



ASSESS THE QUALITY OF LIFE AND PERCEPTION AMONG COUPLES UNDERGOING FERTILITY TREATMENT.

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Abstract

Key words: Infertility, FertiQoL, Reproductive age

Aims & Objectives: A study to evaluate the quality of life of infertile couples undergoing reproductive treatment and compare it to that of their partners. And investigate the perception of experiences in depth. **Methodology:** After obtaining approval and clearance from the Ethics Committee of Biomedical and Health Research, Adesh university, the study was conducted at Tertiary Care Hospital, Bathinda. The study was cross sectional observational study having the total number of 129 patients with study duration of 6 months. The data was recorded in the form of questionnaire. The recorded data was analyzed as per the objectives of the study. **Conclusion:** A total of 129 infertile couples were enrolled, and analyzed fertiQoL on the basis of some scales like psychological factors, physical factors, social factors as well as environmental factors. Couples in this research experienced poor fertility quality of life. In comparison to their spouses, wives had higher fertiQoL values.

Introduction: Infertility is defined as the failure to conceive after a year of sexual intercourse between two partners without the use of contraception (Kirsten R, et al.2015). Millions of people of reproductive age around the world are affected by infertility, which has a negative impact on their

mental health as well as families and communities. Each year, the number of infertile couples rises as a result of lifestyle changes, higher activity levels, and marriage postponement. Delaying motherhood is the most prevalent reason for infertility in modern western civilization, because the quality of oocyte decreases dramatically with age, especially beyond the age of 35. (Elizabeth E Pusheck, et al. 2020). WHO estimates that around 5% of all couples throughout the world are struggling with infertility, in which around 20–30% of infertility cases involving men while 20–35% involving women, and 25–40% of infertility cases involving men and women working together. (Ashok Agarwal, et al. 2015). Most of the women experience infertility due to anovulation, which are marked by irregular menstrual cycles, while in man sperm abnormalities can cause infertility. It is observed that person's mental health also affected with this condition when they are unable to have a child from long time. Infertility is associated with a wide range of psychological problems, including depression, anxiety, social isolation. This heightened level of anxiety may affect most of the couples considering infertility therapy. Psychological stress as a cause of infertility and treatments to help decrease psychological pain and enhance pregnancy chances are emphasized as important factors that may cause greater stress in couples attempting to conceive (Alice D. Domar, et al. 2018).

Infertility can be divided in to two categories

- 1) Primary infertility includes, a woman who has never been pregnant and is unable to conceive after one year of unprotected sexual intercourse. Endometriosis, uterine fibroids, and thyroid dysfunction are all possible causes of primary infertility. (Debra Rose Wilson, et al. 2018)
- 2) Secondary infertility occurs after a previous successful pregnancy, when women are unable to conceive or bring a child to full term. Causes of this type of infertility in women and men include advancing age, complications from a previous pregnancy or surgery, increased weight, drugs, sexually transmitted illnesses, reduced sperm production, alcohol misuse, and smoking. (Debra Rose Wilson, et al. 2020).

Management of infertility in females.

Treatment	Procedure
Ovulation induction	Clomiphene citrate, letrozole, gonadotropins, and metformin used to induce ovulation in infertile women.
Surgical treatment for tubal occlusion	A fallopian tube obstruction usually stops the egg from reaching the sperm. This prevalent causes of infertility can be treated with surgery like Fimbrioplasty or salpingostomy

Laparoscopic ovarian drilling (LOD)	General mechanism of LOD isto restore ovulatory function in women by destruction of androgen producing tissues leading to decrease ovarian androgen production and peripheral androgen level as well as estrogen conversion.
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Management of infertility in males.

Treatment	Procedure
Aromatase inhibitors (anastrozole and letrozole)	aromatase inhibitors inhibit the estrogen synthesis while increasing testosterone level which leading to increased production of sperm in male with infertility.
Varicocelectomy	This surgery is performed for the male to remove those enlarged veins causes varicocele and regain the normal blood flow to reproductive organs.
Transurethral resection of the ejaculatory ducts	TURD is a procedure for unblocking the ejaculatory duct obstruction (EDO). In result of TURD, obstruction in the duct is removed, allowing the semen and sperm to combine and generate healthy ejaculation with enhancing fertility.
Vasovasostomy	It is a surgical process that partially reverse vasectomies.

IUI (Intrauterine insemination)- It is a type of insemination used to treat the infertility by the time when ovaries produce one or more egg to be fertilized. During an IUI, washed and concentrated sperm is inserted directly into the uterus by using tiny catheter.

IVF (In vitro fertilization) – It is a fertility treatment that uses both eggs and sperm to treat infertility in the couples. This procedure operates by taking the egg out from the ovaries and fertilizing them with sperm to create embryos. After that embryo are then implanted back to women’s body.

MATERIALS AND METHODS -

This cross-sectional observational study was carried out in the In-and-Out-patient Department of Reproductive Medicine and Surgery (IVF) at Tertiary Care Hospital in Bathinda. Couples who were able to participate, write, speak and understand English/Hindi/ Punjabi were included in the study. Couples with secondary infertility, a history of IVF treatment, and intrauterine insemination were also included in the study. The research was conducted after approval from Ethics Committee for Biomedical and Health Research, Adesh University, Bathinda and all written permits were obtained from authorities prior to the start of the project. The purpose of study was explained to all the individual and they were ensured confidentiality regarding their data. Informed written consent was obtained from each sample.

Total 129 couples who meet the inclusion criteria were selected. The mode of data collection was face- face interview. Infertility Questionnaire tool was used to evaluate the FertiQoL consist of 36 questions. Questions are based on obstetrical, gynecological, medical, medication, as well as social history of the couples undergoing infertility treatment to evaluate quality of life. Perception form include couples' perception about their experiences. It is available in English Hindi as well as Punjabi to better understand of the participants.

The information gathered from the participants was transferred to a data input form for analysis. SPSS software version 20 was used to analyze the data. Continuous variable was represented as mean and standard division. Frequencies and percentage were used to categorical variable. Chi square test was used to find the correlation between the various factors and disease. p value <0.05 acted as statically significant.

Result- It deals with analysis and interpretation of data to evaluate the Quality of life of infertile couple as well as investigate their perceptions of experiences in depth of couples undergoing infertility treatment in Tertiary Care Hospital Bathinda. Total of 129 couples were studied. The data was evaluated according to objectives of study.

Demographics of males and females.

variables	Females n=129	Males n=129	P value
Age			0.004
20-25	8(6.2%)	—	
26-30	55(42.6%)	26(20.2%)	
31-35	39(30.2%)	55(42.6%)	
36-40	26(20.2%)	38(29.5%)	
41-45	1(0.8%)	9(7%)	
45-50	—	1(0.8%)	
Occupation			0.005
Non working	107(82.9%)	—	
working	22(17.1%)	—	
farmers	—	31(24%)	
Army	—	29(22.5%)	
Private employee	—	36(27.9%)	
Gov. employee	—	4(3.1%)	
others	—	29(22.5%)	

Significant Difference in terms of age and occupation.

In terms of social health or personal habits, in this study 20.2% of the 129 infertile males were smokers and 73.6% males were alcoholic in which 17.8% were frequent and 55.8% were occasional drinker. while social health of females were not affected with infertility as they do not have any history of alcohol consumptions or cigarette smoking. 48.1% of males having exposure to pesticides, anabolic steroids, x-rays, and high temperature which has negative impact on the male fertility.

In consideration of reproductive health, the duration of infertility in maximum couples were from 1-5years i.e around 45%, where as 38.8% couples were experiencing infertility from 6-10years, 15.5% couples experiencing from 11-15years and 0.8 % couples from 16-20 years. According to this study majority i.e 58.1% couples were facing primary infertility whereas 41.9% were facing secondary.

The majority 54.3% women having irregular menstrual cycle due to some reasons. And 30.2% women were having history of endometriosis.

Physical health of the couples also affected with infertility according to this study, when it is compares with their respective partners 72.9% females were impacted by some of disease such as PCOS, Thyroid, Diabetes, Migraine, Insomnia, Asthma, HTN and Anemia. But only 26.4% males had specific disorder such HTN, Diabetes, Azoospermia, oligospermia, and Asthma.

24.8% of 129 infertile couples had a history of failed IUI, 14.7 % had a history of failed IVF, 3.9 % had a history of both IUI and IVF failure, and this unsuccessful history of fertility therapy has negative impact on 39.6 % of women and 34.1% of men's mental health. It has an impact on couples intellectually, physically, emotionally, and monetarily because the therapies are highly expensive.

This study shows that the mental health of couples also affected with infertility. 78.3% women were affected with their mental health where as in males 77.5% of them having psychological effect due to infertility.

Variables	Males' mental health affected due to infertility (n=129)	Females' mental health affected due to infertility (n=129)
No Effect	29(22.5%)	28(21.7%)
Emotional Breakdown	23(17.8%)	81(62.8%)
Stress	32(24.8%)	—
Isolation from society	23(17.8%)	—
Depression and worthlessness	22(17.1%)	20(15.5%)
Total	100%	100%

In-depth interviews with couples on their relevant experiences were recorded and transcribed.

Four key topics emerged from the content analysis.

Societal negativity and harsh comments effect couples' mental health- Many couples undergoing reproductive therapy suffer from societal stress and seclusion, which has an impact on both their emotional and physical health. In this study, 81.4 % of 129 couples reported receiving many harsh and negative comments from society, resulting in emotional breakdowns. In comparison to men, women received the most unfavorable and harsh comments from society, which led to emotional breakdown and, at times, melancholy thinking.

Most women complained that “social gatherings had turned into nightmares since everyone was more interested in knowing about us rather than the celebration.” In addition, some have reported that because they are infertile, people do not allow their kids to play with them because "they regard us as sinister".

Men also expressed unpleasant comments from society, as some of them stated, "gossip about our visit to the fertility Centre has increased, and it is truly difficult to lead a regular life." To prevent such unfavorable comments, they stated, "we have intentionally stopped attending such celebrations and meeting people."

Couples' perceptions about family are supportive to fertility treatment. portrays a couple's viewpoint on whether their family is supportive of infertility treatment. Out of 129 couples, 79 (61.2%) indicated their family is not supportive and that they are hiding about their treatment from them, whereas 50 (30.8%) said their family is highly supportive of their counselling and treatment.

Couples' perspectives on who should be evaluated first for infertility- A gender bias was seen amongst couples under treatment when questioned about infertility occurrence, females were critically blamed from their husband side of the family. Females' laboratory investigation was prioritized as compare to their male counterpart, as the perception resolves around underlying abnormalities, which ought to be present in females, primarily. As 41 (31.8%) answered the wife should investigate infertility issues first, while 88 (68.2%) said the husband and wife should investigate infertility issues. According to the data, not a single pair feels that the husband should investigate first.

Marriage issues with their respective partner- When the woman is asked if they have any marital problems as a result of infertility. Out of 129 couples, 83 (64.3%) women reported marital troubles as a result of infertility, and that their intimacy with their husband is not what it used to be. Whereas 46 (35.7%) of women said that nothing changed in their marital life after disclosing infertility.

Discussion

The quality of life of infertile males and infertile females was compared in this study. According to our findings, the duration of infertility is one factor that has a significant impact on both male and female quality of life. Long-term therapies and treatments in infertile couples were found to promote pessimism in their living situations, decreasing the quality of life in older infertile couples. In this study it was observed that fertiQoL were affected in both the sexes undergoing infertility at some extent. But female partners have poorer fertiQoL scores as compared to their male partners on the basis of mental health as well as physical health scale. We examined the impact of failed therapy on infertile couples' quality of life. In this study, 129 couples participated, with 43.4% having a history of failed reproductive treatment, and this unsuccessful history of fertility therapy had a detrimental influence on the mental health of 39.6% of women and 34.1% of men. It has an intellectual influence on couples. According to the study's findings, society criticism and harsh comments, as well as familial supportiveness of fertility treatment, have a negative impact on couples' quality of life.

Conclusion

The study has concluded that, according to data couples seeking reproductive therapy in the Bathinda region reported poor quality of life. In this study fertiQoL of couples measured on the basis of various scales, such as, mental health, social health, physical health, as well as environmental factors. In this study it observed that fertiQoL were affected in both the sexes undergoing infertility at some extent. But wives have poorer fertiQoL scores as compared to their partners on the basis of mental health as well as physical health scale. According to this study mental health of wife affected with infertility around 78.3% where as their partners mental health affected 77.5%. according to this research couple's quality of life also affected by societal pressure, as majority of couples reported that, they felt extremely criticized by societal opinion as well as many of them admitted extremely pressurized regarding conception. Most of them mentioned that people questioning their sexuality and failure to conceive a child, was the primary causative factor for their deteriorated mental states.

Recommendation:

To tackle this problem psychologically to uplift the taboo regarding infertility, which can only be achieved by combined counselling of the couples, and their respected family.

Educational seminars about knowledge regarding infertility and normalizing its occurrence, should be a primary concern to enhances fertiQoL in couples undergoing fertility treatment.

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