a conspicuous absence of substantial focus on investigating the quality of life concerning fertility issues. In Europe and various regions across the globe, numerous publications focus on infertility treatment. Infertility is closely linked with cultural factors and intercultural variations. In India there is a wide difference in terms of culture and social life, in spite of this there are very few studies in this area. Infertility is a distressing experience that badly affects the lives of the person in social, emotional, and psychological aspects. Quality of life is a fundamental necessity for individuals grappling with infertility.

This study aims to explore the impact of illness cognition and self-efficacy on marital adjustment and quality of life in individuals dealing with infertility. Depending upon the study people can modify their lives using various techniques to improve Illness Cognition. It will result in enhanced quality of life for those experiencing infertility.

There is a need for understanding the psychosocial problems in infertile couples because they face a lot of problems and they need to develop a clearer insight about it. It is a pertinent need to address the problem of infertility, associated psychological

trauma, the psycho social stress related to the prolonged treatment, in relation to socio economic and educational conditions in this state. Research in infertility area will develop awareness about the issues related to this and it will help many couples undergoing infertility treatment.

This study aims to provide the necessary inputs to Practicing psychologists so that they can formulate strategies and effective interventions. The present study will address an under researched area of infertility treatment's impact on Couples and their life's quality, adjustment in martial life, Self-efficacy, and Illness cognition in Kerala.

CHAPTER III

METHODS AND MATERIALS

3.1 Research Problem

The interrelationships between illness cognition, infertility self-efficacy, marital adjustment, and fertility quality of life, along with their differences across various sociodemographic and clinical variables, among couples undergoing infertility treatment.

3.2 Research Objectives:

1. To identify the relationship among illness cognition, self-efficacy, marital adjustment, and quality of life of individuals undergoing infertility treatment.
2. To investigate the influence of illness cognition, marital adjustment, and self-efficacy on quality of life among individuals undergoing infertility treatment.
3. To find the differences in illness cognition, self-efficacy marital adjustment and quality of life among individuals undergoing infertility treatment with respect to demographic variables (Gender, Age, Religion, Education qualification, Employment, Monthly income, Family history of infertility, Duration of Marital Life, Family Type, Cohabitation, Infertility Type, Infertility Factor, Duration of Infertility treatment, Number of IUI and IVF)

3.3 Research Hypotheses

1. There is significant relationship among illness cognition, self-efficacy, marital adjustment, and quality of life in individuals undergoing infertility treatment.
2. There is significant influence of illness cognition, marital adjustment, and self-efficacy on quality of life among individuals undergoing infertility treatment.
3. There are significant differences in illness cognition, self-efficacy marital adjustment and quality of life among individuals undergoing infertility treatment with respect to demographic variables (Gender, Age, Religion, Education

qualification, Employment, Monthly income, Family history of infertility, Duration of Marital Life, Family Type, Cohabitation, Infertility Type, Infertility Factor, Duration of Infertility treatment, Number of IUI and IVF)

3.4 Research Design

Descriptive research design is a method used in psychology to provide an accurate, objective, and detailed picture of a population or phenomenon being studied. This type of research design can be conducted through observation, surveys, and interviews to gather information about a specific group of individuals, such as their demographic characteristics, personality traits, or behaviors. Descriptive research offers a significant benefit by enabling researchers to swiftly and effortlessly amass a vast volume of information.

3.5 Variables

In the present study, psychological variables (Quality of life, Illness cognition, marital adjustment, and self-efficacy) were investigated.

3.5.1 Illness cognition

Illness cognition refers to the mental processes and beliefs that individuals have about their health and illness. It includes their understanding of the causes, symptoms, and consequences of their illness, as well as their beliefs about the effectiveness of various treatments and their capacity to handle and adapt to their illness. Illness cognition assesses a person’s perception of helplessness, acceptance, and benefits of their experiences

3.5.2 Self-efficacy

Infertility self-efficacy is the confidence an individual has in their ability to handle and navigate the challenges associated with infertility. It is a specific type of self-efficacy that is related to a person's belief in their capacity to act. and make

decisions that will help them cope with infertility-related stress, adhere to treatment protocols, and maintain their overall well-being.

3.5.3 Marital adjustment

Marital adjustment refers to the degree of harmony, satisfaction, and overall functioning within a marital relationship. It reflects the extent to which a couple can adapt to each other's needs, resolve conflicts effectively, communicate well, and maintain a positive emotional connection.

3.5.4 Quality of life

Fertility quality of life is the overall well-being and life satisfaction of individuals who are experiencing infertility or seeking fertility treatments. Quality of fertility is shaped by an array of elements, encompassing the emotional and physical toll of fertility procedures, the social and financial ramifications of infertility, and the coping mechanisms and support network of the individual.

3.5.5 Socio demographic and clinical variables

We studied the socio-demographic variables like Gender (Male and Female), Age (15-25years, 26-35 years, and above 35 years), Religion (Hindu, Christen, & Muslim), Education qualification (Upto 10^{th} Class, 12^{th}, Graduate, Post Graduate, Doctorate), Occupation (Employed, and Unemployed), Monthly income Rs (Up to 15, 000, 15,001-30,000, and above 30,000), Duration of Marital Life (1-3 years, 3- 5 years, 5- 8 years), Family history of marriage, and Family Type (Nuclear, Joint).

Additionally, we studied clinical variables related to infertility, such as, Infertility Type (Primary infertility, Secondary fertility), Cohabitation type, Infertility Factor as per Medical Record/Couples (Male, Female, Combined, Unexplained), Duration of Infertility treatment (1-3 years, 3- 5 years, more than 5 years), Number of Cycles of IUI done, and Number of Cycles of IVF Done.

3. 6 Sampling

Over the span of a year, approximately 500 couples from various regions of Kerala sought infertility treatments at the Susrutha Fertility Centre located in Palakkad, Kerala. For this study, information was gathered from 100 couples (200 individuals) through purposive sampling. Participants meeting specific criteria were selected to form the study sample.

3.6.1 Inclusion Criteria

- The participants are taking treatment for Infertility
- Couples who have completed one year of married life
- Participants attained legal age for marriage

3.6.2 Exclusion Criteria

- The participants who are taking treatment for mental illness
- Participants who are taking treatment for Secondary sub fertility
- Participants not attained legal age for marriage

3.7 Ethical statement

The study diligently followed the requisite institutional ethics committee review and obtained clearance. Before beginning the task, it was necessary to obtain written informed consent from the clients. Participants were provided with a detailed explanation of the study, assured of confidentiality, and informed of their right to withdraw at any point during the study. No additional cost was incurred from the clients for the purpose of this study.

3.8 Measuring Tools

In this study, the assessment process utilized the following tools.

1. Socio demographic sheet for the respondent's personal information and treatment details sheet are prepared by the researcher.
2. Illness Cognition Questionnaire by Evers et al. (2001)
3. Infertility Self-Efficacy scale by Cousineau et al. (2006)
4. Marital Adjustment Questionnaire by Pramod Kumar and Kanchana Rohtagi (2018)
5. FertiQol- Fertility Quality of life tool by Boivin et al. (2011)

3.8.1 Socio Demographic and Treatment details Sheet:

In this study, ten demographic variables such as Gender, Age, Religion, Education, Occupation, Income, Duration of married life, Order of marriage, who the couple live with, Cohabitation details. Duration of married life, Family history of infertility, Infertility Type, Infertility Factor, Cohabitation, Duration of Infertility, Duration of infertility treatments, Number Of cycles of IUI done and Number of Cycles of IVF Done. The information related to these variables will be collected by the Socio demographic sheet and treatment details are prepared by the researcher.

3.8.2 Illness Cognition Questionnaire

This study will utilize the modified version of the Illness Cognition Questionnaire developed by Patel et al. (2018), tailored specifically for the context of infertility. Illness Cognition Questionnaire was developed as self-report instrument to assess cognitions across different health conditions. The Illness Cognition Questionnaire (ICQ) evaluates feelings of helplessness, such as "My infertility controls my life" levels of acceptance, for instance, ""I can handle the problems related to my infertility" and perceptions of benefits, like "Dealing with my infertility has made me a stronger person." It includes 18 questions which are scored on a 4-pointLikert scale and it has subscales consisting of 6 items. The psychometric properties of the ICQ have been established in the Indian context, with Cronbach's alpha values ranging from 0.84

to 0.91, indicating high internal consistency, and a test-retest reliability of 0.67, suggesting good temporal stability. Furthermore, compelling evidence supports its concurrent and predictive validity, reinforcing its robust psychometric properties for the Indian population.

3.8.3 Infertility Self-Efficacy scale

The Infertility Self-Efficacy (ISE) scale was developed to gauge individuals' perceived ability to cope with the diagnosis and treatment of infertility. The Infertility Self-Efficacy Scale displays a high level of consistency, with self-efficacy items showing significant correlations, indicating strong interrelationships among them. The Cronbach's alpha coefficient for the 16-item ISE scale indicated a high level of internal consistency, measuring at 0.94. The correlations between item totals spanned from 0.59 to 0.86, while the test-retest reliability stood at 91%. In this example, the internal consistency reliability of ISE stood at 0.80 **(**Cousineau et al., 2006**).** In the Indian context, both the original and adapted versions of the ISE Scale have been widely used in research studies, supporting its applicability and relevance to Indian populations (Pandya, 2023). The scale effectively measures individuals' confidence in managing the emotional, physical, and treatment-related challenges associated with infertility.

3.8.4 Marital Adjustment Questionnaire

Marital Adjustment Questionnaire (MAQ), developed by Indian researchers Pramod Kumar and Kanchana Rohtagi, specifically designed to assess marital adjustment within the Indian population. The MAQ consists of 25 items, each requiring a dichotomous (Yes/No) response format, which facilitates ease of administration and scoring. The questionnaire evaluates key aspects of marital adjustment, including emotional, social, and sexual adjustment between partners, thereby providing a comprehensive understanding of the quality of marital relationships. High scores on the MAQ indicate better marital adjustment, while lower scores suggest difficulties in marital functioning. The psychometric properties of the tool demonstrate strong reliability and validity. The test-retest reliability coefficient was found to be 0.84,

indicating high consistency over time, and the validity coefficient was reported as 0.71, reflecting satisfactory construct validity. Given its cultural relevance and robust psychometric properties, the MAQ is considered a suitable instrument for assessing marital adjustment among Indian couples in the current research.

3.8.5 FertiQOL

FertiQOL represents a groundbreaking globally recognized self-assessment tool crafted to gauge the quality of life (QOL) for individuals grappling with infertility. Developed by Jacket Boivin, Janet Takefman, and Andrea Braveman. The tool consists of 36 items distributed across six domains. The *Core FertiQOL* assesses four key dimensions: *Emotional* (feelings of sadness, frustration, and anxiety related to infertility), *Mind-Body* (impact on physical health, energy levels, and cognitive functioning), *Relational* (effects on partnership dynamics), and *Social* (influence on social interactions and perceived support). The *Treatment FertiQOL* module further evaluates two dimensions: *Treatment Environment* (perceptions of the healthcare setting and professionals) and *Treatment Tolerability* (physical and emotional burden of infertility treatments). Responses are assessed on a scale ranging from 0 to 4, where higher scores indicate an improved quality of life. Every positive item receives a score from 0 to 4, while negative items are scored from 4 to 0, matching the response given. An examination of FertiQOL's reliability indicated an internal consistency of 0.65 and a composite reliability value of 0.63, suggesting satisfactory construct reliability (Boivin et al., 2011). The tool has been effectively utilized in diverse populations, including Indian samples, making it suitable for use in the current research context.

3.9 Data Analysis

We organized and analyzed the data using Microsoft Excel for coding and tabulation. “Descriptive statistics, including mean, standard deviation, and frequency distribution, were calculated. For inferential statistics, SPSS version 20.0 was utilized. Pearson correlation was used to assess relationships between continuous variables”, linear regression analysis examined the effects of independent variables on the

dependent variable, and differences in means were evaluated using one-way ANOVA and independent sample t-tests.

3.10 Result Interpretation and Discussion

The result interpretation and discussion were done in the light of various empirical studies and theoretical orientations available after a comprehensive review of literature on the variables under study.

CHAPTER IV

RESULTS

4.1 Frequency Distribution

Table No- 4.1: Distribution of respondents with respect to demographic variables

Variable	Group	Frequency	Percent
Gender	Female	100	50.0
	Male	100	50.0
Age	15-25Years	100	50.0
	26-35 Years	88	44.0
	Above 35 Years	12	6.0
Religion	Hindu	162	81.0
	Muslim	38	19.0
Education Qualification	Up to 10th Class	35	17.5
	12^{th}- Graduate	75	37.5
	Post Graduate,	60	30.0
	Doctorate	30	15.0
Occupation	Employed	133	66.5
	Unemployed	67	33.5
Monthly income Rs	(Up to 15, 000INR	128	64.0
	15,001-30,000, INR	50	25.0
	Above 30,001 INR	22	11.0
Duration of Marital Life	1-3 Years	92	46.0
	3- 5 Years	50	25.0
	5 -8 Years	36	18.0
	More than 8 Years	22	11.0
Family Type	Nuclear Family	14	7.0
	Joint Family	186	93.0
Family History of infertility	Yes	50	25.0
	No	150	75.0

Infertility Type		Primary infertility	162	81.0
		Sub fertility-No Miscarriage	38	19.0
Cohabitation		Continuous	132	66.0
		Non-Continuous	68	34.0
		Male	50	25.0
	Medical	Female	76	38.0
	Factor	Combined	40	20.0
Infertility		Unexplained	34	17.0
Factor		Male	54	27.0
	Client	Female	32	16.0
	Factor	Combined	38	19.0
		Unexplained	76	38.0
		0-1 Year	70	35.0
Duration of Infertility		1- 3 Years	70	35.0
treatment		3-5 Years	28	14.0
		More than 5 Years	32	16.0
		0	172	86.0
Number of Cycles of IUI done		1	22	11.0
		2	6	3.0
Number of Cycles of IVF		0	198	99.0
Done		1	2	1.0

This table 4.1 presents the distribution of respondents across various demographic variables, providing insights into the characteristics of the sample population. It if found that respondents are evenly divided between male and female, with 50% each.

The majority of respondents fall within the age range of 15-25 years (50%), followed by 26-35 years (44%), and a smaller proportion above 35 years (6%). Also, the majority of respondents are Hindu (81%), while the rest are Muslim (19%).

Respondents' educational qualifications vary, with a significant portion having completed 12th grade to graduation (37.5%) and post-graduation (30%). A smaller proportion have education up to 10th grade (17.5%) or hold a doctorate (15%).

Most respondents are employed (66.5%), while the remaining are unemployed (33.5%). The majority of respondents have a monthly income up to 15,000 INR (64%), followed by 15,001-30,000 INR (25%), and above 30,001 INR (11%).

Respondents' marital durations vary, with significant portions falling into the categories of 1-3 years (46%) and 3-5 years (25%). The majority of respondents belong to joint families (93%), while a small proportion belong to nuclear families (7%).

A quarter of respondents have a family history of infertility, while the majority do not (75%). Primary infertility is more prevalent among respondents (81%) compared to subfertility (19%). A higher percentage of respondents report continuous cohabitation (66%) compared to non-continuous (34%) respectively.

The table further breaks down the factors contributing to infertility, distinguishing between medical factors (male and female), combined factors, and unexplained factors. Each category has varying percentages of contribution. Respondents have undergone infertility treatment for different durations, with significant portions falling into the categories of 0-1 year (35%) and 1-3 years (35%). Findings also infer that the majority of respondents have not undergone cycles of IUI (86%) or IVF (99%), with smaller percentages having undergone one or two cycles.

The table offers a detailed summary of the demographic characteristics and infertility-related factors among the respondents, providing valuable insights into patterns and trends in infertility treatment.

Fig 4.1:- Graphical presentation of respondents by Gender

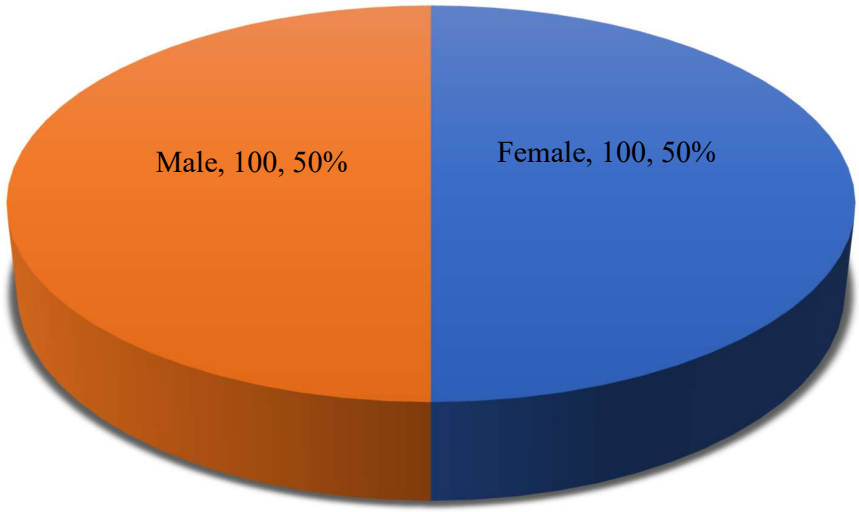


Fig 4.2:- Graphical presentation of respondents by Age

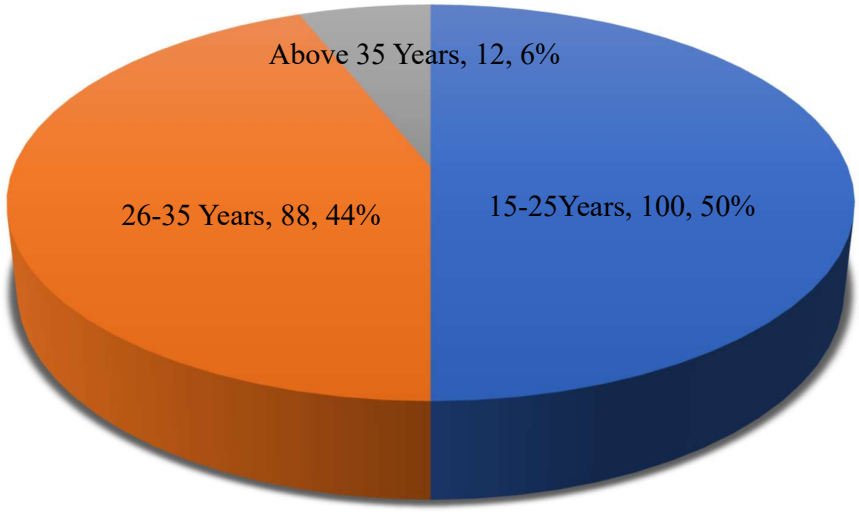


Fig 4.3:- *Graphical presentation of respondents by Religion*

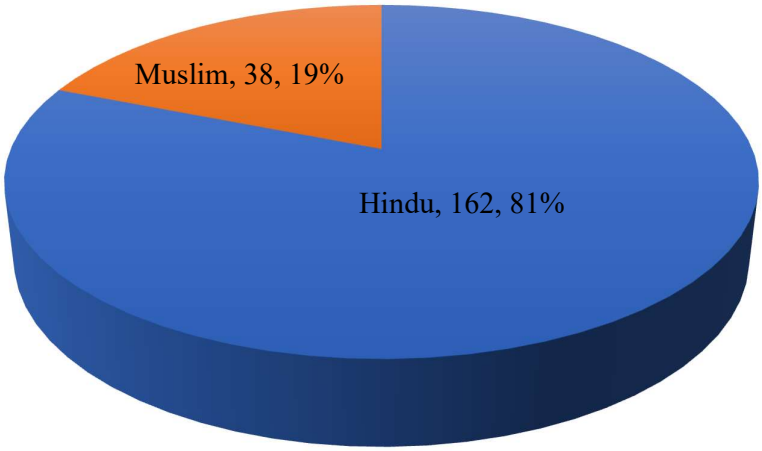


Fig 4.4:- *Graphical presentation of respondents by Education Qualification*

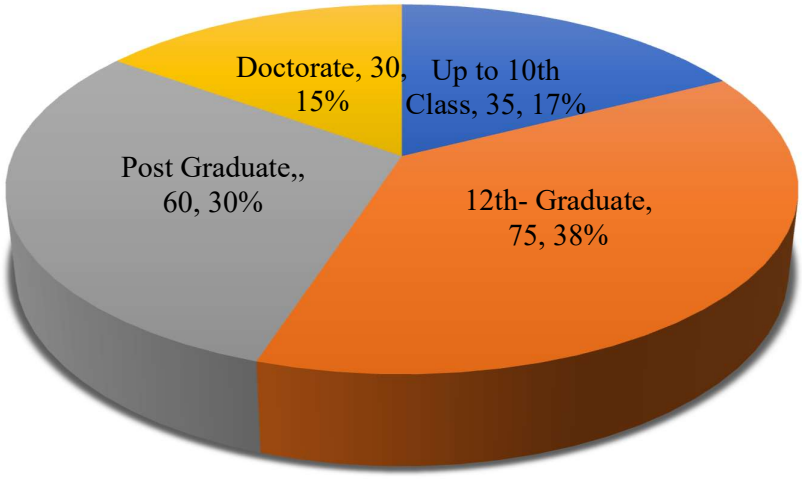


Fig 4.5:- *Graphical presentation of respondents by Monthly Income*

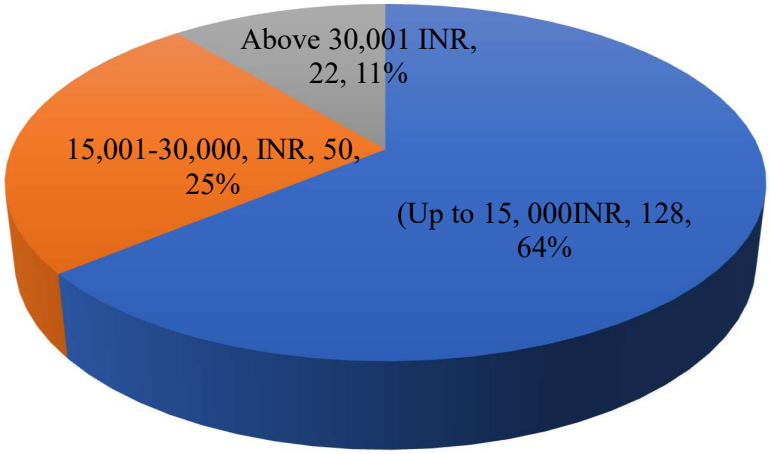


Fig 4.6:- *Graphical presentation of respondents by Duration of Marital Life*

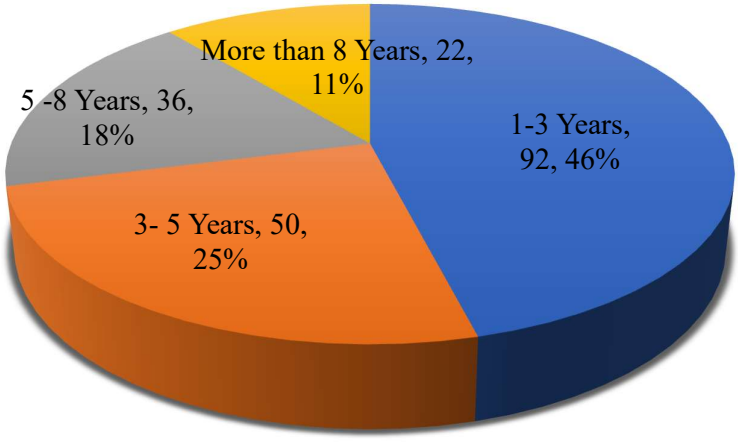


Fig 4.7:- *Graphical presentation of respondents by Family Type*

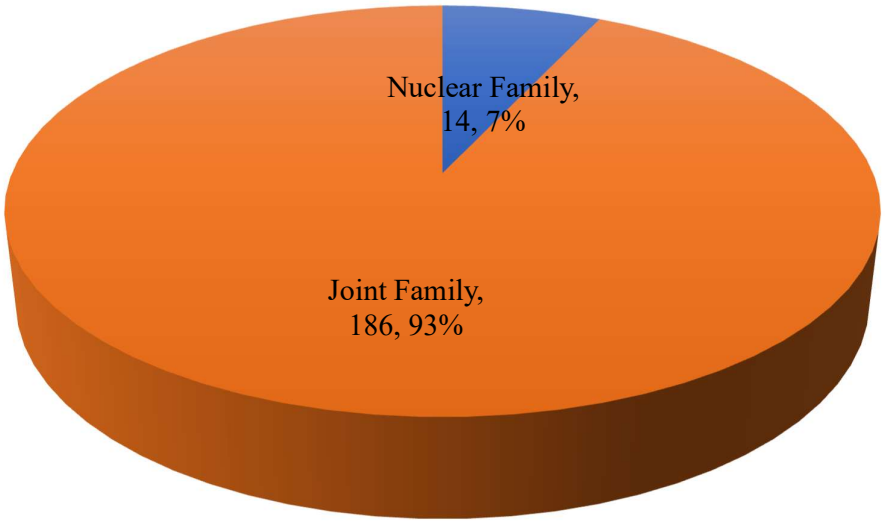


Fig 4.8:- *Graphical presentation of respondents by Family History of infertility*

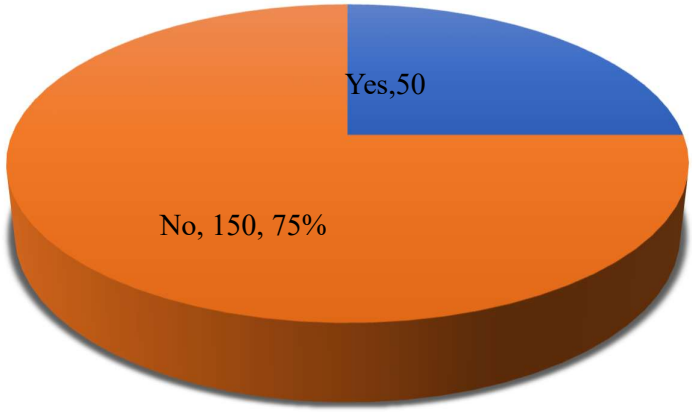


Fig 4.9:- *Graphical presentation of respondents by Infertility Type*

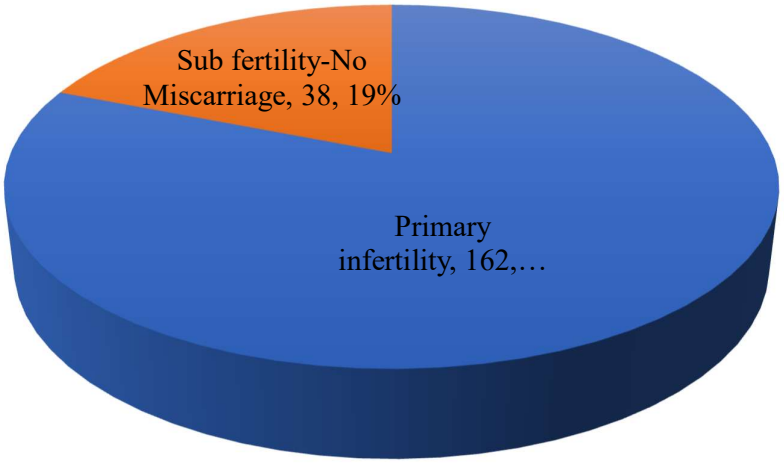


Fig 4.10:- *Graphical presentation of respondents by Cohabitation*

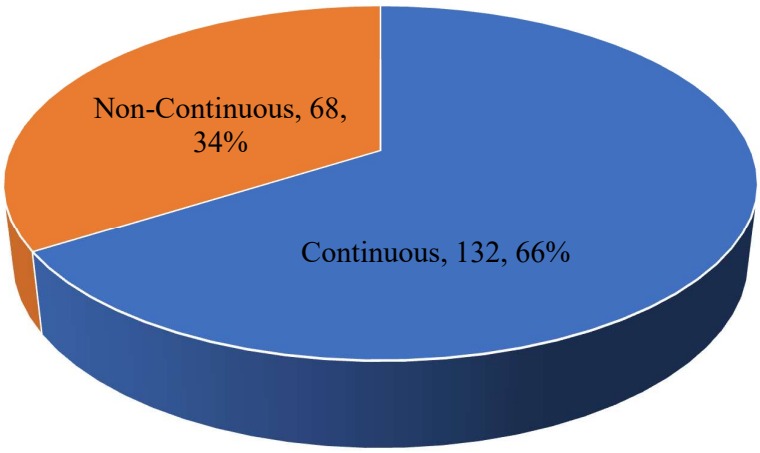


Fig 4.11a:- *Graphical presentation of respondents by Infertility Factor (Medical Factor)*

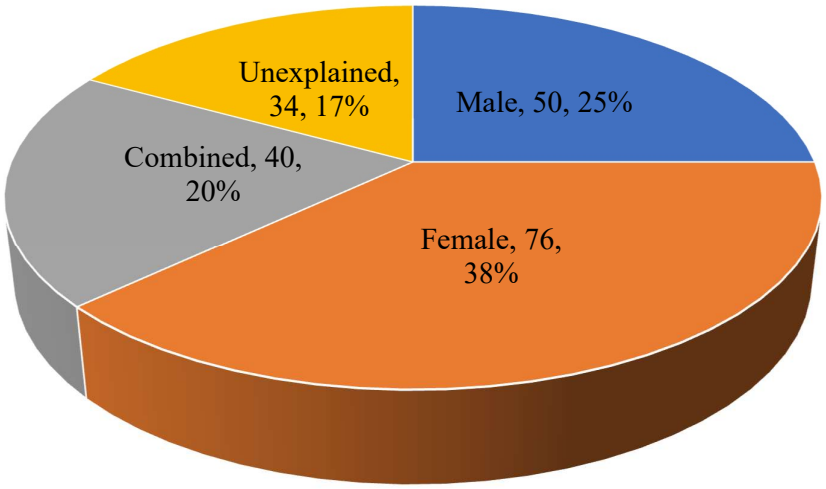


Fig 4.11b:- *Graphical presentation of respondents by Infertility Factor (Client Perceived Factor)*

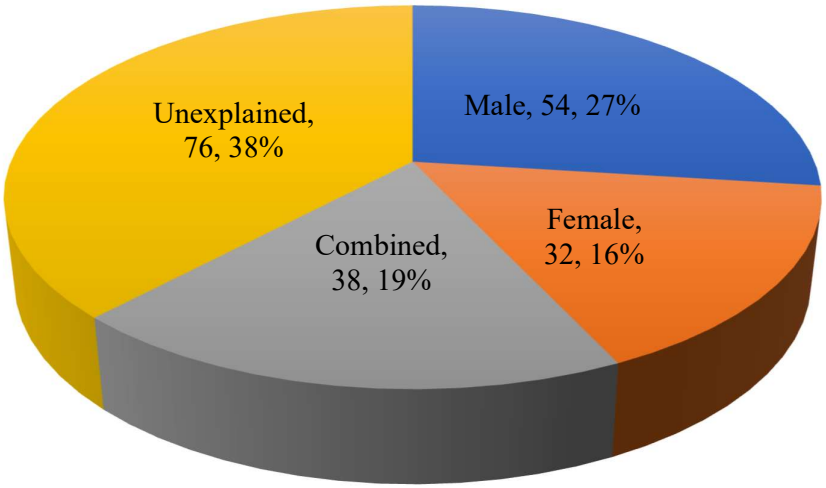


Fig 4.12:- *Graphical presentation of respondents by Duration of Infertility treatment*

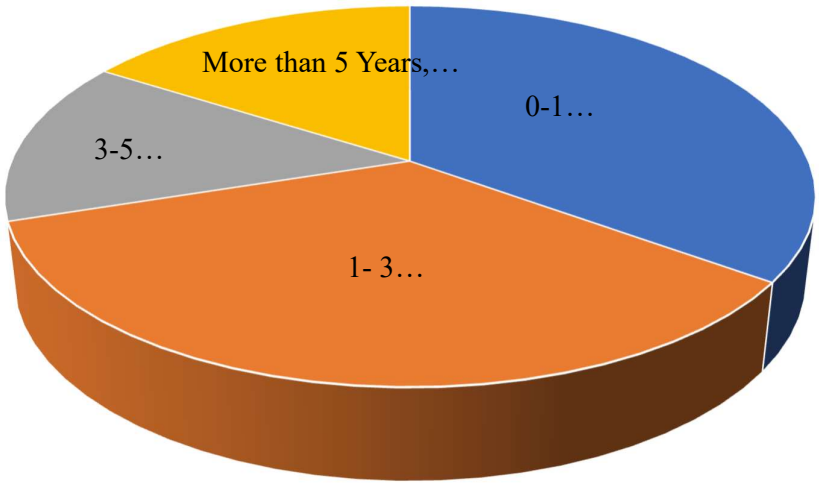


Fig 4.13a:- Graphical presentation of respondents by Cycles of IUI done

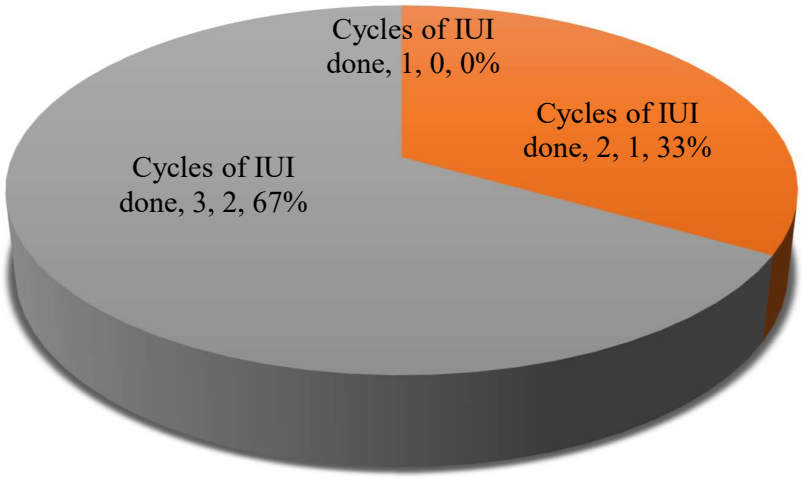
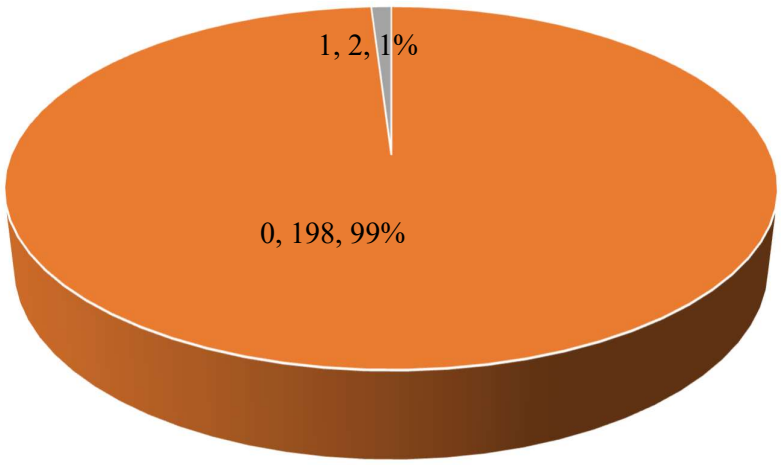


Fig 4.13b:- *Graphical presentation of respondents by Cycles of IVF done*



4.2 Correlation Analysis

Table No- 4.2: Relationship among Dimensions of Illness Cognition and Quality of Life With Self-Efficacy and Marital Adjustment

	EM	MB	RE	SO	ENV	TO	HLN	ACC	PB	SE	MA	TOF
Emotional	1											
Mind Body	.772**	1										
Relation	.305**	.339**	1									
Social	.688**	.653**	.298**	1								
Environment	.190**	.178*	.201**	.300**	1							
Tolerability	.473**	.543**	.129	.422**	.146*	1						
Helplessness	-.604**	-.629**	-.317**	-.508**	-.145*	-.300**	1					
Acceptance	.345**	.361**	.211**	.347**	.073	.289**	-.227**	1				
Perceived Benefits	.107	.108	.027	.188**	.022	.159*	.048	.624**	1			
Self-Efficacy	.455**	.501**	.218**	.495**	.167*	.368**	-.371**	.450**	.270**	1		
Marital Adjustment	.173*	.225**	.316**	.205**	.175**	.143	-.170**	.183**	.130*	.339**	1	
Total FertiQoL	.848**	.856**	.535**	.823**	.476**	.605**	-.619**	.390**	.142*	.533**	.293**	1

**Correlation is significant at the 0.01 level (2-tailed), *Correlation is significant at the 0.05 level (2-tailed).

EM=Emotional, MB=Mind Body, RE=Relation, SO=Social, ENV=Environment, TO=Tolerability, HLN= Helplessness, ACC= Acceptance, PB=Perceived Benefits, SE=Self-Efficacy, MA=Marital Adjustment, TOF=Total FertiQoL

The correlation analysis revealed significant relationships between various dimensions of illness cognition, quality of life, marital adjustment, and self-efficacy. The findings are detailed as follows:

Emotional (EM): Emotional health showed strong positive correlations with Self-Efficacy (SE) ($r = .455$, $p < 0.01$), indicating that individuals who manage their emotions well are more likely to feel capable in dealing with illness-related challenges. It also correlated positively with Acceptance ($r = .345$, $p < 0.01$), suggesting that those with better emotional regulation are more likely to accept their illness situation. Emotional health was positively correlated with Marital Adjustment ($r = .173$, $p < 0.05$), implying that better emotional well-being is associated with improved marital relationships. Additionally, Emotional health demonstrated a significant negative correlation with Helplessness (HLN) ($r = -0.604$, $p < 0.01$), suggesting that individuals with better emotional well-being are less likely to experience feelings of helplessness in managing their illness.

Mind Body (MB): The Mind-Body dimension demonstrated a significant positive correlation with both Self-Efficacy ($r = .501$, $p < 0.01$) and Acceptance ($r = .361$, $p < 0.01$), suggesting that individuals with a stronger mind-body connection tend to have higher confidence in managing their illness and greater acceptance of it, and vice versa, those with higher self-efficacy and acceptance are more likely to report a stronger mind-body connection. A significant positive correlation was also found between the Mind-Body dimension and Marital Adjustment ($r = .225$, $p < 0.01$), indicating that higher mind-body awareness is associated with better marital harmony. Additionally, a strong negative correlation with Helplessness (HLN) ($r = -0.629$, $p < 0.01$) suggests that individuals with a stronger mind-body connection tend to experience lower levels of helplessness.

Relation (RE): The relation dimension exhibited positive correlations with Marital Adjustment (MA) ($r = .316$, $p < 0.01$), indicating that healthier interpersonal relationships are associated with better marital adjustment. It also showed a positive correlation with Acceptance ($r = .211$, $p < 0.01$), suggesting that strong relationships

are linked to greater illness acceptance. The relation dimension demonstrated a positive correlation with Self-Efficacy (SE) ($r = .218$, $p < 0.01$), indicating that individuals with strong relational support tend to feel more capable of managing their illness. Additionally, a significant negative correlation was found with Helplessness (HLN) ($r = -.317$, $p < 0.01$), suggesting that stronger relational ties are associated with lower levels of helplessness.

Social (SO): The Social dimension showed positive correlations with Self-Efficacy (SE) ($r = .495$, $p < 0.01$), suggesting that individuals with stronger social support tend to have greater confidence in managing their illness. It also correlated positively with Acceptance ($r = .347$, $p < 0.01$), indicating that social connections are associated with higher levels of illness acceptance. The Social dimension was positively correlated with Perceived Benefits (PB) ($r = .188$, $p < 0.01$), implying that a supportive social network is linked to enhanced perceptions of coping benefits. Additionally, it showed a positive correlation with Marital Adjustment (MA) ($r = .205$, $p < 0.01$), suggesting that strong social ties are related to better marital stability. A significant negative correlation with Helplessness (HLN) ($r = -0.508$, $p < 0.01$) further highlights the association between social support and reduced feelings of helplessness.

Environment (ENV): The Environment dimension showed positive correlations with Self-Efficacy (SE) ($r = .167$, $p < 0.05$), indicating that individuals in positive environments tend to report a stronger sense of efficacy. Marital Adjustment (MA) also showed a significant positive correlation with environmental factors ($r = .175$, $p < 0.01$), suggesting that a supportive environment is associated with better marital harmony. Additionally, a significant negative correlation was found with Helplessness (HLN) ($r = -.145$, $p < 0.05$), indicating that individuals in nurturing environments tend to experience lower levels of helplessness.

Tolerability (TO): The Tolerability dimension showed positive correlations with Acceptance ($r = .289$, $p < 0.01$), indicating that individuals who tolerate their illness well are more likely to accept it. It also correlated positively with Perceived Benefits (PB) ($r = .159$, $p < 0.05$), suggesting that those with higher tolerability tend to

perceive more benefits from coping strategies. A positive correlation with Self-Efficacy (SE) ($r = .368$, $p < 0.01$) was observed, showing that better tolerability is associated with higher feelings of efficacy. Additionally, a significant negative correlation with Helplessness (HLN) ($r = -.300$, $p < 0.01$) was found, indicating that individuals who tolerate their condition better tend to experience less helplessness.

Helplessness (HLN): Helplessness showed strong negative correlations with Total FertiQoL (TOF) ($r = -.619$, $p < 0.01$), indicating that higher levels of helplessness are associated with a lower overall quality of life. It also demonstrated a negative correlation with Self-Efficacy (SE) ($r = -.371$, $p < 0.01$), suggesting that greater helplessness is linked to a weaker sense of efficacy. Additionally, a negative correlation was found with Marital Adjustment (MA) ($r = -.170$, $p < 0.01$), indicating that higher feelings of helplessness are associated with lower marital adjustment.

Acceptance (ACC): The Acceptance dimension showed positive correlations with Self-Efficacy (SE) ($r = .450$, $p < 0.01$), indicating that individuals who accept their illness tend to feel more capable of managing it. It also correlated with Marital Adjustment (MA) ($r = .183$, $p < 0.01$), suggesting that greater acceptance is associated with better marital relationships. Additionally, it showed a positive correlation with Total FertiQoL (TOF) ($r = .390$, $p < 0.01$), indicating that higher levels of acceptance are linked to better overall quality of life.

Perceived Benefits (PB): The Perceived Benefits dimension showed a positive correlation with Self-Efficacy (SE) ($r = .270$, $p < 0.01$), indicating that individuals who perceive greater benefits from their coping strategies tend to report higher feelings of capability. It also showed a positive correlation with Marital Adjustment (MA) ($r = .130$, $p < 0.05$), suggesting that perceived benefits are associated with improved marital relationships. Additionally, Perceived Benefits was positively correlated with Total FertiQoL (TOF) ($r = .142$, $p < 0.05$), indicating an association between perceived benefits and higher quality of life.

Self-Efficacy (SE): Self-efficacy exhibited strong positive correlations with the following: Total FertiQoL (TOF) ($r = .533$, $p < 0.01$), suggesting that higher self-efficacy is associated with better overall quality of life, and Marital Adjustment (MA) ($r = .339$, $p < 0.01$), indicating that individuals with greater self-efficacy tend to report better marital relationships.

Marital Adjustment (MA): Marital Adjustment was positively correlated with Total FertiQoL (TOF) ($r = .293$, $p < 0.01$), indicating that better marital adjustment is associated with higher overall quality of life.

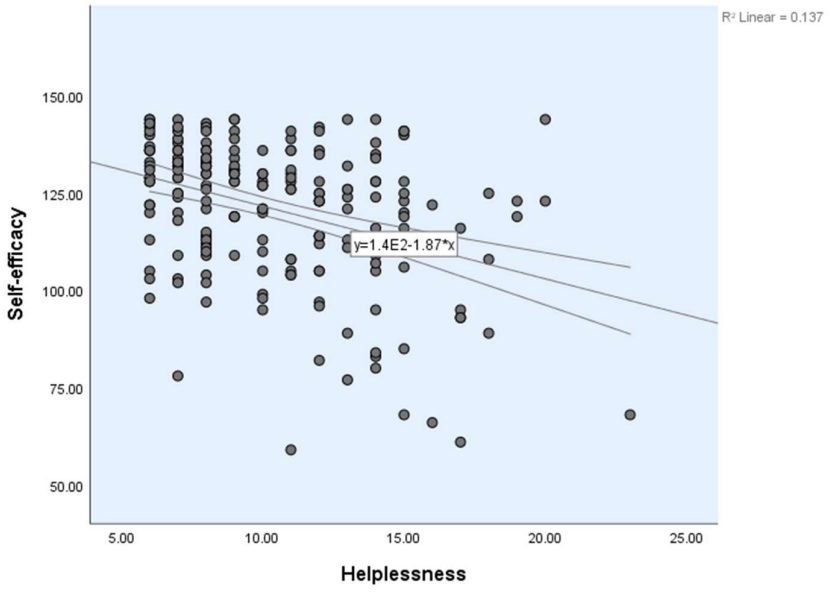


Fig 4.14: - Graphical presentation of correlation between Self-efficacy and helplessness

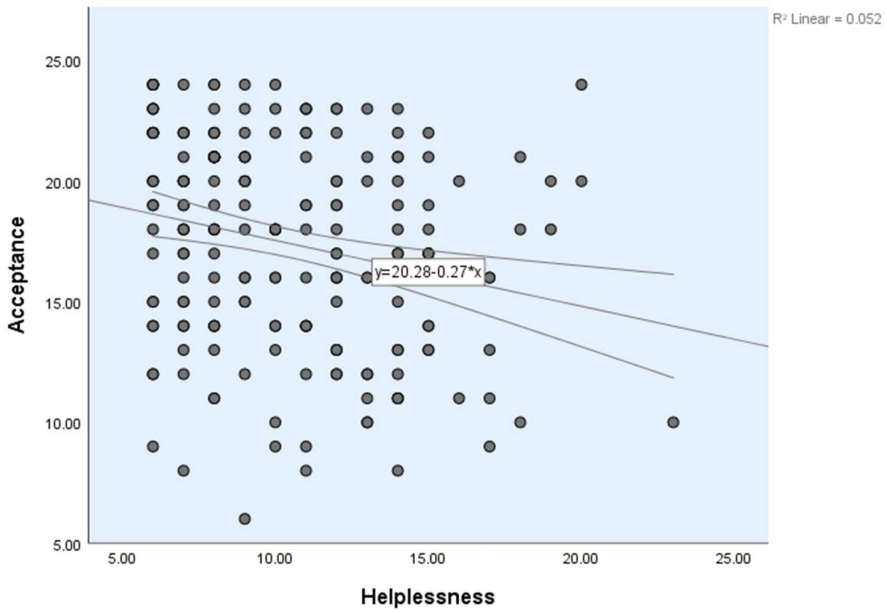


Fig 4.15: - Graphical presentation of correlation between Acceptance and helplessness

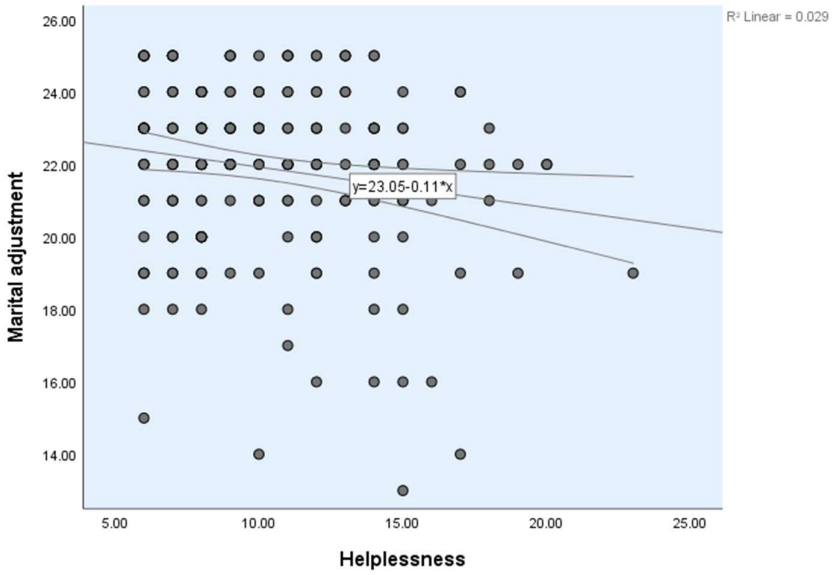


Fig 4.16: - Graphical presentation of correlation between Marital adjustment and helplessness

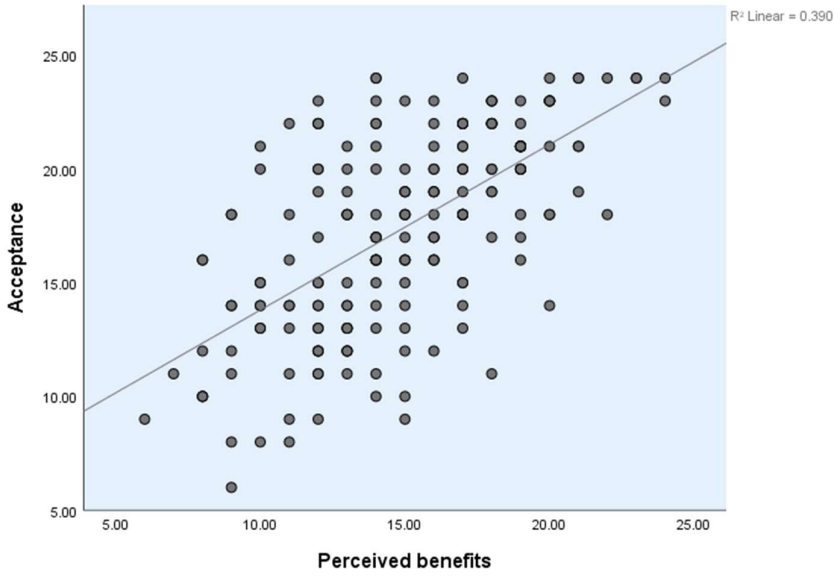


Fig 4.17: - Graphical presentation of correlation between acceptance and perceived benefits

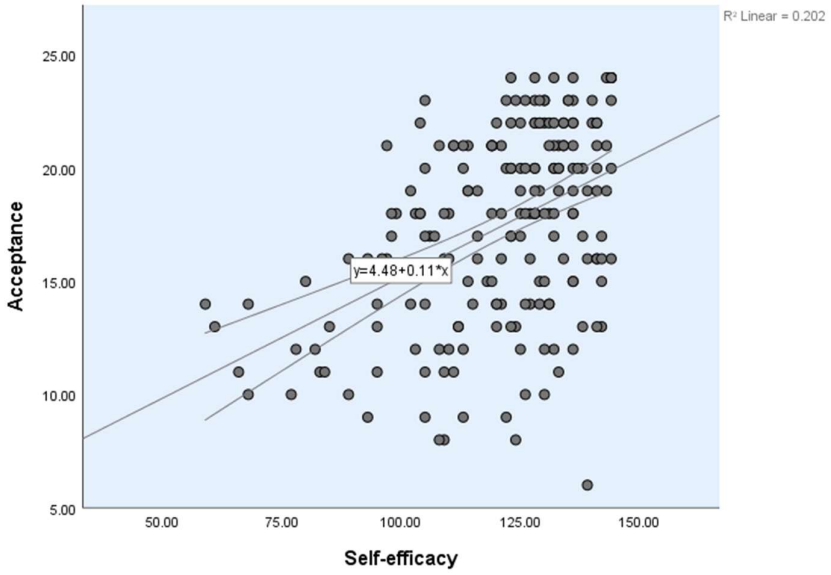


Fig 4.18: - Graphical presentation of correlation between acceptance and Self-efficacy

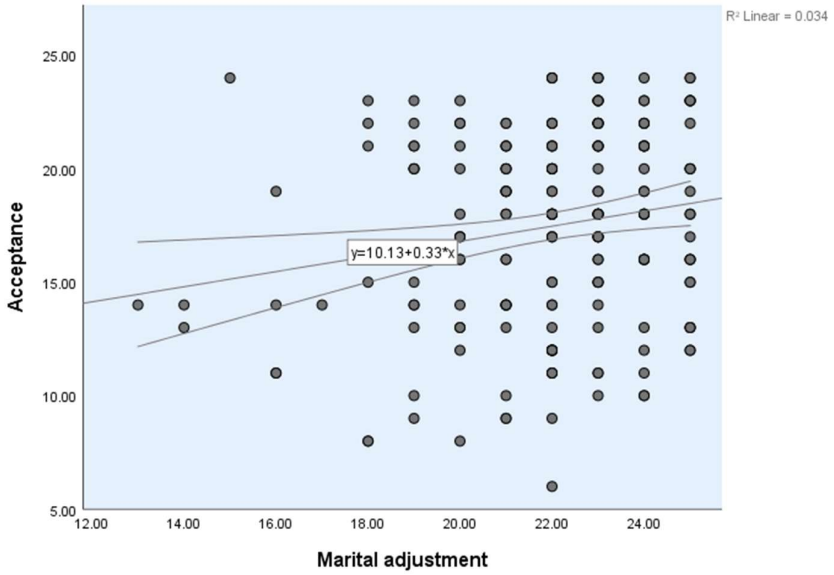


Fig 4.19: - Graphical presentation of correlation between acceptance and marital adjustment

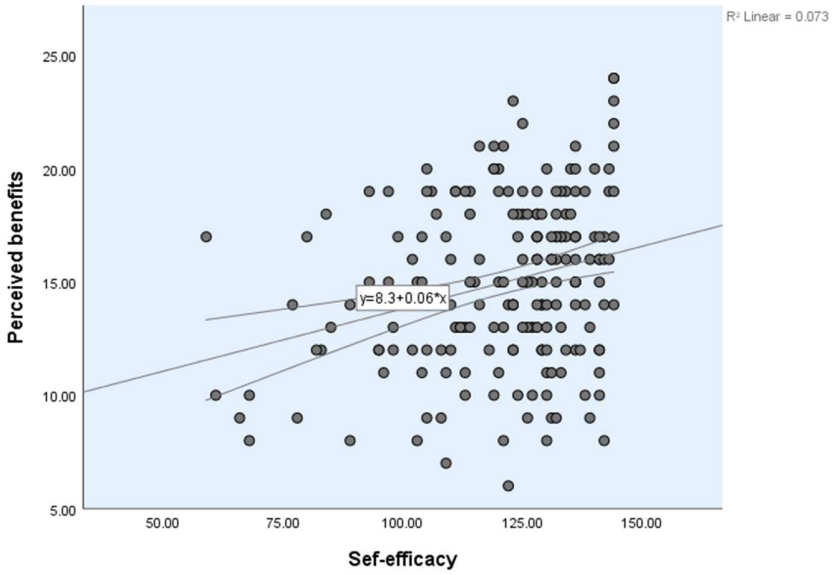


Fig 4.20: - Graphical presentation of correlation between perceived benefits and self-efficacy

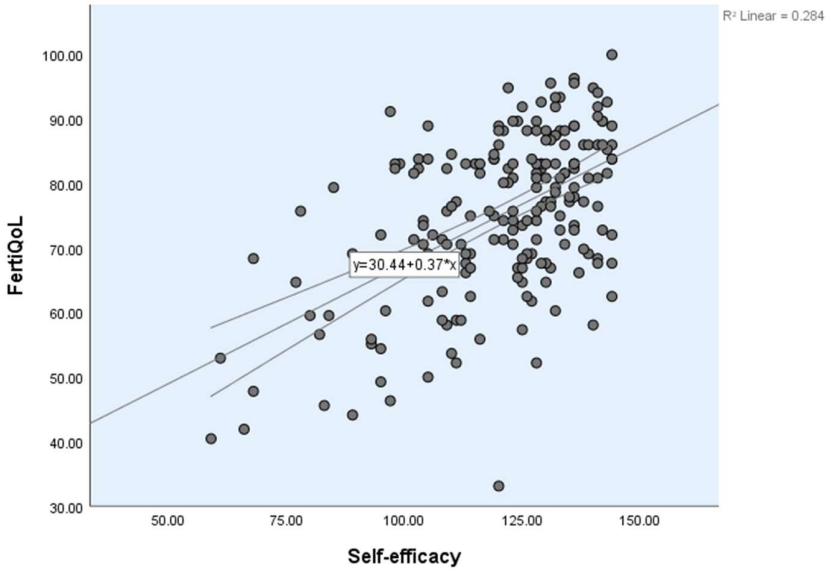


Fig 4.21: - Graphical presentation of correlation between FertiQol and Self-efficacy

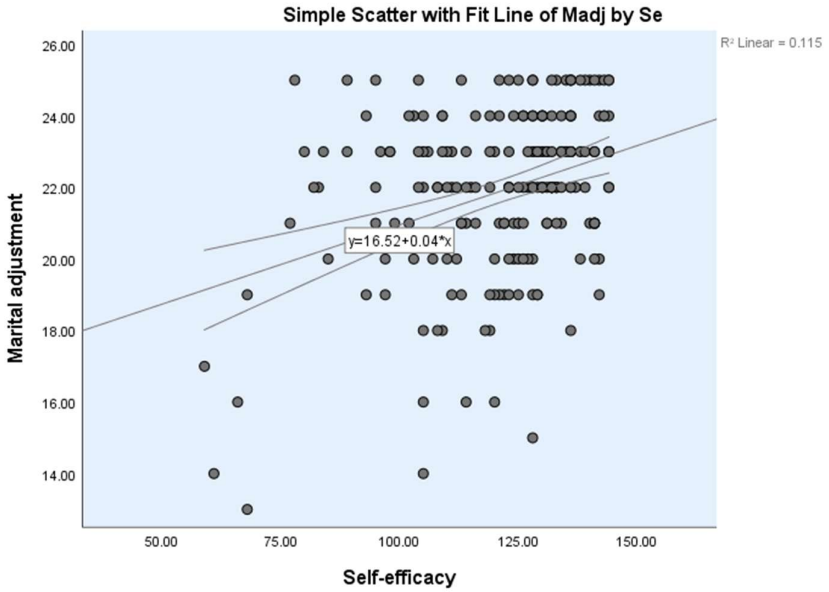


Fig 4.22: - Graphical presentation of correlation between marital adjustment and Self-efficacy

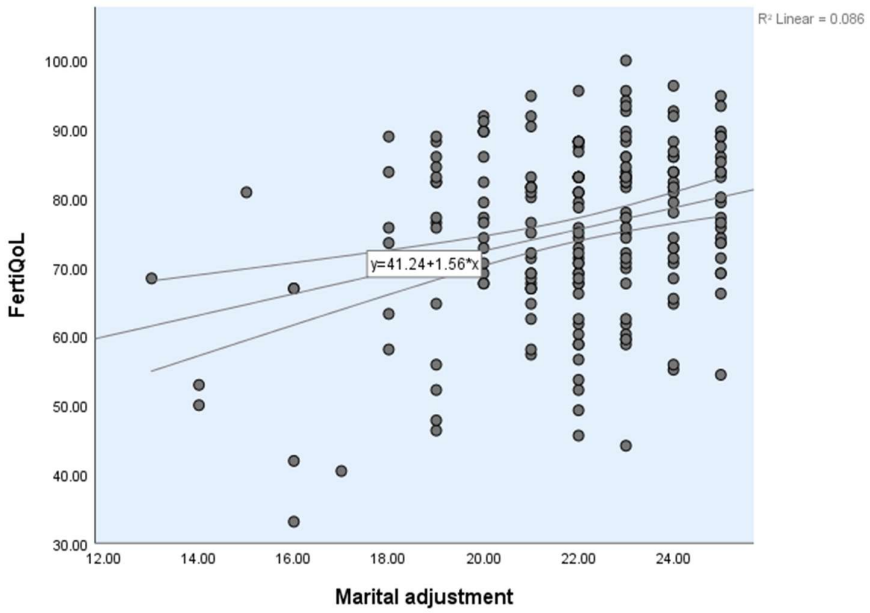


Fig 4.23: - Graphical presentation of correlation between FertiQol and marital adjustment

4.3 Regression Analysis

Table No- 4.3: Results of linear regression analysis showing the effects of Illness Cognition (Helplessness, Acceptance, Perceived Benefits), Self-efficacy, and Marital Adjustment on Fertility Quality of Life

Table No- 4.3: Illness Cognition (Helplessness, Acceptance, Perceived Benefits), Self-efficacy, and Marital Adjustment on Quality of Life					
Independent Variables	Dependent Variable	Standardized beta coefficient	t-value	*p*-value	Partial Eta-squared
Helplessness	Quality of Life	-0.469	-8.399	<0.001	0.267
Acceptance		0.161	2.285	0.023	0.026
Perceived benefits		-0.018	-0.278	0.781	0.000
Marital Adjustment		0.098	1.850	0.066	0.017
Self-efficacy		0.258	4.233	<0.001	0.085
Model R-squared = 0.517					
(Adjusted R-squared = 0.505)					

This table displays the results of a regression analysis examining the impact of Illness Cognition (Helplessness, Acceptance, Perceived Benefits), Self-Efficacy, and Marital Adjustment on Fertility Quality of Life. Based on the findings, the Helplessness domain of Illness Cognition emerged as the strongest predictor ($p < 0.001$, partial eta squared = 0.267). It demonstrated a significant negative relationship with quality of life ($\beta = -0.469$), indicating that greater levels of helplessness are associated with lower quality of life. Self-efficacy demonstrates the second strongest association with quality of life, exhibiting a positive effect ($p < 0.001$, partial eta squared = 0.085), which suggests that higher self-efficacy is linked to improved quality of life ($\beta = 0.258$). Similarly, the acceptance domain of Illness Cognition shows a statistically significant positive relationship with quality of life ($p = 0.023$); however, its effect size is notably smaller ($\beta = 0.161$, partial eta squared = 0.026). The perceived benefits domain of illness cognition ($p = 0.781$) and marital adjustment ($p = 0.066$) do not show a significant impact on quality of life, as evidenced by their non-significant p-values.

Overall, the results suggest that Helplessness in Illness Cognition and Self-Efficacy play significant roles in predicting the quality of life, while Acceptance in Illness Cognition has a weaker, albeit still significant, association. However, Marital Adjustment does not seem to have a substantial impact on quality of life in this analysis.

4.4 t-test and ANOVA

Table 4.4: Mean differences in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by gender

	Gender	N	Mean	SD	t	Sig.
Helplessness	Female	100	11.03	3.62	2.473	.561
	Male	100	9.80	3.41		
Acceptance	Female	100	16.67	4.42	-2.546	.143
	Male	100	18.19	4.01		
Perceived benefits	Female	100	14.90	3.44	-.308	.231
	Male	100	15.06	3.90		
Self-efficacy	Female	100	115.98	18.92	-4.025	< .001
	Male	100	125.84	15.55		
Marital adjustment	Female	100	21.99	2.37	.660	.282
	Male	100	21.77	2.34		
Quality of life (Total FertiQoL)	Female	100	72.18	13.38	-3.660	< .001
	Male	100	78.46	10.77		

Table 4.4 highlights significant gender differences in psychological dimensions. Males reported significantly higher self-efficacy (M = 125.84, SD = 15.55) compared to females (M = 115.98, SD = 18.92), with the difference reaching statistical significance ($t = -4.025$, $p < .001$). This indicates that males tend to have a stronger sense of self-efficacy than females in managing their illness. Additionally, males reported a significantly higher quality of life (M = 78.46, SD = 10.77) than females (M = 72.18, SD = 13.38), with this difference also being statistically significant ($t = -3.660$, $p < .001$). Females (M = 11.03, SD = 3.62) reported higher helplessness compared to males (M = 9.80, SD = 3.41). However,

the t-test did not reveal a statistically significant difference (t = 2.473, p = .561). Males (M = 18.19, SD = 4.01) had higher levels of acceptance than females (M = 16.67, SD = 4.42), but the difference was not statistically significant (t = -2.546, p = .143). Both females (M = 14.90, SD = 3.44) and males (M = 15.06, SD = 3.90) reported similar levels of perceived benefits, with no significant difference between the genders (t = -.308, p = .231). Both females (M = 21.99, SD = 2.37) and males (M = 21.77, SD = 2.34) reported similar marital adjustment levels, with no significant difference (t = .660, p = .282).

In summary, the analysis revealed notable gender differences in self-efficacy and quality of life, with males reporting higher levels in both areas. Although there were observed differences in other dimensions, such as helplessness and others were not statistically significant.

Table 4.5: Mean differences in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by age groups

Variable	Age	N	Mean	SD	F	Sig.
Helplessness	15-25Years	100	10.48	3.48	.642	.527
	26-35 Years	88	10.20	3.63		
	Above 35 Years	12	11.42	3.78		
Acceptance	15-25Years	100	16.98	4.45	2.118	.123
	26-35 Years	88	18.10	4.18		
	Above 35 Years	12	16.25	2.86		
Perceived benefits	15-25Years	100	14.75	3.64	.413	.662
	26-35 Years	88	15.24	3.80		
	Above 35 Years	12	15.00	2.98		
Self-efficacy	15-25Years	100	117.30	18.94	5.089	.007
	26-35 Years	88	125.39	15.65		
	Above 35 Years	12	118.17	19.70		
Marital adjustment	15-25Years	100	22.04	2.49	.520	.595
	26-35 Years	88	21.75	2.24		
	Above 35 Years	12	21.5	1.98		

	15-25Years	100	73.70	12.48		
Quality of life	26-35 Years	88	77.43	12.74	2.269	.106
	Above 35 Years	12	73.34	9.14		

The table 4.5 shows analysis comparing age groups across various psychological dimensions reveals the following: Individuals aged 15-25 years (M = 10.48, SD = 3.48), 26-35 years (M = 10.20, SD = 3.63), and above 35 years (M = 11.42, SD = 3.78) reported similar levels of helplessness. The ANOVA test revealed no statistically significant difference between the age groups (F = .642, p = .527). The 26-35 years age group (M = 18.10, SD = 4.18) reported higher levels of acceptance compared to the 15-25 years group (M = 16.98, SD = 4.45) and those above 35 years (M = 16.25, SD = 2.86). However, the differences did not reach statistical significance (F = 2.118, p = .123). Across the three age groups, perceived benefits were fairly similar: 15-25 years (M = 14.75, SD = 3.64), 26-35 years (M = 15.24, SD = 3.80), and above 35 years (M = 15.00, SD = 2.98). No significant age-related differences were found (F = .413, p = .662). The 26-35 years age group (M = 125.39, SD = 15.65) reported significantly higher self-efficacy than both the 15-25 years group (M = 117.30, SD = 18.94) and those above 35 years (M = 118.17, SD = 19.70). This difference was statistically significant (F = 5.089, p = .007), indicating that individuals aged 26-35 years tend to have higher self-efficacy. All age groups reported similar levels of marital adjustment: 15-25 years (M = 22.04, SD = 2.49), 26-35 years (M = 21.75, SD = 2.24), and above 35 years (M = 21.5, SD = 1.98). No significant differences were observed between the groups (F = 0.520, p = 0.595). Participants aged 26-35 years (M = 77.43, SD = 12.74) reported a higher quality of life compared to both the 15-25 years group (M = 73.70, SD = 12.48) and those older than 35 years (M = 73.34, SD = 9.14), but these differences were not statistically significant (F = 2.269, p = 0.106).

In summary, the analysis revealed significant differences in self-efficacy, with individuals aged 26-35 years showing the highest levels. No significant differences were observed in other variables like helplessness, acceptance, perceived benefits, marital adjustment, or quality of life across the age groups.

Table: -4.6*:* Mean difference in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by Religion N= 200, df 198

	Religion	N	Mean	SD	t	Sig.
Helplessness	Hindu	162	10.39	3.77	-.208	.836
	Muslim	38	10.50	2.51		
Acceptance	Hindu	162	17.57	4.23	.950	.346
	Muslim	38	16.81	4.47		
Perceived benefits	Hindu	162	14.92	3.70	-.490	.626
	Muslim	38	15.24	3.56		
Self-efficacy	Hindu	162	121.22	17.53	.468	.642
	Muslim	38	119.58	19.93		
Marital adjustment	Hindu	162	21.83	2.35	-.647	.520
	Muslim	38	22.10	2.39		
Quality of life	Hindu	162	75.76	13.08	1.230	.223
	Muslim	38	73.45	9.67		

Table 4.6 presents the mean differences in various psychological and quality of life dimensions between participants of Hindu and Muslim religious backgrounds. The results are as follows: Hindus (M = 10.39, SD = 3.77) and Muslims (M = 10.50, SD = 2.51) reported similar levels of helplessness. The t-test revealed no significant difference between the two groups (t = -0.208, p = .836). The mean scores for acceptance were slightly higher for Hindus (M = 17.57, SD = 4.23) compared to Muslims (M = 16.81, SD = 4.47), but the difference was not statistically significant (t = 0.950, p = .346). Both Hindus (M = 14.92, SD = 3.70) and Muslims (M = 15.24, SD = 3.56) reported similar perceived benefits, with no significant difference found between the groups (t = -0.490, p = .626). Hindus (M = 121.22, SD = 17.53) reported slightly higher self-efficacy than Muslims (M = 119.58, SD = 19.93), but the difference was not statistically significant (t = 0.468, p = .642). Marital adjustment scores were

comparable between Hindus (M = 21.83, SD = 2.35) and Muslims (M = 22.10, SD = 2.39), with no significant difference (t = -0.647, p = .520). Hindus (M = 75.76, SD = 13.08) reported a slightly higher quality of life compared to Muslims (M = 73.45, SD = 9.67). However, the difference was not statistically significant (t = 1.230, p = .223).

In summary, there were no notable differences between Hindu and Muslim participants regarding helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, or quality of life. This indicates that religious background did not have a significant impact on these factors in the current sample.

Table: -4.7: Mean difference in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by Educational Qualification N= 200

Variable	Educational Qualification	N	Mean	SD	F	Sig.
Helplessness	Up to 10th Class	35	11.03	3.73	.776	.508
	12th- Graduate	75	10.6	3.46		
	Post-graduate	60	10.03	3.21		
	Doctorate	30	10.00	4.27		
Acceptance	Up to 10th Class	35	18.54	3.43	1.532	.207
	12th- Graduate	75	16.92	4.46		
	Post-graduate	60	17.08	4.48		
	Doctorate	30	18.1	4.19		
Perceived benefits	Up to 10th Class	35	15.88	3.61	1.094	.353
	12th- Graduate	75	14.59	3.59		
	Post-graduate	60	15.10	3.78		
	Doctorate	30	14.67	3.69		
Self-efficacy	Up to 10th Class	35	124.66	16.41	1.086	.356
	12th- Graduate	75	118.31	19.85		
	Post-graduate	60	121.45	16.83		
	Doctorate	30	121.97	16.81		
Marital adjustment	Up to 10th Class	35	21.80	1.79	.247	.863
	12th- Graduate	75	21.87	2.44		

	Post-graduate	60	22.07	2.33		
	Doctorate	30	21.63	2.78		
Quality of life	Up to 10th Class	35	75.78	13.41	.019	.996
	12th- Graduate	75	75.24	11.30		
	Post-graduate	60	75.18	13.08		
	Doctorate	30	75.24	13.78		

The table 4.7 shows the differences in various psychological dimensions (helplessness, acceptance, perceived benefits, quality of life, self-efficacy, and marital adjustment) across four educational qualification groups: up to 10th class, 12th-graduate, post-graduate, and doctorate. The findings are summarized below: Participants with education up to 10th class reported the highest levels of helplessness (M = 11.03, SD = 3.73), while those with a doctorate had the lowest (M = 10.00, SD = 4.27). However, the differences between the groups were not statistically significant (F = .776, p = .508). The mean acceptance levels were highest among those educated up to 10th class (M = 18.54, SD = 3.43) and doctorate holders (M = 18.1, SD = 4.19). However, no significant difference was observed across the educational groups (F = 1.532, p = .207). The 10th class-educated group reported the highest perceived benefits (M = 15.88, SD = 3.61), but the difference between groups was not statistically significant (F = 1.094, p = .353). Participants with up to 10th class education reported the highest self-efficacy (M = 124.66, SD = 16.41), whereas the 12th-graduate group had the lowest (M = 118.31, SD = 19.85). Despite the variation, the difference was not statistically significant (F = 1.086, p = .356). There were minor variations in marital adjustment across the educational groups, with post-graduates showing the highest adjustment (M = 22.07, SD = 2.33) and doctorate holders the lowest (M = 21.63, SD = 2.78). However, these differences were not statistically significant (F = .247, p = .863). The overall quality of life scores was very similar across all educational levels, with no significant differences observed (F = .019, p = .996).

No statistically significant differences were observed across the educational qualification groups for any of the measured variables. This indicates that education

level does not significantly influence feelings of helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, or quality of life in this sample.

Table: -4.8*:* Mean difference in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by Employment, N= 200, df 198

	Occupation	**N**	**Mean**	**SD**	**t**	**Sig.**
Helplessness	Employed	133	10.20	3.57	-1.192	.235
	Unemployed	67	10.84	3.53		
Acceptance	Employed	133	17.67	4.13	1.078	.283
	Unemployed	67	16.95	4.56		
Perceived benefits	Employed	133	14.96	3.72	-.096	.923
	Unemployed	67	15.01	3.59		
Self-efficacy	Employed	133	122.80	17.07	2.119	.044
	Unemployed	67	117.15	19.21		
Marital adjustment	Employed	133	21.74	2.35	-1.217	.226
	Unemployed	67	22.16	2.34		
Quality of life	Employed	133	75.75	12.46	.683	.496
	Unemployed	67	74.46	12.68		

The findings from the table 4.8 shows interesting findings about employment status (employed vs. unemployed) on various psychological dimensions, including helplessness, acceptance, perceived benefits, quality of life, self-efficacy, and marital adjustment. The findings are summarized below: Unemployed participants (M = 10.84, SD = 3.53) reported slightly higher helplessness compared to employed individuals (M = 10.20, SD = 3.57). However, this difference was not statistically significant (t = -1.192, p = .235). Employed individuals (M = 17.67, SD = 4.13) had slightly higher acceptance scores than unemployed individuals (M = 16.95, SD = 4.56). The difference was not statistically significant (t = 1.078, p = .283). Both employed (M = 14.96, SD = 3.72) and unemployed (M = 15.01, SD = 3.59) groups showed similar levels of perceived benefits, with no significant difference (t = -.096, p = .923). Employed participants (M = 122.80, SD = 17.07) had significantly higher self-efficacy compared to unemployed individuals (M = 117.15, SD = 19.21), with the difference being

statistically significant (t = 2.119, p = .044). This indicates that employment positively influences self-efficacy. Unemployed participants (M = 22.16, SD = 2.34) reported slightly better marital adjustment compared to employed participants (M = 21.74, SD = 2.35). However, the difference was not statistically significant (t = -1.217, p = .226). Employed participants (M = 75.75, SD = 12.46) and unemployed individuals (M = 74.46, SD = 12.68) showed no significant differences in quality of life (t = .683, p = .496).

Although most psychological variables showed no significant differences between employed and unemployed individuals, a notable difference was found in self-efficacy, with employed participants reporting higher levels. This suggests that employment status may positively impact one's sense of self-efficacy, although it does not significantly affect other aspects like helplessness, acceptance, perceived benefits, marital adjustment, or overall quality of life.

Table: -4.09*:* Mean difference in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by Monthly Income N= 200

Variable	Monthly Income (INR)	N	Mean	SD	F	Sig.
Helplessness	≤ 15, 000	128	10.83	3.32	1.704	.185
	15,001-30,000	50	10.13	3.87		
	≥ 30,001	22	9.65	3.62		
Acceptance	≤ 15, 000	128	16.89	4.30	2.292	.104
	15,001-30,000	50	18.36	4.03		
	≥ 30,001	22	17.41	4.47		
Perceived benefits	≤ 15, 000	128	15.07	3.32	.104	.901
	15,001-30,000	50	14.97	3.91		
	≥ 30,001	22	14.73	4.30		
Self-efficacy	≤ 15, 000	128	117.99	18.04	3.044	.050
	15,001-30,000	50	123.64	16.14		
	≥ 30,001	22	125.03	19.75		
	≤ 15, 000	128	22.14	2.25	1.659	.193

Marital adjustment	15,001-30,000	50	21.72	2.24		
	≥ 30,001	22	21.35	2.76		
Quality of life	≤ 15, 000	128	72.79	12.64	4.671	.010
	15,001-30,000	50	78.01	11.01		
	≥ 30,001	22	78.29	13.33		

The findings of the table 4.9 shows the differences in psychological variables (helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life) across three monthly income groups: ≤ INR 15,000, INR 15,001–30,000, and ≥ INR 30,001. The findings are summarized below: Participants with a monthly income of ≤ INR 15,000 reported the highest helplessness (M = 10.83, SD = 3.32), followed by those in the INR 15,001–30,000 group (M = 10.13, SD = 3.87), and those earning ≥ INR 30,001 (M = 9.65, SD = 3.62). However, these differences were not statistically significant (F = 1.704, p = .185). Participants earning INR 15,001–30,000 reported the highest acceptance scores (M = 18.36, SD = 4.03), followed by those in the ≥ INR 30,001 group (M = 17.41, SD = 4.47). Those earning ≤ INR 15,000 had the lowest scores (M = 16.89, SD = 4.30). The differences were not statistically significant (F = 2.292, p = .104). There were minimal differences in perceived benefits across income groups, with the ≤ INR 15,000 group reporting a mean score of 15.07 (SD = 3.32), followed by the INR 15,001–30,000 group (M = 14.97, SD = 3.91), and the ≥ INR 30,001 group (M = 14.73, SD = 4.30). The differences were not statistically significant (F = .104, p = .901). Participants in the highest income group (≥ INR 30,001) had the highest self-efficacy (M = 125.03, SD = 19.75), followed by those in the INR 15,001–30,000 group (M = 123.64, SD = 16.14). Those earning ≤ INR 15,000 had the lowest self-efficacy (M = 117.99, SD = 18.04). The differences approached statistical significance (F = 3.044, p = .050), suggesting a possible relationship between income and self-efficacy. The ≤ INR 15,000 group had the highest marital adjustment scores (M = 22.14, SD = 2.25), while those earning ≥ INR 30,001 had the lowest (M = 21.35, SD = 2.76). However, these differences were not statistically significant (F = 1.659, p = .193). Participants earning ≥ INR 30,001 reported the highest quality of life (M =

78.29, SD = 13.33), followed by those in the INR 15,001–30,000 group (M = 78.01, SD = 11.01). Those in the ≤ INR 15,000 group reported the lowest quality of life (M = 72.79, SD = 12.64). The differences were statistically significant (F = 4.671, p = .010), indicating that higher income is associated with better quality of life.

The findings indicate that monthly income plays a significant role in determining quality of life, with individuals earning higher incomes reporting a better overall quality of life. Additionally, self-efficacy demonstrated a near-significant difference, as higher income was linked to greater self-efficacy. However, no significant differences were found in other psychological variables such as helplessness, acceptance, perceived benefits, and marital adjustment across income group.

Table: -4.10: Mean difference in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by Duration of Marital Life N= 200

Variable	Duration of Marital Life	N	Mean	SD	F	Sig.
Helplessness	1-3 Years	92	9.71	3.52	3.902	.01
	3- 5 Years	50	10.24	3.12		
	5 -8 Years	36	11.75	3.92		
	>8 Years	22	11.59	3.39		
Acceptance	1-3 Years	92	17.88	4.25	1.730	.162
	3- 5 Years	50	17.74	4.57		
	5 -8 Years	36	16.05	3.89		
	>8 Years	22	17.09	4.09		
Perceived benefits	1-3 Years	92	14.88	3.86	1.482	.221
	3- 5 Years	50	15.44	3.49		
	5 -8 Years	36	14.05	3.54		
	>8 Years	22	15.86	3.30		

Self-efficacy	1-3 Years	92	122.80	16.60	1.645	.180
	3- 5 Years	50	122.50	18.93		
	5 -8 Years	36	116.19	19. 90		
	>8 Years	22	117.09	17.17		
Marital adjustment	1-3 Years	92	21.86	2.49	.728	.537
	3- 5 Years	50	22.80	1. 68		
	5 -8 Years	36	21.14	2.55		
	>8 Years	22	21.09	2.11		
Quality of life	1-3 Years	92	79.04	11.02	1.645	.180
	3- 5 Years	50	74.93	12.41		
	5 -8 Years	36	65.95	13.95		
	>8 Years	22	70.12	11.33		

This table 4.10 analysis examined the influence of the duration of marital life (1-3 years, 3-5 years, 5-8 years, and more than 8 years) on various psychological dimensions, including helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life. The findings are summarized as follows: A significant difference was found in helplessness across the different durations of marital life ($F = 3.902$, $p = .01$). Participants married for 5-8 years reported the highest helplessness ($M = 11.75$, $SD = 3.92$), while those married for 1-3 years had the lowest helplessness ($M = 9.71$, $SD = 3.52$). Although acceptance scores varied across the groups, with participants married for 1-3 years reporting the highest acceptance ($M = 17.88$, $SD = 4.25$) and those married for 5-8 years reporting the lowest ($M = 16.05$, $SD = 3.89$), the differences were not statistically significant ($F = 1.730$, $p = .162$). Perceived benefits showed no significant difference across the marital life groups ($F = 1.482$, $p = .221$). The highest perceived benefits were observed in participants married for more than 8 years ($M = 15.86$, $SD = 3.30$), while those married for 5-8 years had the lowest perceived benefits ($M = 14.05$, $SD = 3.54$). Self-efficacy scores were highest among those married for 1-3 years ($M = 122.80$, $SD = 16.60$) and lowest for participants married for 5-8 years ($M = 116.19$, $SD = 19.90$). However, the differences in self-

efficacy across the groups were not statistically significant (F = 1.645, p = .180). There were no significant differences in marital adjustment across varying durations of marital life (F(1, n) = 0.728, p = 0.537). Participants married for 3-5 years reported the highest marital adjustment (M = 22.80, SD = 1.68), while those married for more than 8 years had the lowest scores (M = 21.09, SD = 2.11). Although not statistically significant (F = 1.645, p = .180), quality of life scores was highest for participants married for 1-3 years (M = 79.04, SD = 11.02) and lowest for those married for 5-8 years (M = 65.95, SD = 13.95).

The duration of marital life had a statistically significant effect only on helplessness, with participants married for 5-8 years experiencing the highest levels of helplessness. No significant differences were observed in acceptance, perceived benefits, self-efficacy, marital adjustment, or quality of life across varying durations of marital life. These results suggest that helplessness may increase with the length of marital life, particularly in the mid-range years (5-8 years).

Table: -4.11: Mean difference in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by Family Type N= 200, df 198

	Family type	N	Mean	SD	t	Sig.
Helplessness	Nuclear	14	13.00	4.79	2.132	.051
	Joint	186	10.22	3.39		
Acceptance	Nuclear	14	18.00	4.33	.511	.617
	Joint	186	17.39	4.33		
Perceived benefits	Nuclear	14	15.71	4.50	.642	.531
	Joint	186	14.92	3.61		
Self-efficacy	Nuclear	14	121.28	19.53	.075	.941
	Joint	186	120.88	17.90		
Marital adjustment	Nuclear	14	20.64	3.13	-1.561	.141
	Joint	186	21.97	2.27		

Quality of life	Nuclear	14	68.54	17.75	-1.511	.153
	Joint	186	75.83	11.94		

The table 4.11 showcases the differences in psychological dimensions (helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life) between participants from nuclear and joint families. The findings are summarized as follows: Participants from nuclear families reported higher levels of helplessness (M = 13.00, SD = 4.79) compared to those from joint families (M = 10.22, SD = 3.39). This difference approached statistical significance (t = 2.132, p = .051), indicating a potential trend of increased helplessness among nuclear family participants. Additionally, nuclear family participants demonstrated slightly higher acceptance levels (M = 18.00, SD = 4.33) than their joint family counterparts (M = 17.39, SD = 4.33), but this difference was not statistically significant (t = .511, p = .617). Similarly, perceived benefits were marginally higher in the nuclear family group (M = 15.71, SD = 4.50) compared to the joint family group (M = 14.92, SD = 3.61), though this difference was also not statistically significant (t = .642, p = .531). Both family types reported similar levels of self-efficacy, with nuclear family participants (M = 121.28, SD = 19.53) and joint family participants (M = 120.88, SD = 17.90) showing no significant difference (t = .075, p = .941). Joint family participants (M = 21.97, SD = 2.27) reported better marital adjustment than nuclear family participants (M = 20.64, SD = 3.13). However, the difference was not statistically significant (t = -1.561, p = .141). Participants from joint families (M = 75.83, SD = 11.94) reported higher quality of life compared to those from nuclear families (M = 68.54, SD = 17.75). This difference, however, did not reach statistical significance (t = -1.511, p = .153).

The comparison between participants from nuclear and joint families showed no statistically significant differences in the majority of psychological variables. However, the higher levels of helplessness in nuclear family participants approached statistical significance, indicating that family type may have an influence on feelings of helplessness. Participants from joint families generally reported higher marital adjustment and better quality of life; however, these differences were not statistically significant.

Table: -4.12: Mean difference in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by Family History of infertility N= 200, df 198

	Family History of infertility	N	Mean	SD	t	Sig.
Helplessness	Yes	50	11.24	3.80	1.812	.074
	No	150	10.14	3.45		
Acceptance	Yes	50	16.74	4.43	-1.287	.202
	No	150	17.66	4.22		
Perceived benefits	Yes	50	14.70	3.87	-.601	.550
	No	150	15.07	3.61		
Self-efficacy	Yes	50	117.68	20.77	-1.327	.189
	No	150	121.99	16.87		
Marital adjustment	Yes	50	21.58	2.58	-.977	.332
	No	150	21.98	2.27		
Quality of life	Yes	50	73.76	15.04	-.891	.376
	No	150	75.84	11.57		

This table 4.12 presents the comparison of psychological dimensions (helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life) between individuals with and without a family history of infertility. The findings are summarized as follows: Participants with a family history of infertility (M = 11.24, SD = 3.80) reported higher levels of helplessness compared to those without a family history (M = 10.14, SD = 3.45). Although the difference was not statistically significant (t = 1.812, p = .074), participants without a family history of infertility (M = 17.66, SD = 4.22) exhibited slightly higher acceptance levels compared to those with a family history (M = 16.74, SD = 4.43). Similarly, the difference between these groups was not statistically significant (t = -1.287, p = .202). Both groups showed similar levels of perceived benefits, with no significant difference between those with a family history (M = 14.70, SD = 3.87) and those without (M = 15.07, SD = 3.61) (t = -.601, p = .550). Participants without a family history of infertility (M = 121.99, SD = 16.87) reported higher self-efficacy than those with a family history (M = 117.68, SD = 20.77). The difference was not statistically significant (t = -1.327, p = .189). Participants without a

family history demonstrated slightly higher marital adjustment (M = 21.98, SD = 2.27) compared to those with a family history (M = 21.58, SD = 2.58); however, this difference was not statistically significant (t = -0.977, p = .332). Similarly, quality of life scores was marginally higher among participants without a family history (M = 75.84, SD = 11.57) than those with a family history (M = 73.76, SD = 15.04), but the difference was not statistically significant (t = -0.891, p = .376).

There were no statistically significant differences in the measured variables between individuals with and without a family history of infertility. While participants with a family history of infertility reported slightly higher helplessness and lower self-efficacy and quality of life, these differences were not significant. The data suggest that having a family history of infertility does not substantially influence illness cognition, self-efficacy, marital adjustment, or quality of life in this sample.

Table: -4.13: Mean difference in Self-Efficacy, Marital Adjustment, Illness cognition and Quality of Life by Infertility Type N= 200, df 198

	Infertility Type	N	Mean	SD	t	Sig.
Helplessness	Primary infertility	162	10.56	3.51	1.101	.276
	Sub fertility	38	9.82	3.78		
Acceptance	Primary infertility	162	17.17	4.46	-2.155	.034
	Sub fertility	38	18.53	3.21		
Perceived benefits	Primary infertility	162	14.80	3.76	-1.567	.122
	Sub fertility	38	15.74	3.19		
Self-efficacy	Primary infertility	162	119.84	17.87	-1.745	.087
	Sub fertility	38	125.47	17.92		
Marital adjustment	Primary infertility	162	21.81	2.38	-.847	.400
	Sub fertility	38	22.16	2.21		

Quality of life	Primary infertility	162	74.77	12.37	-1.235	.222
	Sub fertility	38	77.65	13.05		

This table 4.13 examines the differences between individuals with primary infertility and subfertility across several psychological dimensions, including helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life. The results are summarized below: Participants with primary infertility (M = 10.56, SD = 3.51) reported slightly higher levels of helplessness compared to those with subfertility (M = 9.82, SD = 3.78). However, this difference was not statistically significant (t = 1.101, p = .276). Those with subfertility (M = 18.53, SD = 3.21) reported significantly higher acceptance compared to individuals with primary infertility (M = 17.17, SD = 4.46), with the difference being statistically significant (t = -2.155, p = .034). Although participants with subfertility (M = 15.74, SD = 3.19) had slightly higher perceived benefits than those with primary infertility (M = 14.80, SD = 3.76), the difference was not statistically significant (t = -1.567, p = .122). Participants with subfertility (M = 125.47, SD = 17.92) reported higher self-efficacy compared to those with primary infertility (M = 119.84, SD = 17.87). However, the difference did not reach statistical significance (t = -1.745, p = .087). Individuals with subfertility (M = 22.16, SD = 2.21) had slightly higher marital adjustment compared to those with primary infertility (M = 21.81, SD = 2.38), but this difference was not statistically significant (t = -.847, p = .400). Participants with subfertility (M = 77.65, SD = 13.05) reported higher quality of life compared to those with primary infertility (M = 74.77, SD = 12.37), although the difference was not statistically significant (t = -1.235, p = .222).

The results show that individuals with subfertility exhibit significantly greater acceptance compared to those with primary infertility. Although there were no statistically significant differences in variables such as helplessness, perceived benefits, self-efficacy, marital adjustment, or quality of life, individuals with subfertility generally reported slightly better outcomes in these areas.

Table: -4.14: Mean difference in Self-Efficacy, Marital Adjustment, Illness cognition and Quality of Life by Cohabitation N= 200, df 198

	Cohabitation type	N	Mean	SD	t	Sig.
Helplessness	Continuous	132	10.69	3.80	1.642	.102
	Non-Continuous	68	9.88	2.99		
Acceptance	Continuous	132	17.31	4.29	-.549	.584
	Non-Continuous	68	17.66	4.28		
Perceived benefits	Continuous	132	15.02	3.84	.239	.811
	Non-Continuous	68	14.90	3.35		
Self-efficacy	Continuous	132	120.26	18.58	-.738	.462
	Non-Continuous	68	122.18	16.78		
Marital adjustment	Continuous	132	21.81	2.52	-.626	.532
	Non-Continuous	68	22.01	1.99		
Quality of life	Continuous	132	74.26	13.04	-1.749	.082
	Non-Continuous	68	77.37	11.25		

This 4.14 table analysis examines the influence of cohabitation type (continuous vs. non-continuous) on various psychological dimensions, including helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life. The results are summarized below: Participants in the continuous cohabitation group (M = 10.69, SD = 3.80) reported slightly higher helplessness compared to those in the non-continuous cohabitation group (M = 9.88, SD = 2.99). However, this difference was not statistically significant (t = 1.642, p = .102). The acceptance levels were similar between continuous (M = 17.31, SD = 4.29) and non-continuous cohabitants (M = 17.66, SD = 4.28), with no significant difference found (t = -.549, p = .584). There was very little difference in perceived benefits between the continuous (M = 15.02, SD = 3.84) and non-continuous (M = 14.90, SD = 3.35) cohabitation groups, and the difference was not significant (t = .239, p = .811). Non-continuous cohabitants (M = 122.18, SD = 16.78) had slightly higher self-efficacy than continuous cohabitants (M = 120.26, SD = 18.58), but this difference was not statistically significant (t = -.738, p =

.462). Marital adjustment scores were very similar between continuous (M = 21.81, SD = 2.52) and non-continuous cohabitation groups (M = 22.01, SD = 1.99), with no significant difference observed (t = -.626, p = .532). Participants in the non-continuous cohabitation group (M = 77.37, SD = 11.25) reported slightly higher quality of life compared to the continuous group (M = 74.26, SD = 13.04). However, this difference did not reach statistical significance (t = -1.749, p = .082).

There were no statistically significant differences between the continuous and non-continuous cohabitation groups on the variables of helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life. The trends indicate that the type of cohabitation may not have a significant impact on these psychological dimensions within this sample.

Table: -4.15: Mean difference in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by Medical Factor of Infertility N= 200

Variable	Medical Factor	N	Mean	Std. Deviation	F	Sig.
Helplessness	Male	50	11.28	3.57	1.680	.173
	Female	76	10.14	3.77		
	Combined	40	10.50	3.43		
	Unexplained	34	9.65	3.05		
Acceptance	Male	50	17.52	3.75	.291	.832
	Female	76	17.68	4.33		
	Combined	40	17.30	3.74		
	Unexplained	34	16.88	5.47		
Perceived benefits	Male	50	15.16	3.54	.722	.540
	Female	76	14.67	3.76		
	Combined	40	15.62	3.44		
	Unexplained	34	14.65	3.95		
Self-efficacy	Male	50	119.20	16.71	.659	.578
	Female	76	119.99	20.10		
	Combined	40	121.92	17.65		

	Unexplained	34	124.29	15.06		
Marital Adjustment	Male	50	22.00	2.04	.086	.968
	Female	76	21.83	2.50		
	Combined	40	21.92	2.05		
	Unexplained	34	21.76	2.81		
Quality of life	Male	50	74.25	10.65	1.160	.326
	Female	76	76.04	12.77		
	Combined	40	73.03	12.89		
	Unexplained	34	77.96	13.88		

This table 4.15 explores the differences in psychological variables (helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life) across four categories of medical factors of infertility: male factor, female factor, combined factor, and unexplained infertility. The findings are summarized below: The highest mean helplessness was observed in the male infertility group (M = 11.28, SD = 3.57), while the lowest was found in the unexplained infertility group (M = 9.65, SD = 3.05). However, the differences across the four groups were not statistically significant (F = 1.680, p = .173). The female infertility group had the highest mean acceptance (M = 17.68, SD = 4.33), while the unexplained infertility group reported the lowest (M = 16.88, SD = 5.47). However, the differences were not significant (F = .291, p = .832). The combined infertility group showed the highest perceived benefits (M = 15.62, SD = 3.44), and the unexplained infertility group had the lowest (M = 14.65, SD = 3.95). No significant difference was found between the groups (F = .722, p = .540). Participants in the unexplained infertility group reported the highest self-efficacy (M = 124.29, SD = 15.06), while the male infertility group had the lowest (M = 119.20, SD = 16.71). The differences were not statistically significant (F = .659, p = .578). Marital adjustment scores were relatively similar across all groups, with the male infertility group having the highest (M = 22.00, SD = 2.04) and the unexplained infertility group the lowest (M = 21.76, SD = 2.81). These differences were not statistically significant (F = .086, p = .968). Participants with unexplained infertility

reported the highest quality of life (M = 77.96, SD = 13.88), while the combined infertility group reported the lowest (M = 73.03, SD = 12.89). However, the differences were not statistically significant (F = 1.160, p = .326).

No statistically significant differences were found in any of the measured psychological variables based on the medical factor of infertility. Although some variation in means was observed, the results indicate that the medical cause of infertility does not significantly affect feelings of helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, or overall quality of life.

Table: -4.16: Mean difference in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by Client Perceived Factor of Infertility N= 200

Variable	Client Factor	N	Mean	Std. Deviation	F	Sig.
Helplessness	Male	54	11.05	3.69	1.491	.218
	Female	32	10.53	4.09		
	Combined	38	10.68	3. 78		
	Unexplained	76	9.78	3.05		
Acceptance	Male	54	17.67	3.48	.578	.630
	Female	32	16.72	4.89		
	Combined	38	17.97	3.84		
	Unexplained	76	17.29	4.73		
Perceived benefits	Male	54	15.30	3.37	.623	.601
	Female	32	14.75	3.69		
	Combined	38	15.45	3.80		
	Unexplained	76	14.62	3.82		
Self-efficacy	Male	54	119.74	16.67	1.334	.265
	Female	32	115.97	22.48		
	Combined	38	122.71	18.37		
	Unexplained	76	122.92	16.36		

Marital adjustment	Male	54	21.98	2.27	.643	.588
	Female	32	21.53	2.45		
	Combined	38	21.60	2.06		
	Unexplained	76	22.09	2.51		
Quality of life	Male	54	75.26	11.14	.409	.747
	Female	32	73.28	13.65		
	Combined	38	75.35	13.42		
	Unexplained	76	76.21	12.63		

Table 4.16 displays the mean differences in psychological dimensions, including helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life, based on clients' perceptions of infertility factors (male, female, combined, and unexplained). The results are summarized as follows: Participants who perceived male factor infertility had the highest helplessness scores (M = 11.05, SD = 3.69), followed by those who perceived female factor (M = 10.53, SD = 4.09), combined factor (M = 10.68, SD = 3.78), and unexplained infertility (M = 9.78, SD = 3.05). However, these differences were not statistically significant (F = 1.491, p = .218). Combined factor infertility had the highest acceptance levels (M = 17.97, SD = 3.84), followed by male factor (M = 17.67, SD = 3.48), unexplained factor (M = 17.29, SD = 4.73), and female factor infertility (M = 16.72, SD = 4.89). The differences between groups were not statistically significant (F = .578, p = .630). The combined factor group reported the highest perceived benefits (M = 15.45, SD = 3.80), while the unexplained group had the lowest (M = 14.62, SD = 3.82). The male (M = 15.30, SD = 3.37) and female (M = 14.75, SD = 3.69) factor groups showed similar scores. No significant differences were found (F = .623, p = .601). The unexplained infertility group (M = 122.92, SD = 16.36) and the combined factor group (M = 122.71, SD = 18.37) reported the highest self-efficacy, followed by the male (M = 119.74, SD = 16.67) and female (M = 115.97, SD = 22.48) factor groups. However, the differences were not statistically significant (F = 1.334, p = .265). The unexplained factor group (M = 22.09, SD = 2.51) reported the highest marital adjustment, followed by the male

factor (M = 21.98, SD = 2.27), combined factor (M = 21.60, SD = 2.06), and female factor group (M = 21.53, SD = 2.45). These differences were not statistically significant (F = .643, p = .588). The unexplained group had the highest quality of life scores (M = 76.21, SD = 12.63), followed closely by the combined (M = 75.35, SD = 13.42), male (M = 75.26, SD = 11.14), and female (M = 73.28, SD = 13.65) factor groups. No significant differences were observed between the groups (F = .409, p = .747).

Overall, although there were minor variations in helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life based on the client-perceived factor of infertility, none of these differences were statistically significant. This suggests that the perceived cause of infertility does not significantly affect these psychological dimensions in this sample.

Table: -4.17: Mean difference in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by Duration of Treatment N= 200

Variable	Group	N	Mean	Std. Deviation	F	Sig.
Helplessness	0-1 Year	70	9.06	2.99	6.903	< .001
	1- 3 Years	70	10.70	3.55		
	3-5 Years	28	11.18	4.26		
	> 5 Years	32	12.09	3.15		
Acceptance	0-1 Year	70	17.93	4.58	1.848	.140
	1- 3 Years	70	17.86	3.87		
	3-5 Years	28	16.39	4.98		
	> 5 Years	32	16.31	3.55		
Perceived benefits	0-1 Year	70	14.34	3.89	1.600	.191
	1- 3 Years	70	15.66	3.43		
	3-5 Years	28	14.68	3.71		
	> 5 Years	32	15.16	3.52		
Self-efficacy	0-1 Year	70	121.80	17.22	1.770	.154

	1- 3 Years	70	122.93	17.76		
	3-5 Years	28	121.07	18.75		
	> 5 Years	32	114.41	18.69		
Marital adjustment	0-1 Year	70	21.88	2.50	1.336	.264
	1- 3 Years	70	22.01	2.51		
	3-5 Years	28	22.32	1.68		
	> 5 Years	32	21.19	2.08		
Quality of life	0-1 Year	70	79.56	9.91	6.344	< .001
	1- 3 Years	70	74.73	14.36		
	3-5 Years	28	73.76	11.75		
	> 5 Years	32	68.68	10.92		

This table 4.17 examines the differences in various psychological variables (helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life) based on the duration of treatment (0–1 year, 1–3 years, 3–5 years, and more than 5 years). The findings are summarized below: The analysis revealed significant differences in helplessness across the duration of treatment ($F = 6.903$, $p < .001$). Participants who had been in treatment for more than 5 years reported the highest helplessness scores ($M = 12.09$, $SD = 3.15$), while those in treatment for less than a year reported the lowest levels ($M = 9.06$, $SD = 2.99$). This suggests that longer durations of treatment are associated with higher feelings of helplessness. There were no significant differences in acceptance across the various treatment durations ($F = 1.848$, $p = .140$). The mean acceptance scores were similar across groups, with the highest being among those in treatment for 0–1 year ($M = 17.93$, $SD = 4.58$) and the lowest among those in treatment for more than 5 years ($M = 16.31$, $SD = 3.55$). There were no significant differences in perceived benefits based on treatment duration ($F = 1.600$, $p = .191$). The group with 1–3 years of treatment had the highest perceived benefits ($M = 15.66$, $SD = 3.43$), while the 0–1 year group had the lowest ($M = 14.34$, $SD = 3.89$). Differences in self-efficacy across treatment durations were not statistically

significant (F = 1.770, p = .154). The highest self-efficacy scores were observed in the 1–3-year group (M = 122.93, SD = 17.76), and the lowest were in the group with more than 5 years of treatment (M = 114.41, SD = 18.69). No significant differences were found in marital adjustment based on the duration of treatment (F = 1.336, p = .264). Marital adjustment was consistent across groups, with the highest mean in the 3–5 years group (M = 22.32, SD = 1.68) and the lowest in the more than 5 years group (M = 21.19, SD = 2.08). The analysis revealed significant differences in quality of life based on treatment duration (F = 6.344, p < .001). Participants who had been in treatment for 0–1 year reported the highest quality of life (M = 79.56, SD = 9.91), while those with treatment durations exceeding 5 years reported the lowest quality of life (M = 68.68, SD = 10.92). This suggests that quality of life declines as treatment duration increases

The results reveal notable variations in helplessness and quality of life depending on treatment duration, with longer treatment periods linked to greater helplessness and a lower quality of life. However, no significant differences were observed in acceptance, perceived benefits, self-efficacy, or marital adjustment, suggesting that these factors remain consistent irrespective of the length of treatment.

Table: -4.18: Mean difference in Illness cognition, Self-Efficacy, Marital Adjustment and Quality of Life by Number of IUI Cycles done, N= 200

Variable	Group	N	Mean	SD	F	Sig.
Helplessness	0	172	10.11	3.45	4.671	.010
	1	22	12.23	3.79		
	2	6	12.50	3.94		
Acceptance	0	172	17.68	4.27	2.388	.094
	1	22	15.59	4.27		
	2	6	17.00	3.52		
Perceived benefits	0	172	15.07	3.68	.418	.659
	1	22	14.36	3.88		
	2	6	14.50	2.66		
Self-efficacy	0	172	122.02	16.40	2.428	.091

	1	22	113.77	26.69		
	2	6	115.00	18.64		
	0	172	21.94	2.38		
Marital adjustment	1	22	21.72	2.14	.903	.407
	2	6	20.67	2. 25		
	0	172	76.57	11.64		
Quality of life	1	22	67.61	15.70	6.452	.002
	2	6	67.77	13.41		

The table 4.18 examines the impact of the number of Intrauterine Insemination (IUI) cycles on various psychological dimensions, including helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life. The groups were divided based on the number of IUI cycles: 0 cycles (N = 172), 1 cycle (N = 22), and 2 cycles (N = 6). The findings are summarized below: Participants who had undergone one or two IUI cycles reported higher levels of helplessness (M = 12.23, SD = 3.79 for 1 cycle; M = 12.50, SD = 3.94 for 2 cycles) compared to those who had not undergone any cycles (M = 10.11, SD = 3.45). The difference was statistically significant (F = 4.671, p = .010), indicating that undergoing IUI cycles is associated with higher feelings of helplessness. The group with 1 IUI cycle showed the lowest acceptance scores (M = 15.59, SD = 4.27), while those with no cycles and two cycles reported higher acceptance (M = 17.68, SD = 4.27 for 0 cycles; M = 17.00, SD = 3.52 for 2 cycles). However, the difference was not statistically significant (F = 2.388, p = .094). There were no significant differences in perceived benefits across the groups (F = .418, p = .659), with the mean scores being relatively consistent (M = 15.07, SD = 3.68 for 0 cycles; M = 14.36, SD = 3.88 for 1 cycle; M = 14.50, SD = 2.66 for 2 cycles). Participants who had undergone no IUI cycles reported the highest self-efficacy (M = 122.02, SD = 16.40), while those with 1 and 2 cycles reported lower scores (M = 113.77, SD = 26.69 for 1 cycle; M = 115.00, SD = 18.64 for 2 cycles). However, the difference was not statistically significant (F = 2.428, p = .091). The marital adjustment scores were similar across the groups, with no significant differences (F = .903, p =

.407). Participants with 2 IUI cycles reported the lowest marital adjustment scores (M = 20.67, SD = 2.25), while those with 0 cycles reported slightly higher scores (M = 21.94, SD = 2.38). A significant difference was found in quality of life across the groups (F = 6.452, p = .002). Participants who had not undergone any IUI cycles had the highest quality of life scores (M = 76.57, SD = 11.64), while those with 1 and 2 cycles reported lower scores (M = 67.61, SD = 15.70 for 1 cycle; M = 67.77, SD = 13.41 for 2 cycles). This suggests that undergoing IUI cycles negatively affects overall quality of life.

The analysis showed notable differences in helplessness and quality of life depending on the number of IUI cycles. Participants who completed more IUI cycles experienced higher levels of helplessness and a lower quality of life. No significant differences were found in acceptance, perceived benefits, self-efficacy, or marital adjustment across the groups, although some variables showed observable trends.

Table: -4.19*:* Mean difference in Self-Efficacy, Marital Adjustment, Illness cognition and Quality of Life by Number of IVF Cycles done, N= 200, df 198

	Number of IVF Cycles	N	Mean	SD	t	Sig.
Helplessness	0	198	10.36	3.53	-2.80	.212
	1	2	16.00	2.83		
Acceptance	0	198	17.41	4.29	-.784	.572
	1	2	19.00	2.83		
Perceived benefits	0	198	14.97	3.68	-.511	.697
	1	2	16.00	2.83		
Self-efficacy	0	198	121.04	18.01	9.858	< .001
	1	2	107.50	.71		
Marital adjustment	0	198	21.89	2.36	.877	.535
	1	2	21.00	1.41		
Quality of life	0	198	75.44	12.51	2.712	.209
	1	2	63.24	6.24		

The table 4.19 presents a comparison of various psychological dimensions, including helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life, between participants who had undergone no IVF cycles (N = 198) and those who had undergone one IVF cycle (N = 2). The findings are as follows: Participants who had undergone one IVF cycle reported a higher mean level of helplessness (M = 16.00, SD = 2.83) compared to those with no IVF cycles (M = 10.36, SD = 3.53). However, the difference was not statistically significant (t = -2.80, p = .212). The acceptance levels were slightly higher among those with one IVF cycle (M = 19.00, SD = 2.83) compared to those with no IVF cycles (M = 17.41, SD = 4.29). The difference, however, was not statistically

significant (t = -.784, p = .572). Participants with one IVF cycle reported higher perceived benefits (M = 16.00, SD = 2.83) compared to those with no cycles (M = 14.97, SD = 3.68), but this difference was not statistically significant (t = -.511, p = .697). A significant difference was observed in self-efficacy, with participants who had undergone one IVF cycle (M = 107.50, SD = 0.71) reporting significantly lower self-efficacy than those with no IVF cycles (M = 121.04, SD = 18.01). This difference was highly significant (t = 9.858, p < .001), indicating that self-efficacy tends to decrease after undergoing an IVF cycle. There was no significant difference in marital adjustment between participants with no IVF cycles (M = 21.89, SD = 2.36) and those with one IVF cycle (M = 21.00, SD = 1.41) (t = .877, p = .535). Participants with one IVF cycle reported a lower quality of life (M = 63.24, SD = 6.24) compared to those with no IVF cycles (M = 75.44, SD = 12.51). However, the difference was not statistically significant (t = 2.712, p = .209).

Although most variables did not exhibit significant differences between participants based on the number of IVF cycles, self-efficacy was notably lower among those who had undergone just one IVF cycle. This finding indicates that the experience of an IVF cycle may negatively impact an individual's confidence in their ability to cope with the challenges related to infertility. Other variables, such as helplessness, acceptance, perceived benefits, marital adjustment, and quality of life, showed no significant differences between the groups.

CHAPTER V
DISCUSSION

5.1 Sociodemographic characteristics

We conducted a study involving 100 couples (200 individuals: 100 females and 100 males) who were seeking treatment at a tertiary care infertility center in Kerala, South India. Most respondents were in the younger age groups, with 50% aged 15–25 and 44% aged 26–35. A smaller proportion of respondents were aged above 35 years, comprising 6% of the sample. Of the 100 couples (200 individuals), 81% were Hindus and 19% Muslims. The absence of Christian participants in the study may be attributed to the geographical location of the tertiary clinic, where Christians were a minority in the area.

Educational qualifications among respondents exhibited variability, with a significant proportion having completed education ranging from 12th grade to graduation (37.5%) and post-graduation (30%). A smaller percentage had educational qualifications up to 10th grade (17.5%), while an equally modest proportion possessed a doctorate degree (15%). Regarding employment status, the majority of respondents were employed (66.5%), while the remaining were unemployed (33.5%). Analysis of monthly income levels revealed that the majority of respondents earned up to 15,000 INR per month (64%), followed by 15,001-30,000 INR (25%), and above 30,001 INR (11%). This income distribution reflects the socio-economic diversity within the sample, encompassing individuals with varying levels of financial stability and economic resources.

The general educational trend in Kerala is reflected here. According to survey by National Statistical Office (NSO) the literacy rate in Kerala is 97.4% for males and 95.2% for females, with an average of 96.2% (National Statistical Office (NSO), 2018). Regarding the occupational status of men and women in Kerala, Kerala State Literacy Mission Authority in 2014 has given the statistics as 35.4% for women 82.4% for men (Saravana Selvi & Pushpa, 2017). The work participation rate in rural areas is reported

as 22.1% for women and 56.5% for men (Jesna, 2021). The report by Manimekalai and Linshi (2021) shows a 32% female labor force participation in India among the working age population.

Regarding the family history of infertility, 25% of couples reported having a family history of infertility, while the majority of participants did not report any such history. This is important because a family history of infertility can have clinical and psychological impact (Moura-Ramos et al., 2015). Most couples participating in this study had been married for 1 to 3 years. This means that majority of the couples started seeking treatment within 3 years of married life. There is an inverse relationship between years of married life and seeking treatment. As the duration of marriage lengthens, there is a noticeable decline in the proportion of couples seeking treatment. Additionally, this study revealed that 93% of couples seeking treatment in this tertiary care center were part of a joint family. Only 7% of couples lived as a nuclear family. Couples living together (cohabiting) continuously were in the majority in the study (66%), and 34% of couples did not have continuous cohabitation, mostly because the husband's place of employment was away from their place of residence. Among the couples studied, 81% of the female partners had never conceived (primary Infertility), and 19% had experienced pregnancy before but never delivered a baby (secondary infertility).

From a clinical perspective, female factors accounted for infertility in 38% of couples, male factors in 25%, and a combination of both male and female factors in 20%. 17% fell under the diagnosis of unexplained infertility. This is in variance with the clients' perception of the couple infertility, in that 38% of the couple perceived infertility as unexplained, while 16% of couples perceived infertility as due to female factor. 27% of clients perceived their couple infertility to be due to the male factor, and 19% of couples perceived their infertility as due to a male and female combined factor. This disparity between clinical causes and the client's perception may be because of gaps in communication between the caregiver and client. Abdelseid and colleagues (2024) have documented that 36.7% of infertility cases stem from male factors, 24.1% from female factors, 13.3% from combined causes, and 25.9% remain unexplained.

Moridi et al. (2019) however, reported the etiological factor as 34% male, 43.5% female, 17% combined and 8.1% unexplained (Bennett et al., 2014).

Early treatment seeking behavior is evident in this study. Majority of the couples (70%) in this group were on treatment from within three years of married life (Sarkar & Gupta, 2016). As duration of treatment increases couples persisting in treatment are seen to reduce in numbers.

11% of couples under study underwent the basic assisted reproductive technology of Intrauterine Insemination (IUI) once, 3% of couples underwent IUI twice, and 86% did not undergo this procedure at all. Ninety-nine percent of the couples in the study did not utilize advanced assisted reproductive technology, such as In Vitro Fertilization (IVF), while 1% had experienced a failed IVF treatment.

Further, we discuss the results of the inferential statistics of this study under the following three headings:

- The relationship among illness cognition, self-efficacy, marital adjustment, and Fertility related quality of life of individuals undergoing infertility treatment.
- The influence of illness cognition, self-efficacy, and marital adjustment, on Fertility related quality of life among individuals undergoing infertility treatment.
- The differences in illness cognition, self-efficacy, marital adjustment, and Fertility related quality of life among individuals undergoing infertility treatment with respect to demographic variables.

5.2 The relationship among illness cognition, self-efficacy, marital adjustment, and Fertility related quality of life in individuals undergoing infertility treatment.

Hypothesis 1 (alternate hypothesis): *There is significant relationship among illness cognition, self-efficacy, marital adjustment, and quality of life of individuals undergoing infertility treatment.*

Correlation between variables

The correlation analysis reveals significant relationships among the various dimensions of illness cognition, infertility self-efficacy, marital adjustment, and fertility quality of life. This section explores these findings in the context of the Fertility Quality of Life (FertiQol) domains, encompassing emotional well-being, mind-body connection, relationships, social aspects, environmental factors, and tolerability.

Emotional Domain (EM)

The emotional health domain of FertiQol demonstrated a significant positive correlation with self-efficacy ($r = .455$, $p < 0.01$). This indicates that individuals who effectively manage their emotions are more likely to feel confident in handling illness-related challenges. This finding aligns with Bandura's theory of self-efficacy, which suggests that individuals with higher self-efficacy perceive themselves as better equipped to cope with stressors and uncertainties (Bandura, 1997). Furthermore, a significant positive correlation between emotional health and acceptance ($r=.345$, $p<0.01$) suggests that emotional regulation promotes a more adaptive acceptance of one's illness, which is consistent with findings from studies on chronic illness coping strategies (Evers et al., 2001).

Furthermore, the emotional domain showed a positive correlation with marital adjustment ($r = .173$, $p < 0.05$), suggesting that improved emotional well-being supports healthier marital relationships. This supports the notion that emotional intelligence and regulation can positively impact relationship dynamics (Schutte et al., 2001). A strong negative correlation between emotional health and helplessness ($r=-.604$, $p<0.01$) underscores the protective role of emotional well-being in reducing feelings of helplessness, as previously documented in studies on infertility stress (Wright et al., 1991).

Mind-Body Domain (MB)

The mind-body connection showed a significant positive correlation with self-efficacy ($r = .501$, $p < 0.01$), suggesting that a strong mind-body connection enhances

individuals' confidence in effectively managing their illness. This finding is supported by research on psychosomatic health, which shows that individuals who maintain a strong mind-body awareness exhibit greater resilience in the face of illness (Sharma, 2016). The positive correlation between mind-body awareness and acceptance ($r=.361$, $p<0.01$) further suggests that those who maintain a balanced relationship between their physical and mental states are better able to accept their fertility challenges.

Marital adjustment was positively related to mind-body awareness ($r=.225$, $p<0.01$), highlighting the potential influence of mind-body harmony on relationship satisfaction. Research indicates that couples who maintain a healthy emotional and physical connection tend to navigate infertility challenges more effectively (Peterson et al., 2006). Additionally, the strong negative correlation between mind-body and helplessness ($r=-.629$, $p<0.01$) emphasizes the role of psychosomatic health in reducing feelings of helplessness.

Relation Domain (RE)

Interpersonal relationships, as assessed by the relationship domain, showed a positive correlation with marital adjustment ($r = .316$, $p < 0.01$), suggesting that healthy relationships enhance marital satisfaction. This finding aligns with previous research indicating that robust social support systems, particularly within marriage, can mitigate the negative psychological impacts of infertility (Cousineau & Domar, 2007). Additionally, the positive correlation between relationships and acceptance ($r = .211$, $p < 0.01$) implies that supportive relationships facilitate the acceptance of illness, a key factor for long-term psychological adjustment (Benyamini et al., 2004).

The positive correlation between relationships and self-efficacy ($r = .218$, $p < 0.01$) supports the notion that social support enhances individuals' perceived ability to manage illness (Luszczynska et al., 2005). The negative correlation between relationships and helplessness ($r = -0.317$, $p < 0.01$) provides additional evidence for the protective role of strong social ties in alleviating feelings of helplessness during difficult times.

Social Domain (SO)

The social domain, which assesses the impact of social support in managing fertility challenges, exhibited a significant positive correlation with self-efficacy ($r = 0.495$, $p < 0.01$). This highlights the importance of social networks in boosting individuals' confidence in managing their illness, a finding echoed in the literature on social support and self-efficacy (Zimet et al., 1988; Khalid & Dawood, 2020; Nelson, 2010). Social support showed a positive correlation with acceptance ($r = .347$, $p < 0.01$), suggesting that individuals with strong social connections are more likely to accept their illness situation.

A notable positive correlation between social support and perceived benefits ($r=.188$, $p<0.01$) suggests that social networks not only provide emotional support but also enhance individuals' perception of the benefits derived from coping strategies. Additionally, the social domain was positively correlated with marital adjustment ($r=.205$, $p<0.01$), supporting findings that couples with strong social support experience better relationship satisfaction during fertility treatments (Martins et al., 2014). The strong negative correlation between social support and helplessness ($r = -0.508$, $p < 0.01$) emphasizes the protective role of social networks in reducing feelings of powerlessness.

Environmental Domain (ENV)

The environmental domain showed a positive correlation with self-efficacy ($r = 0.167$, $p < 0.05$), indicating that individuals in supportive environments tend to feel more confident in managing their illness. This finding supports environmental psychology theories, which assert that a nurturing and supportive environment promotes a sense of control and competence (Evans, 2003; Nelson, 2010). A positive correlation with marital adjustment ($r = .175$, $p < 0.01$) highlights the significance of environmental factors, such as living conditions and community support, in promoting marital harmony. The negative correlation between environment and helplessness ($r=-.145$, $p<0.05$) suggests that supportive environments help mitigate feelings of

helplessness, as reported in studies on chronic illness (Sadeghi et al., 2022; Stewart & Archbold, 1992).

Tolerability Domain (TO)

The tolerability domain, which evaluates an individual's capacity to endure the challenges associated with their illness, revealed significant positive correlations with both acceptance ($r = .289$, $p < 0.01$) and self-efficacy ($r = .368$, $p < 0.01$). These results suggest that individuals who tolerate their condition well are more likely to accept it and feel more capable of managing its effects. A notable positive correlation with perceived benefits ($r = .159$, $p < 0.05$) suggests that individuals with greater tolerability tend to perceive more benefits from their coping strategies (Li et al., 2018; Snyder et al., 1991). Finally, the negative correlation with helplessness ($r=-.300$, $p<0.01$) highlights the role of illness tolerance in reducing feelings of helplessness, a finding supported by research on chronic illness adaptation (Folkman & Lazarus, 1988; Song & Vilares, 2021).

The correlation analysis between illness cognition domains—helplessness, acceptance, and perceived benefits—and key outcomes, including infertility self-efficacy, marital adjustment, and fertility quality of life (FertiQoL), offers valuable insights into individuals' coping mechanisms with fertility challenges.

Helplessness (HLN)

Helplessness domain of illness cognition emerged as a significant negative factor impacting overall quality of life, self-efficacy, and marital adjustment. The strong negative correlation between helplessness and total FertiQoL ($r=-.619$, $p<0.01$) indicates that individuals who feel more helpless tend to experience a significantly impaired quality of life. This is consistent with prior research indicating that feelings of helplessness are associated with worse mental health outcomes in individuals dealing with chronic health conditions (Shahbazi et al., 2017; Khorasani et al., 2017; Stanton et al., 2001). In the context of infertility, feelings of powerlessness can exacerbate psychological distress, leading to lower life satisfaction and well-being (Ridenour et al., 2021).

The negative relationship between helplessness and self-efficacy (r=−.371, p<0.01) suggests that individuals who feel helpless are less likely to believe in their ability to cope with fertility-related challenges. This supports Bandura's (1997) self-efficacy theory, which posits that low self-efficacy can result in a sense of helplessness, as individuals perceive that they lack control over their circumstances (Moyano et al., 2018; Ziegler et al., 2021). The implication here is that interventions aimed at increasing self-efficacy, such as cognitive-behavioral therapy, could help reduce feelings of helplessness.

Helplessness was also negatively correlated with marital adjustment ($r = -0.170$, $p < 0.01$), suggesting that individuals who experience higher levels of helplessness are more likely to encounter greater strain in their marital relationships. Research suggests that couples facing infertility may struggle with communication and emotional support, particularly when one or both partners experience feelings of helplessness (Newton et al., 2009). Addressing these feelings through couples therapy or relationship-focused interventions could help improve marital satisfaction and reduce the negative impact of infertility on relationships.

Acceptance (ACC)

The acceptance domain of illness cognition was identified as a significant positive factor in several outcomes, including self-efficacy, marital adjustment, and overall quality of life. The positive correlation between acceptance and self-efficacy ($r = .450$, $p < 0.01$) indicates that individuals who accept their infertility are more likely to perceive themselves as capable of managing it. This is consistent with findings from coping literature, where acceptance is identified as a key adaptive strategy that fosters psychological resilience (Benyamini et al., 2004). In the context of fertility challenges, promoting acceptance can empower individuals to focus on aspects of their lives that they can control, rather than fixating on their inability to conceive.

Acceptance was also positively correlated with marital adjustment (r=.183, p<0.01), indicating that individuals who accept their situation tend to have healthier relationships with their partners. Acceptance can facilitate better communication and

emotional support between partners, which are crucial for maintaining marital harmony during fertility treatment (Peterson et al., 2006). These findings indicate that integrating acceptance-based interventions, like Acceptance and Commitment Therapy (ACT), could assist couples in managing infertility more effectively.

Furthermore, the positive relationship between acceptance and total FertiQoL ($r=.390$, $p<0.01$) reinforces the idea that accepting one's fertility challenges leads to improved overall quality of life. Acceptance helps individuals overcome the stress and anxiety linked to infertility, enabling them to shift their focus to other areas of their lives and overall well-being (Domar et al., 2012). This finding has significant implications for fertility counseling, where fostering acceptance may be a critical component of improving life satisfaction.

Perceived Benefits (PB)

The perceived benefits domain of illness cognition was also identified as a positive factor linked to self-efficacy, marital adjustment, and overall quality of life. The correlation between perceived benefits and self-efficacy ($r=.270$, $p<0.01$) indicates that individuals who recognize positive outcomes from their coping strategies, such as personal growth or strengthened relationships, feel more capable of managing their fertility challenges. This is consistent with the concept of benefit finding, which has been demonstrated to improve self-efficacy and psychological well-being in individuals dealing with chronic illnesses (Helgeson et al., 2006).

Perceived benefits were positively associated with marital adjustment ($r = 0.130$, $p < 0.05$), indicating that individuals who perceive greater benefits from their fertility journey are more likely to experience stable and satisfying marital relationships. Research indicates that couples who can identify positive aspects of their fertility experience, such as increased closeness or mutual support, tend to navigate the stress of infertility more effectively (Martins et al., 2014). Therapeutic interventions that encourage couples to reflect on the positive changes brought about by their fertility challenges may thus improve relationship quality.

Finally, perceived benefits were positively correlated with total FertiQoL ($r = 0.142$, $p < 0.05$), suggesting that recognizing the advantages of coping strategies leads to an improved overall quality of life. This finding suggests that helping individuals reframe their fertility experiences to focus on the positive outcomes can improve their well-being. Interventions such as positive psychology or benefit-finding exercises may be particularly effective in fostering this shift in perspective (Li et al., 2019; Folkman & Moskowitz, 2000).

DeShazo et al. (2023) discovered that shifts in feelings of helplessness were linked with various factors, including self-efficacy. Thanscheidt et al. (2023) showed that if the male partner showed a high level of self-efficacy, lower scores for helplessness was observed in the female partner. They also showed a positive correlation between self- efficacy in the female partner and acceptance in the male partner.

Prémusz et al. (2022) and Suh et al. (2023) both observed a comparable connection between feelings of helplessness and the quality of life, mirroring findings in the current study. Individuals grappling with greater feelings of helplessness often indicate diminished scores across various dimensions of FertiQoL, including emotional, mind-body, social, and tolerability domains. This suggests that feelings of helplessness are associated with poorer psychological well-being, increased discomfort related to bodily experiences, diminished social functioning, and decreased ability to cope with the challenges associated with fertility concerns and treatment. Benyamini et al. (2004) discovered a negative correlation between infertility-related quality of life and factors including negative perceptions of infertility, maladaptive coping strategies, and negative emotional states. Positive mental states in infertility were shown by Patel et al. (2018) to lead to a constructive coping, while non-acceptance and avoidance were shown to lead to a negative psychological health. Similarly, Prémusz and colleagues (2022) found a positive correlation between acceptance and improved fertility-related quality of life, while a negative correlation was observed between helplessness and fertility-related quality of life. Gordon and Balsom (2020) identified a connection between increased acceptance and the discovery of benefits, which in turn was

associated with enhanced mental well-being. Conversely, higher levels of helplessness were linked to a more significant negative impact on mental health. The findings also suggest that helplessness serves a maladaptive role, whereas acceptance and perceived benefits play adaptive roles in promoting the long-term physical and psychological health of patients with chronic diseases (Evers et al., 2001).

Both Prémusz et al. (2022) and Gordon and Balsom (2020) identified a significant positive correlation between acceptance and quality of life in their respective studies. Gordon and Balsom (2020) also reported that helplessness and benefit finding did not show significant effect on quality of life after adjusting for other variables in their regression analysis. In their examination of infertile couples, Patel et al. (2018) demonstrated that women experience more adverse health effects, such as low acceptance and feelings of helplessness, in comparison to their male partners. They reached the conclusion that a lack of acceptance could potentially result in unresolved grief among the female partners of infertile couples. In the Indian scenario according to Patel et al. (2018), both men and women do not consider any perceived benefit from the problem of infertility. According to Lord & Robertson (2005), people who considered their illness as uncontrollable and chronic, experienced more psychological problems. People who could actively cope and reframe positively and use more adaptive coping mechanisms were found to experience less psychological issues. Sun (2000) found that men who accepted a childless lifestyle experienced better marital adjustment.

Prémusz et al. (2022) in their study showed a negative correlation between acceptance and helplessness among women. Similarly, Gordon & Balsom (2020) showed that women who had greater helplessness experienced a negative impact on the perceived benefit in infertility. They also demonstrated that women exhibiting a greater level of acceptance and perceived benefits experienced reduced feelings of helplessness. Benyamini et al. (2009) found that spouses' perceptions of illness could affect the partners illness perceptions.

Self-efficacy, defined as an individual's belief in their ability to handle and overcome difficult situations, was found to have a substantial positive effect on both

overall quality of life and marital adjustment in individuals dealing with infertility. These results are consistent with Bandura's (1997) self-efficacy theory, which suggests that greater self-efficacy enables individuals to take charge of their circumstances, fostering more effective coping strategies and improved outcomes.

Self-Efficacy and Quality of Life

The positive correlation between self-efficacy and total FertiQoL ($r = .533$, $p < 0.01$) indicates that individuals with higher self-efficacy tend to report a significantly better overall quality of life. This finding aligns with prior studies that highlight the significant role of self-efficacy in fostering psychological resilience and life satisfaction among individuals with chronic illnesses (Schwarzer & Renner, 2000). In the context of infertility, a higher sense of self-efficacy enables individuals to tackle fertility treatments and the emotional stress they entail with increased confidence. This, in turn, helps to alleviate the psychological burden and strengthens their capacity to maintain a sense of control and purpose (Fekkes et al., 2003).

The significant influence of self-efficacy on quality of life underscores the importance of psychological interventions aimed at enhancing individuals' confidence in navigating their fertility challenges. Cognitive-behavioral therapy (CBT), which focuses on reshaping negative thought patterns and enhancing self-efficacy, has been shown to improve mental health outcomes in infertility patients (Greil et al., 2010). Furthermore, self-efficacy-building exercises, such as setting achievable goals and celebrating small successes, can help individuals feel more capable and less overwhelmed by their fertility journey (Lopez & Snyder, 2009).

Self-Efficacy and Marital Adjustment

Self-efficacy showed a positive correlation with marital adjustment ($r = .339$, $p < 0.01$), suggesting that individuals with greater confidence in their ability to cope with infertility tend to have better marital relationships. This finding supports the idea that self-efficacy not only affects individual well-being but also plays a crucial role in relationship dynamics (Bodenmann, 2005). Couples who can effectively communicate,

provide mutual support, and cope with the emotional toll of infertility are more likely to maintain a healthy and supportive partnership.

The connection between self-efficacy and marital adjustment can be understood through the idea that individuals who have confidence in their ability to handle infertility are less prone to feelings of helplessness and frustration, which can negatively impact relationships (Pasch & Sullivan, 2017). When both partners exhibit a strong sense of self-efficacy, they are more inclined to engage in constructive problem-solving and maintain an optimistic attitude, contributing to a more harmonious and resilient marital dynamic. This suggests that relationship-focused interventions, such as couple-based CBT, may help improve both individual and marital outcomes by enhancing self-efficacy and communication skills (Peterson et al., 2006).

The strong positive correlation between self-efficacy and quality of life highlights the significant role that individuals' confidence in their ability to manage their health plays in their overall well-being. This suggests that higher levels of self-efficacy are linked to more favorable subjective evaluations of life, including physical, emotional, and social aspects. Research by Maroufizadeh et al. (2021), Andrei et al. (2021), Chu et al. (2021), and Karimian and Hejazi (2019) highlighted a significant connection between self-efficacy and quality of life. Specifically, Maroufizadeh et al. (2021) showed that the fertility-related quality of life for couples was influenced by the self-efficacy scores of each individual involved. They found that women's infertility self-efficacy (ISE) was notably linked with both their personal quality of life and that of their husbands. Meanwhile, men's ISE was associated with their own marital satisfaction but did not show a significant correlation with their wives'. Couples with higher self-efficacy scores showed better quality of life than those who have lowest scores. Similar findings were reported in the studies by Juniarto et al. (2021), Chu et al. (2021), Andrei et al. (2021), as well as in the research conducted by Bandura (1994), Karimian and Hejazi (2020, 2019), O'Connor et al. (2002), Fu et al. (2016), Sani and Tamannaeifar (2017), Pasha et al. (2013), and Khadivzadeh et al. (2018). Additionally, Maroufizadeh and colleagues (2021) highlighted that self-efficacy is a critical factor influencing the quality of life for couples facing infertility. They stated that this

particularly significant for patients in developing countries like India. In contrast, the notable negative correlation observed between self-efficacy and marital adjustment highlights the complex interplay between individual psychological factors and interpersonal relationships in the context of infertility. The inverse relationship suggests that as individuals' confidence in their ability to manage their health increases, their perceptions of marital adjustment tend to decrease. This unexpected finding challenges conventional assumptions regarding the beneficial role of self-efficacy in fostering positive interpersonal dynamics within marital relationships.

The analysis showed a significant positive correlation between marital adjustment (MA) and overall quality of life, as indicated by the Total FertiQoL score ($r = .293$, $p < 0.01$). This result is consistent with existing research that underscores the importance of a healthy marital relationship in the psychological and emotional well-being of individuals and couples facing infertility. A strong, supportive marriage may serve as a protective factor, helping to alleviate the stress and emotional strain related to fertility challenges (Martins et al., 2014).

Marital Adjustment and Quality of Life

The positive relationship between marital adjustment and total FertiQoL suggests that couples with stronger marital harmony and mutual support generally report a higher quality of life. This aligns with Bodenmann's (2005) research on dyadic coping, which posits that partners who can effectively support each other during challenging events, like infertility, are more likely to preserve their psychological well-being. Infertility often leads to feelings of grief, frustration, and anxiety, which can strain marital relationships. However, when partners demonstrate strong marital adjustment, they can better navigate these emotional challenges together, reducing the overall psychological toll of infertility (Greil et al., 2010).

Eghtedar et al. (2021) and Keramat et al. (2013) highlighted the significance of marital adjustment as a key factor in enhancing fertility-related quality of life. In contrast, Luk and Loke (2014) and Park and Shin (2021) found no statistically significant link between marital adjustment and quality of life. Furthermore, in an

Actor-Partner Interdependence Model analysis, Kim et al. (2016) revealed that marital adjustment had an actor effect on the quality of life for wives, but no such effect was observed for husbands.

Couples dealing with infertility frequently face substantial relational stress; however, when they engage in open communication, offer mutual support, and share responsibilities, the adverse effects of stress on their relationship and overall well-being are reduced (Peterson et al., 2006). Marital adjustment is key in buffering the emotional impact of infertility, creating a supportive atmosphere where both partners feel acknowledged, validated, and understood. Consequently, the positive correlation between marital adjustment and FertiQoL underscores the importance of promoting healthy relationship dynamics among couples undergoing fertility treatments.

Marital Adjustment as a Protective Factor

Marital adjustment appears to function as a protective factor that enhances overall quality of life by promoting resilience and emotional well-being. Research shows that couples who maintain a strong, supportive relationship during infertility are less likely to experience severe psychological distress, such as anxiety or depression, which are common in individuals facing fertility problems (Pasch & Sullivan, 2017). In this sense, the marital relationship serves as a source of emotional security, helping both partners to cope more effectively with the uncertainties and disappointments that often accompany fertility treatment.

Interventions aimed at improving marital adjustment, such as couple-based cognitive-behavioral therapy (CBT), can help couples enhance their communication, problem-solving, and emotional support skills. These interventions not only strengthen the marital bond but also improve individual mental health, leading to a higher quality of life. Such approaches can be particularly effective in fostering shared coping mechanisms that address both partners' emotional needs during the infertility experience (Schmidt et al., 2005).

Our regression analysis did not find a significant relationship between marital adjustment and quality of life, suggesting that other psychological factors may mediate the connection between these two variables. Further research with larger sample sizes could help clarify this finding.

5.3 The influence of illness cognition, self-efficacy, and marital adjustment, on Fertility related quality of life among individuals undergoing infertility treatment.

Hypothesis 2 (alternate hypothesis): *There is significant influence of illness cognition, marital adjustment, and self-efficacy on quality of life among individuals undergoing infertility treatment.*

In our regression analysis, we found that illness cognition and self-efficacy significantly influenced fertility-related quality of life, whereas marital adjustment did not have a significant effect. Therefore, the alternate hypothesis is accepted.

We found that self-efficacy had a significant impact on quality of life, with a medium effect size ($p < 0.001$, partial $\eta^2 = 0.085$). Increased self-efficacy has been linked to improved quality of life concerning fertility. Research by Maroufizadeh et al. (2021), Andrei et al. (2021), Chu et al. (2021), and Karimian and Hejazi (2019) highlights a significant relationship between self-efficacy and quality of life. Specifically, Maroufizadeh and colleagues (2021) identified self-efficacy as a crucial factor shaping the quality of life among couples facing infertility. They stated that this is particularly significant for patients in developing countries like India. Maroufizadeh et al. (2021) demonstrated that the quality of life pertaining to fertility, viewed within the context of couples, was impacted by the self-efficacy scores of each individual. Additionally, they demonstrated a significant correlation between women's infertility self-efficacy (ISE) and both their personal quality of life and their husbands', whereas men's ISE showed a notable correlation with their own marital satisfaction but not with that of their wives. Couples with higher self-efficacy scores showed better quality of life than those who have lowest scores**.** Comparable findings were reported by Juniarto et al. (2021), Chu et al. (2021), Andrei et al. (2021), Bandura (1994), Karimian and

Hejazi (2019, 2020), O'Connor et al. (2002), Fu et al. (2016), Sani and Tamannaeifar (2017), Pasha et al. (2013), and Khadivzadeh et al. (2018).

Among the domains of illness cognition, helplessness emerged as the strongest predictor, exerting a significant negative impact on fertility-related quality of life, with a large effect size ($p < 0.001$, partial $\eta^2 = 0.267$). This aligns with previous research suggesting that feelings of powerlessness and lack of control can contribute to lower well-being in individuals experiencing fertility challenges (Azizi Ziabari et al., 2024). The substantial effect size indicates that interventions addressing helplessness have the potential to significantly enhance fertility-related quality of life. Although acceptance emerged as a significant positive predictor, its effect size was small ($p = 0.023$, partial $\eta2 = 0.026$). This finding supports the notion that acceptance of one's situation, rather than fighting against it, can foster better psychological outcomes in the context of infertility (Pinto-Gouveia et al., 2012). Therapeutic interventions that promote acceptance, such as mindfulness-based therapies, may therefore be beneficial for individuals struggling with fertility issues. Contrary to expectations, perceived benefits did not significantly predict fertility quality of life. This may suggest that while individuals may recognize positive aspects of their fertility journey (such as personal growth or strengthened relationships), these perceived benefits do not necessarily translate into better quality of life in this context. Further research is essential to better understand the intricate relationship between perceived benefits and fertility-related quality of life. Studies by Evers et al. (2001) and Hoving et al. (2010) have highlighted the substantial influence of illness cognition and cognitive representations on overall quality of life. Similar findings were reported by Prémusz et al. (2022), Suh et al. (2023), Gordon and Balsom (2020), Patel et al. (2018), and Lord and Robertson (2005).

In our research, regression analysis revealed no significant impact of marital adjustment on fertility-related quality of life. Existing studies present mixed findings regarding the influence of marital adjustment on couples' quality of life. Luk and Loke (2014) as well as Park and Shin (2021) both found consistent findings in their research, indicating no statistically significant correlation between marital adjustment and quality of life. Kim and Shin (2013) propose that marital adjustment plays a crucial role in

shaping an individual's quality of life. Similarly, Eghtedar et al. (2021) and Keramat et al. (2013) highlight the importance of marital adjustment as a pivotal factor in improving fertility-related quality of life. In their 2016 study employing the Actor-Partner Interdependence Model analysis, Kim et al. found that marital adjustment significantly impacted wives' quality of life through actor effects, while no such effect was observed for husbands. The trend-level significance ($p = .066$) identified in our study regarding the relationship between marital adjustment and quality of life suggests that this association might become more pronounced with a larger sample size.

5.4 The differences in illness cognition, self-efficacy, marital adjustment, and Fertility related quality of life among individuals undergoing infertility treatment with respect to demographic and clinical variables.

Hypothesis 3 (alternate hypothesis): *There are significant differences in illness cognition, self-efficacy marital adjustment and quality of life among individuals undergoing infertility treatment with respect to demographic variables (Gender, Age, Religion, Education qualification, Employment, Monthly income, Family history of infertility, Duration of Marital Life, Family Type, and Cohabitation, and clinical factors like Infertility Type, Infertility Factor, Duration of Infertility treatment, Number of IUI and IVF).*

Gender

The results of this study yield intriguing insights into the gender differences observed in relation to various psychosocial variables. significant gender differences were found in self-efficacy and quality of life, while helplessness, acceptance, perceived benefits, and marital adjustment showed no significant differences, indicating that both genders share similar experiences in these psychological dimensions.

Benyamini et al. (2009) reported that spouses' perceptions of illness could affect the partners illness perceptions. Karademas and Hondronikola (2010) found no significant differences concerning gender with cardiovascular disease in a study with cardiac patients with respect to the illness cognition domains. In contrast, our study

found a significant gender difference in self-efficacy, with males exhibiting higher self-efficacy scores than females. Similarly, Hosseini et al. (2021) reported that wives had lower levels of self-efficacy compared to their husbands. In contrast, a significant difference in quality of life between genders was evident, with males reporting higher quality of life compared to females. Sociocultural norms, unequal access to resources, and societal expectations about gender roles and responsibilities can influence disparities in quality-of-life outcomes between men and women. This aligns with findings by Andrei et al. (2021) and Domeyer et al. (2017), who observed that male partners in infertile couples tend to report a higher quality of life compared to female partners.

Age

The findings of this study revealed significant differences in self-efficacy, with individuals aged 26-35 years exhibiting the highest levels. However, no significant differences were found in other psychological dimensions, including helplessness, acceptance, perceived benefits, marital adjustment, or quality of life across age groups. This aligns with research suggesting that quality of life perceptions may fluctuate with age but do not show consistent trends across all age groups (Schneiderman et al., 2020). Previous research has suggested that acceptance tends to improve with age and experience. However, the current findings indicate that this may not apply consistently across different age groups (Smith & Miller, 2019). These results offer a more nuanced perspective on how psychological experiences can vary with age, highlighting the need to consider age-specific factors in psychological research.

Patel et al. (2018) did not find a significant association between age and the acceptance domains of illness cognition. In contrast, DeShazo et al. (2023) identified a link between age and the helplessness domain of illness cognition. Hernandez Hernandez et al. (2022) reported that patient age has a minimal impact on quality of life. On the other hand, Suleimenova et al. (2022), Damayanti et al. (2022), Elsous et al. (2021), and Cusatis et al. (2019) emphasized a notable association between age and FertiQoL.

Religion

Based on the findings, this study found no significant differences between Hindu and Muslim participants on the various psychological dimensions examined. The results suggest that religious background did not play a substantial role in influencing feelings of helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, or quality of life. These findings enhance our understanding of how psychological experiences can cross religious boundaries, highlighting the role of individual and contextual factors in shaping mental health outcomes. Mirghafourvand et al. (2018) highlight the significant influence of religious beliefs on marital adjustment among infertile couples, emphasizing their pervasive impact across various aspects of human life.

Education

The analysis found no statistically significant differences in helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, or quality of life across the four educational qualification groups. This suggests that education level does not significantly impact these psychological dimensions within the sample studied. Future research could investigate additional factors, such as socioeconomic status and support systems, to provide a more holistic understanding of the elements that impact psychological well-being.

Damayanti et al. (2022) and Elsous et al. (2021) showed that FertiQoL scores increase with better education. Women possessing elevated levels of education and emotional intelligence demonstrate a greater capacity for managing marital challenges compared to those with less education. Jalil and Muazzam (2013). Ferreira et al. (2015) reported significantly better marital satisfaction with higher levels of education.

Employment

The results of this study emphasize notable differences in self-efficacy, with employed participants reporting higher levels. However, most other psychological dimensions, such as helplessness, acceptance, perceived benefits, marital adjustment,

and quality of life, did not show significant differences between employed and unemployed individuals. This indicates that while employment status may enhance self-efficacy, it does not drastically affect other aspects of psychological well-being. The results highlight the significance of taking into account various factors that influence psychological experiences, rather than focusing solely on employment status. According to Artazcoz et al. (2004), unemployed men showed lower mental health status in infertility whereas this effect was less prominent in women. Maeda et al. (2022) found that job-related stress negatively impacts women's quality of life, particularly in relation to fertility.

Income

The analysis underscores the significant influence of monthly income on quality of life and a near-significant relationship with self-efficacy. Although helplessness, acceptance, perceived benefits, and marital adjustment did not exhibit significant differences across income groups, the findings highlight the crucial role of income in influencing psychological well-being. Future research should investigate the mechanisms that underlie these relationships, particularly focusing on how financial resources interact with individual resilience and coping strategies.

Duration of married life

The analysis of the study's results revealed that the duration of marital life had a statistically significant impact solely on helplessness, with participants married for 5-8 years reporting the highest levels of helplessness. Although no significant differences were found across groups in terms of acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life, the findings highlight that the middle years of marriage may pose particular challenges. This suggests the need for focused interventions to address these specific dynamics.

Family Type

Our findings the comparison between participants from nuclear and joint families did not reveal statistically significant differences across most psychological

dimensions. However, the trend towards higher helplessness in nuclear family participants indicates that family structure might influence feelings of helplessness to some extent. While joint family participants generally reported better marital adjustment and quality of life, these differences were not significant, highlighting the need for further research to explore the complex interplay between family structure and psychological well-being.

Family history of infertility

The results of this study indicate that there are no statistically significant differences in helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, or quality of life between individuals with and without a family history of infertility. While participants with a family history reported slightly higher helplessness and lower self-efficacy and quality of life, these differences were not substantial enough to suggest a meaningful impact. These findings suggest that family history of infertility does not significantly influence how individuals perceive or cope with infertility-related psychological dimensions in this sample.

Type of infertility

The findings of this study suggest that individuals with subfertility exhibit notably higher levels of acceptance compared to those with primary infertility. While no statistically significant differences were found in other psychological factors such as helplessness, perceived benefits, self-efficacy, marital adjustment, and quality of life, individuals with subfertility generally reported somewhat more favorable outcomes across these variables. These results highlight the importance of targeted psychological interventions that address the specific emotional needs of individuals facing fertility challenges, particularly in promoting acceptance and coping strategies. Foroudifard et al. (2020) reported significantly better FertiQoL in secondary infertility.

Cohabitation

The results of this study reveal that cohabitation type (continuous vs. non-continuous) does not significantly influence psychological dimensions such as

helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, or quality of life. These findings suggest that other factors, such as relationship dynamics and individual coping strategies, may play a more crucial role in shaping psychological well-being than cohabitation patterns alone. This contributes to the broader understanding that living arrangements may not be as impactful on psychological outcomes as previously thought.

Infertility Factors

The results of this study revealed no statistically significant differences in the psychological variables of helplessness, acceptance, perceived benefits, self-efficacy, marital adjustment, and quality of life based on either the medical or client-perceived factors of infertility. These findings imply that the psychological experiences of individuals undergoing infertility treatment remain relatively consistent, irrespective of whether the cause is attributed to male, female, combined, or unexplained factors. This emphasizes the need for psychological support for all individuals dealing with infertility, as the emotional effects may be consistent regardless of the medical diagnosis or perceived cause. But according to Ying et al. (2015) the cause of infertility can impact marital stress.

Duration of treatment

The study revealed notable differences in helplessness and quality of life depending on the treatment duration, with longer treatment periods linked to increased helplessness and reduced quality of life. However, no significant differences were observed in acceptance, perceived benefits, self-efficacy, or marital adjustment, indicating that these factors remain consistent regardless of the treatment duration. These findings emphasize the psychological effects of prolonged treatment, especially concerning feelings of helplessness and overall well-being, and stress the need to address these issues in clinical interventions.

Thanscheidt et al. (2023) found a weak positive correlation between the duration of fertility treatment and the helplessness domain in both men and women. They also showed a weak negative correlation between duration of treatment and self-efficacy in

both partners. Patel et al., (2018) in their study could not find any association between duration of infertility or treatment and the acceptance domain of illness cognition among women. After the third year of treatment, levels of marital adjustment tend to decrease (Peterson et al., 2003).

Intrauterine Insemination (IUI)

The analysis identified significant variations in helplessness and quality of life depending on the number of IUI cycles. Participants who had undergone more cycles reported experiencing higher levels of helplessness and a lower quality of life, highlighting the emotional impact of fertility treatments. Although trends were observed in acceptance, self-efficacy, and marital adjustment, no statistically significant differences were found in these areas. These findings highlight the importance of psychological support for individuals undergoing fertility treatments to address the emotional challenges associated with repeated IUI cycles.

In vitro Fertilization (IVF)

The analysis showed no significant differences in most psychological dimensions, including helplessness, acceptance, perceived benefits, marital adjustment, and quality of life, between participants who had not undergone any IVF cycles and those who had undergone one cycle. However, a significant decline in self-efficacy was observed among participants with one IVF cycle, suggesting that undergoing IVF can negatively affect an individual's confidence in managing infertility-related challenges. These findings highlight the significance of focusing on psychological well-being, especially self-efficacy, for individuals undergoing fertility treatments.

While considering various published studies on this subject the following notable reports could be found. Faramarzi et al. (2014) found a negative correlation between infertility self-efficacy (ISE) scores and demographic factors such as age, education level, and duration of infertility. Specifically, women who are older, more highly educated, and have experienced infertility for longer periods tend to report lower levels of self-efficacy. A study conducted by Cousineau et al. (2006) found no notable correlation between ISE and factors such as age, income, or cause of infertility. Al-

Kareem et al. (2022) and Jafari et al. (2023) could not find any correlation between self-efficacy and various socio demographic factors.

In our study, marital adjustment does not seem to have any association with Religion, Age, Education level, employment, Family history of infertility, duration of the marriage, family type, cohabitation, infertility type, infertility factor, and duration of treatment. Gameiro et al. (2016) and Zeren et al. (2019) also documented comparable results.

Several factors influence infertile couples' satisfaction in marriage and sexual life, including the duration of infertility, infertility type and cause, age, marriage length, education, income, and social class (Soleimani et al., 2015). Research by Elsous et al. (2021) and Cusatis et al. (2019) highlighted a positive relationship between higher education levels and improved quality of life. Conversely, studies by De Rose et al. (2022) and Suleimenova et al. (2022) found a negative correlation between FertiQoL and factors such as age, length of marriage, and duration of infertility.

In their 2013 study, Karabulut et al. observed a positive correlation between quality of life and education level. In contrast, Li et al. (2019) identified negative correlations between quality of life and factors like infertility, type of infertility, and the duration of infertility. Minthami et al. (2023) established significant associations between socio-demographic determinants and QoL scores, unveiling nuanced interplays between factors such as socioeconomic status, religion, residence, and family type. Particularly noteworthy are the negative correlations identified between age group and infertility duration with total mean scores of Core FertiQoL

Domeyer and colleagues (2017) identified potential indicators associated with fertility-related quality of life. These indicators encompassed factors such as reduced income, youth, limited educational attainment, prolonged duration of infertility, and the frequency of IVF or ICSI treatments.

CHAPTER V

SUMMARY AND CONCLUSION

5.1 Summary and Conclusion

This study utilized a descriptive research design to examine the effects of infertility on couples' illness cognition, infertility self-efficacy, marital adjustment, and fertility quality of life. The research was conducted at a tertiary infertility treatment facility in the Palakkad district of Kerala, India. From among an average of 500 couples attending this infertility center in a year, data was collected from 100 couples (200 Individuals) using purposive sampling method. Research tools used to assess the key psychological variable were “Illness Cognition Questionnaire, Infertility Self-Efficacy scale, Marital Adjustment Questionnaire and FertiQol- Fertility Quality of life”. The data was analyzed using Descriptive statistics “(Mean, Standard deviation, Frequency distribution)” and inferential statistics were used for data analysis, Pearson correlation was used for the relationship between the variables, regression analysis was used for influences, and “one-way ANOVA” and “independent sample t-test” were applied for mean differences.

This research highlights the pivotal roles of Helplessness, Self-Efficacy, and Acceptance in shaping the quality of life for individuals dealing with illness. The results indicate that Helplessness has the most adverse impact, exhibiting a strong negative correlation with quality of life and significantly undermining individuals' sense of control and their ability to cope with illness-related challenges. Conversely, self-efficacy emerged as a vital protective factor, showing robust positive correlations with emotional well-being, mind-body connection, social support, and overall quality of life. Individuals with higher self-efficacy are better able to navigate the physical and emotional challenges that come with illness.

Acceptance, although less strongly correlated, still significantly contributes to enhancing quality of life. People who embrace their illness tend to have better emotional regulation, report a stronger mind-body connection, and are more likely to

experience greater relational support. This highlights the importance of fostering acceptance as a coping mechanism to enhance psychological well-being.

Marital adjustment did not have a significant direct impact on quality of life. However, it was positively associated with emotional well-being, social support, and the mind-body connection. This indicates that while marital harmony may not directly enhance overall quality of life, it contributes to emotional and social well-being.

In terms of the psychological dimensions examined, Emotional, Mind-Body, Relation, and social dimensions were all positively influenced by Self-Efficacy and Acceptance, while Helplessness consistently showed strong negative correlations across these dimensions. Strong social networks and environmental factors were also found to buffer the effects of helplessness and promote feelings of efficacy, reinforcing the significance of external support systems in improving individuals' capacity to manage their illness.

This research underscores the intricate relationship between psychological factors like Self-Efficacy, Helplessness, and Acceptance in shaping the quality of life for individuals facing illness-related challenges. These findings suggest that interventions aiming to boost self-efficacy, foster acceptance, and reduce feelings of helplessness are likely to have the most profound impact on improving the well-being of individuals facing health adversities. Moreover, strengthening social and relational support systems could further enhance the positive effects on quality of life, particularly by mitigating the negative emotional impact of illness.

This study offers an in-depth exploration of the psychological aspects linked to infertility, uncovering valuable insights into how demographic, personal, and treatment-related factors affect feelings of helplessness, acceptance, perceived benefits, infertility self-efficacy, marital adjustment, and overall quality of life.

The key findings highlight significant gender differences in self-efficacy and quality of life, with males reporting higher levels in both aspects. This highlights the potential for gender-specific coping strategies, suggesting that males may possess greater confidence in managing infertility challenges. While other psychological

dimensions such as helplessness and acceptance showed no significant gender disparities, it indicates that both genders experience similar emotional distress.

Age also played a role, with individuals aged 26-35 years demonstrating the highest levels of self-efficacy. Conversely, no significant differences were found across age groups regarding helplessness, acceptance, perceived benefits, marital adjustment, or quality of life, suggesting a relative stability in these dimensions across different age ranges.

The analysis revealed that religious background did not significantly influence any psychological variables, indicating that the experience of infertility may be universally distressing, irrespective of religious affiliation. Additionally, educational qualifications did not affect the psychological dimensions measured, underscoring that the psychological impact of infertility transcends educational levels.

Employment status was linked to higher self-efficacy, suggesting that financial stability may enhance confidence in managing infertility. Similarly, quality of life was significantly influenced by monthly income, with higher earners reporting better overall quality of life. This highlights the influence of economic factors in shaping psychological experiences during infertility treatment.

The study also found that marital duration significantly impacted feelings of helplessness, particularly among those married for 5-8 years. This suggests that mid-range years of marriage may be associated with increased feelings of helplessness, while family type had a marginal influence, with nuclear family participants approaching higher helplessness levels.

Participants with a family history of infertility did not show significant differences in psychological dimensions, indicating that this background may not substantially impact their coping strategies. Notably, individuals with subfertility reported higher acceptance than those with primary infertility, suggesting a potential distinction in psychological outcomes based on the type of infertility experienced.

Longer treatment durations and a higher number of IUI cycles were linked to increased feelings of helplessness and a decline in quality of life, emphasizing the emotional strain of extended infertility treatments. However, self-efficacy was significantly lower among individuals who underwent one IVF cycle, indicating that this experience may diminish confidence in managing infertility-related challenges.

In summary, while some demographic factors significantly influenced self-efficacy and quality of life, others, such as religious background and educational qualifications, did not show substantial effects. The findings emphasize the need for targeted psychological support to enhance self-efficacy and reduce helplessness among individuals undergoing fertility treatments. This study enhances the understanding of the psychological challenges linked to infertility and highlights the significance of prioritizing emotional well-being in affected individuals.

5.2 Recommendations

Educational interventions aimed at improving coping strategies understanding of infertility process and acceptance of a state of childlessness. This may be through cognitive behavior therapy, coping skill programmes group therapy sessions and development of social support groups. Special training programmes for creating infertility counsellors may also be instituted.

5.3 Limitations of the study

Sampling bias: The use of purposive sampling from a single fertility center may restrict the generalizability of the findings. A larger sample size could provide a better understanding of the nuanced relationships between the psychological variables.

Self-report measures: The reliance on self-reported measures for the psychosocial variables can cause response bias.

Limited scope variables: Other potentially relevant variables like coping, social support, cultural beliefs were not addressed in this study.

Analysis methods: We concentrated on individual ratings of the psychosocial variables rather than examining them at the couple level. However, studying psychological factors from a couple or dyadic perspective offers valuable insights into how psychosocial variables influence relationships, rather than just focusing on individual experiences.

5.4 Future research directions

Qualitative research may be done to understand deeper levels of the problem including subjective perceptions of infertility and lived experiences among infertile couples.

Psychotherapeutic interventions suitable for infertile couples in the socio-cultural milieu of Kerala can be developed. Sociologists and anthropologists can be included in developing culturally sensitive interventional methods.

Comparative studies can be conducted with other regions of the country. Cross-cultural research methods will be useful in this area.

5.5 Implications of the Study

This study underscores the critical psychological impact of infertility on individuals and couples, highlighting the central roles of self-efficacy, helplessness, and acceptance in shaping fertility-related quality of life. The findings suggest that boosting self-efficacy and fostering acceptance while addressing feelings of helplessness can significantly enhance the emotional well-being and overall quality of life of those undergoing infertility treatment. Gender differences point to the need for gender-sensitive support strategies, particularly as males exhibited higher self-efficacy and quality of life than females. The influence of employment status and income on psychological outcomes emphasizes the role of financial stability in coping with infertility challenges. Furthermore, the emotional toll of prolonged treatment duration and repeated interventions like IUI and IVF cycles highlights the necessity of integrating psychological support early and throughout infertility care. These insights call for targeted interventions, including educational programs, coping skills training,

infertility counseling, and the development of peer support systems. Additionally, addressing mid-marriage duration vulnerabilities and designing culturally appropriate psychological interventions could greatly benefit affected couples, particularly in the sociocultural context of Kerala. Overall, the study highlights the importance of a holistic, psychosocially informed approach to infertility care that extends beyond medical treatment to improve patient outcomes.

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ILLNESS COGNITION QUESTIONNAIRE

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Instructions

On the next page is a list of statements by people with a long-term illness. Please indicate the extent to which you agree with them by circling one of the answers following the statement. An example is provided below.

Example

If you agree with the statement below to **a large extent**, circle **3**:

	not at all	**some-what**	**to a large extent**	**completely**
I have learned to live with my illness.	1	2	3	4

Work through the entire list of statements in this way. Do not spend too much time considering your answer. Your first impression is usually the best.

ILLNESS COGNITION QUESTIONNAIRE

To what extent do you agree with the following statements?	**not at all**	**some-what**	**to a large extent**	**completely**
1. Because of my illness I miss the things I like to do most.	1	2	3	4
2. I can handle the problems related to my illness.	1	2	3	4
3. I have learned to live with my illness.	1	2	3	4
4. Dealing with my illness has made me a stronger person.	1	2	3	4
5. My illness controls my life.	1	2	3	4
6. I have learned a great deal from my illness.	1	2	3	4
7. My illness makes me feel useless at times.	1	2	3	4
8. My illness had made life more precious to me.	1	2	3	4
9. My illness prevents me from doing what I would really like to do.	1	2	3	4
10. I have learned to accept the limitations imposed by my illness.	1	2	3	4
11. Looking back, I can see that my illness has also brought about some positive changes in my life.	1	2	3	4
12. My illness limits me in everything that is important to me.	1	2	3	4
13. I can accept my illness well.	1	2	3	4
14. I think I can handle the problems related to my illness, even if the illness gets worse.	1	2	3	4
15. My illness frequently makes me feel helpless.	1	2	3	4
16. My illness has helped me realize what's important in life.	1	2	3	4
17. I can cope effectively with my illness.	1	2	3	4
18. My illness has taught me to enjoy the moment more.	1	2	3	4

Scoring procedure for the ILLNESS COGNITION QUESTIONNAIRE (ICQ)

The following items have to be added together to obtain the scale scores:

Helplessness	item 1, 5, 7, 9, 12, 15
Acceptance	item 2, 3, 10, 13, 14, 17
Perceived benefits	item 4, 6, 8, 11, 16, 18

Infertility Self-Efficacy Scale

Directions: This list contains many things that a person might do when receiving treatment for infertility. We are interested in your judgment of how *confident* you are that you can accomplish these things. Make sure your rating accurately reflects your confidence *whether or not* you have done it in the past. Your ratings will reflect your confidence that you can do these things now or in the near future.

Please read each item. Then rate that item on how confident you are that you can accomplish that behavior. If you click on a number at the low end of the scale, you will be stating that you are *not at all confident* that you could accomplish that behavior. If you click on a number at the high end of the scale you would be stating that you are *totally confident* that you can accomplish the behavior. Numbers in the middle of the scale indicate that you are *moderately confident* that you can accomplish the behavior.

The rating scale is 1 (not at all confident) to 9 (totally confident).

I feel confident that I can:

Not at all confident — Moderately confident — Totally confident

Rating Scale	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1. Ignore or push away unpleasant thoughts that can upset me during medical procedures.	O	O	O	O	O	O	O	O	O
2. Keep a sense of humor.	O	O	O	O	O	O	O	O	O
3. Make meaning out of my infertility experience.	O	O	O	O	O	O	O	O	O
4. Handle mood swings caused by hormonal treatments	O	O	O	O	O	O	O	O	O
5. Keep from getting discouraged when nothing I do seems to make a difference.	O	O	O	O	O	O	O	O	O
6. Accept that my best efforts may not change my/our infertility.	O	O	O	O	O	O	O	O	O

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Rating Scale	1	2	3	4	5	6	7	8	9
7. Control negative feelings about infertility.	O	O	O	O	O	O	O	O	O
8. Cope with pregnant friends and family members.	O	O	O	O	O	O	O	O	O
9. Handle personal feelings of anger or hostility.	O	O	O	O	O	O	O	O	O
10. Keep a positive attitude.	O	O	O	O	O	O	O	O	O
11. Lessen feelings of self-blame, shame, or defectiveness.	O	O	O	O	O	O	O	O	O
12. Stay relaxed while waiting for appointments or test results.	O	O	O	O	O	O	O	O	O
13. Do something to make myself feel better if I am sad or discouraged.	O	O	O	O	O	O	O	O	O
14. Feel good about my body and myself.	O	O	O	O	O	O	O	O	O
15. Keep active with my usual life routine.	O	O	O	O	O	O	O	O	O
16. Feel like a sexual individual.	O	O	O	O	O	O	O	O	O

Reference: Cousineau, T.M.; Corsini; E.A.; Green; T.C. et al, 2004. Development and validation of the Infertility Self-Efficacy scale. Fertility and Sterility, 2006; 85:1684-1696.

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MARITAL ADJUSTMENT QUESTIONNAIRE

Constructed & Standardized by

"PRAMOD KUMAD, D. Phil. & Km. KANCHANA ROHTGI. Ph. D."

कृपया इसे भरें :

नाम	पति का नाम .....
जाति	आयु .....
आयु	.....
शिक्षा :	नौकरी .....

परिवार : पृथक/संयुक्त

नौकरी .....

Menstrual Status ..... with ..... without .....

निर्देश

नीचे वैवाहिक जीवन से संबंधति कुछ प्रश्न दिये हुऐ हैं। आप कृपया प्रत्येक प्रश्न को ध्यानपूर्वक पढ़ें। अगर आप उस प्रश्न से सहमत हैं तो हां के नीचे बने खाने में ☐ ✓ सही का निशान लगा दें और यदि आप उससे असहमत हैं तो नहीं के नीचे बने खाने में ✓ सही का निशान लगा दें। इस प्रकार से आपको प्रत्येक प्रश्न का उत्तर देना है। चूंकि अधिकतर कथन आपके व्यक्तिगत जीवन से संबंधित हैं इसलिये हम आपको विश्वास दिलाते हैं कि आपके उत्तर पूर्ण रुप से गोपनीय (Confidential) रखें जायेंगे। आशा है कि आप इनका उत्तर अपनी ओर से सही-सही देने की चेष्टा करेंगे। आपके सहयोग के लिये हम आपके आभारी रहेंगे। धन्यवाद।

प्राप्तांक ☐

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HINDI VERSION OF
PERSONALITY QUESTIONNAIRE (HJE/JM)

		हां	नहीं
1.	आप अधिकतर साथ-साथ घर से बाहर जाना पसंद करते हैं।	☐	☐
2.	आपको एक दूसरे पर पूर्ण रुप से विश्वास है।	☐	☐
3.	आप दोनों को ईश्वर में आस्था है।	☐	☐
4.	आप दोनों के बीच घर के खर्च को लेकर प्रायः तनाव पैदा हो जाता है।	☐	☐
5.	आप दोनों ऐसा मानते हैं कि बच्चों की देखभाल करना दोनों की ही जिम्मेदारी है।	☐	☐
6.	आप दोनों परिवार – नियोजन में विश्वास रखते हैं।	☐	☐
7.	आप दोनों यह मानते हैं कि आपने शादी उचित आयु में की है।	☐	☐
8.	आप दोनों एक दूसरे से अलग रहने पर अपने आपको अधूरा अनुभव करते हैं।	☐	☐
9.	आप दोनों ही यौन सुख का पूर्ण आनंद लेते हैं।	☐	☐
10.	आप दोनों ही अपनी कुछ व्यक्तिगत बातें एक दूसरे से गुप्त रखना पसंद करते हैं।	☐	☐
11.	आप दोनों एक दूसरे के लिये अधिक से अधिक समय निकालने का प्रयत्न करते हैं।	☐	☐
12.	आप दोनों एक दूसरे के परिवार वालों का आदर करते हैं।	☐	☐
13.	आप दोनों को एक दूसरे पर गर्व है।	☐	☐
14.	आप दोनों पारिवारिक कठिनाईयों का मिलकर हल ढूंढने का प्रयत्न करते हैं।	☐	☐
15.	आप दोनों एक दूसरे को पति/पत्नी से अधिक एक सहयोगी के रुप में समझते हैं।	☐	☐
16.	आप दोनों समय – समय पर एक दूसरे की प्रशंसा करते हैं।	☐	☐
17.	आप दोनों एक दूसरे की रुचि, आदत और जरुरतों का ध्यान करते हैं।	☐	☐
18.	आप दोनों परिवार में बच्चों की संख्या के संबंध में एक मत हैं।	☐	☐
19.	आप दोनों में प्रायः घरेलू बातों को लेकर बहस हो जाती है।	☐	☐
20.	आप दोनों ही यौन संबंधों में एक दूसरे की आवश्यकताओं का ध्यान रखते हैं।	☐	☐
21.	आप दोनों अनुभव करते हैं कि आपने एक दूसरे से विवाह करके अच्छा किया।	☐	☐
22.	आप दोनों को एक दूसरे की अनुपस्थिति बहुत अखरती है।	☐	☐
23.	आप दोनों मानते हैं कि विवाहित जीवन ही संपूर्ण यौन सुख प्रदान करता है।	☐	☐
24.	आप दोनों की रुचियाँ तथा अभिव्यक्तियां समान है।	☐	☐
25.	आप दोनों ही अपने यौन संबंधों में नयापन बनाये रखने का प्रयत्न करते हैं।	☐	☐

हां नहीं

4
क्या आपने कभी चाहा है कि आप घर छोड़ के होते ?

FertiQoL International

Fertility Quality of Life Questionnaire (2008)

For each question, kindly check (tick the box) for the response that most closely reflects how you think and feel. Relate your answers to your current thoughts and feelings. Some questions may relate to your private life, but they are necessary to adequately measure all aspects of your life.

Please complete the items marked with an asterisk (*) only if you have a partner.

	For each question, check the response that is closest to your current thoughts and feelings	Very Poor	Poor	Neither Good nor Poor	Good	Very Good
A	How would you rate your health?	☐	☐	☐	☐	☐
	For each question, check the response that is closest to your current thoughts and feelings	Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
B	Are you satisfied with your quality of life?	☐	☐	☐	☐	☐
	For each question, check the response that is closest to your current thoughts and feelings	Completely	A Great Deal	Moderately	Not Much	Not At All
Q1	Are your attention and concentration impaired by thoughts of infertility?	☐	☐	☐	☐	☐
Q2	Do you think you cannot move ahead with other life goals and plans because of fertility problems?	☐	☐	☐	☐	☐
Q3	Do you feel drained or worn out because of fertility problems?	☐	☐	☐	☐	☐
Q4	Do you feel able to cope with your fertility problems?	☐	☐	☐	☐	☐
	For each question, check the response that is closest to your current thoughts and feelings	Very Dissatisfied	Dissatisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
Q5	Are you satisfied with the support you receive from friends with regard to your fertility problems?	☐	☐	☐	☐	☐
*Q6	Are you satisfied with your sexual relationship even though you have fertility problems?	☐	☐	☐	☐	☐
	For each question, check the response that is closest to your current thoughts and feelings	Always	Very Often	Quite Often	Seldom	Never
Q7	Do your fertility problems cause feelings of jealousy and resentment?	☐	☐	☐	☐	☐
Q8	Do you experience grief and/or feelings of loss about not being able to have a child (or more children)?	☐	☐	☐	☐	☐
Q9	Do you fluctuate between hope and despair because of fertility problems?	☐	☐	☐	☐	☐
Q10	Are you socially isolated because of fertility problems?	☐	☐	☐	☐	☐
*Q11	Are you and your partner affectionate with each other even though you have fertility problems?	☐	☐	☐	☐	☐
Q12	Do your fertility problems interfere with your day-to-day work or obligations?	☐	☐	☐	☐	☐
Q13	Do you feel uncomfortable attending social situations like holidays and celebrations because of your fertility problems?	☐	☐	☐	☐	☐
Q14	Do you feel your family can understand what you are going through?	☐	☐	☐	☐	☐
	For each question, check the response that is closest to your current thoughts and feelings	An Extreme Amount	Very Much	A Moderate Amount	A Little	Not At All
*Q15	Have fertility problems strengthened your commitment to your partner?	☐	☐	☐	☐	☐
Q16	Do you feel sad and depressed about your fertility problems?	☐	☐	☐	☐	☐
Q17	Do your fertility problems make you inferior to people with children?	☐	☐	☐	☐	☐
Q18	Are you bothered by fatigue because of fertility problems?	☐	☐	☐	☐	☐
*Q19	Have fertility problems had a negative impact on your relationship with your partner?	☐	☐	☐	☐	☐
*Q20	Do you find it difficult to talk to your partner about your feelings related to infertility?	☐	☐	☐	☐	☐
*Q21	Are you content with your relationship even though you have fertility problems?	☐	☐	☐	☐	☐
Q22	Do you feel social pressure on you to have (or have more) children?	☐	☐	☐	☐	☐
Q23	Do your fertility problems make you angry?	☐	☐	☐	☐	☐
Q24	Do you feel pain and physical discomfort because of your fertility problems?	☐	☐	☐	☐	☐

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FertiQoL International

Optional Treatment Module

Have you started fertility treatment (this includes any medical consultation or intervention)? If Yes, then please respond to the following questions. For each question, kindly check (tick the box) for the response that most closely reflects how you think and feel. Relate your answers to your current thoughts and feelings. Some questions may relate to your private life, but they are necessary to adequately measure all aspects of your life.

	For each question, check the response that is closest to your current thoughts and feelings	Always	Very Often	Quite often	Seldom	Never
T1	Does infertility treatment negatively affect your mood?	☐	☐	☐	☐	☐
T2	Are the fertility medical services you would like available to you?	☐	☐	☐	☐	☐

	For each question, check the response that is closest to your current thoughts and feelings	An Extreme Amount	Very Much	A Moderate Amount	A Little	Not At All
T3	How complicated is dealing with the procedure and/ or administration of medication for your infertility treatment(s)?	☐	☐	☐	☐	☐
T4	Are you bothered by the effect of treatment on your daily or work-related activities?	☐	☐	☐	☐	☐
T5	Do you feel the fertility staff understand what you are going through?	☐	☐	☐	☐	☐
T6	Are you bothered by the physical side effects of fertility medications and treatment?	☐	☐	☐	☐	☐

	For each question, check the response that is closest to your current thoughts and feelings	Very Dissatisified	Dissatisfied	Neither Satisifed nor Dissatisfied	Satisfied	Very Satisfied
T7	Are you satisfied with the quality of services available to you to address your emotional needs?	☐	☐	☐	☐	☐
T8	How would you rate the surgery and/or medical treatment(s) you have received?	☐	☐	☐	☐	☐
T9	How would you rate the quality of information you received about medication, surgery and/or medical treatment?	☐	☐	☐	☐	☐
T10	Are you satisfied with your interactions with fertility medical staff?	☐	☐	☐	☐	☐

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