

ASIAN JOURNAL OF SCIENCE AND TECHNOLOGY

Asian Journal of Science and Technology Vol. 13, Issue, 10, pp.12223-12230, October, 2022

RESEARCHARTICLE

QUALITY OF LIFE OF INFERTILE COUPLE IN KERALA, INDIA: AN ANALYTIC APPROACH

*Ramkumar T Balan (Associate Professor)

7H Chaithram, Cidbi, Poonkunnam Thrissur, Kerala, India, 690002

ARTICLE INFO

Article History:

Received 25th July, 2022 Received in revised form 19th August, 2022 Accepted 14th September, 2022 Published online 20th October, 2022

ABSTRACT

This paper is a cross-section analysis of the quality of life faced by the infertile couple in which each gender is considered separately. The social, environmental, economical, sexual, psychological, and physical dimension of the universally accepted questionnaire is adopted and the confidence on better Quality of Life is estimated. How infertile females are distinguished on QoL is enquired and a linear model is developed. Also, the logistic regression model on the QoL of both infertile male and female were distinguished and compared.

Keywords:

Quality of Life, Physical Wellbeing,, Logistic Model, Dimensions, Infertility, Sustainability Dimensions, Infertility, Sustainability.

Citation: Dr. Ramkumar T Balan, 2022." Quality of Life of Infertile Couple in Kerala, India: An analytic approach", Asian Journal of Science and Technology, 11, (10), 12223-12230.

Copyright © 2022, Ramkumar T Balan. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Quality of life (QoL) is the general well-being of individuals and societies, negative and positive features of life. It observes life satisfaction, including everything from physical health, family, education, employment, wealth, safety, security to freedom, religious beliefs, and the environment (Barcaccia, Barbara, 2013). According to the Quality of life research unit, University of Toronto, the quality of life profile was developed to provide a measure that considers both the components and determinants of health and well-being provided by the World Health Organization. The profile emphasizes individuals' physical, psychological, and spiritual functioning; their connections with their environments; and opportunities for maintaining and enhancing skills. The three major domains of life are Being, Belonging, and Becoming up on which QoL is assessed (Quality of life Research Unit, 2017). QoL is the degree to which a person enjoys the important possibilities of his/her life. The opportunities and limitations of each person reflect the interaction of personal and environmental factors and it varies according to group, place, and time. Psychological consequences of infertility render an intense painful experience; both patients and their partners constantly suffer from profound distress, especially for the female partners. Here the discussion is on the QoL of an infertile couple who is deprived of their happy life due to lacking of children.

They are getting weaker in society destined to shame and loneliness and even out-casting from society. Infertility and undergoing fertility treatment exacerbate the intensity of stresses of the couple and negatively affect patients' quality of life (Moura-Ramos, 2012). Newton et al. suggested that infertility-related stress is a multidimensional complication including social, sexual and relationship concern, eagerness for parenthood, and rejection of childfree lifestyle (Newton, 1999). Infertility-related stress exerts both direct and indirect effects on the treatment outcome for female patients. Infertility-inducing stress and non-specific anxiety have been proven to be negatively associated with positive pregnancy outcome after in vitro fertilization (IVF) (Lechner, 2007; Peterson, 2007; Gourounti, 2011). Many of them follow a different life and avoid involvement in social forums. So this study is the comparison of QoL of infertile couple gender-wise in terms of defined domains like Psychological Wellbeing (PW), Sexual Relation (SR), Social and Community Relation (SCR), Physical Fitness (PF), Environmental Assistance (EA), Economic Sustainability (ES) and Future Life or Desire for Child) (DC). Azam Namdar et al in their study aimed to determine the association between general and specified QoL with different psychological aspects, namely self-esteem, social support, sexual satisfaction, and marital satisfaction in a sample of Iranian infertile couples (Azam Namdar, 2017).

The higher educational level, higher monthly income, living in urban area, shorter duration of marriage, and fertility of male in the couple were significant for better QoL status among a set of factors. Association on QoL with self-esteem, social support, sexual satisfaction, and marital satisfaction were highly significant (p<0.05). Bose and Roy conducted a comparative study in eastern India on fertility-related QoL in a primary fertile couple (Swarnali Bose, 2017). The societal and parental pressure of over enquiry make psychological pressure on the infertile couple. Male hold better emotional, relational, social, and global QoL compared to infertile female. Tolerability to infertility and consequent problems was relatively less among females. Primary infertility has extensive negative repercussions in the QoL of women. A study to compare QoL in gender differences within the infertile couple and control couples in Tunisia, the following results were found (Yousri, 2014). Infertile males had lower scores in mental dimension, social functioning, and emotional role compared to male control. Woman infertile suffers from lower vitality, physical dimensions and unstable than the control female. Among the infertile spouses, the female had lower total scores and mental scores. The first consultation is delayed in infertile women due to bodily pain, vitality, and mental depression. Women in the infertile couple had lower QoL than their husbands and infertile couples had lower QoL than control couple. To determine the QoL of infertile couples in rural and urban areas, a study was done in China (Yuezhi Dong, 2016). 53% of couples were from urban areas. Pairs t-test and multiple stepwise regression analysis were conducted to assess Fert.QoL. In general lower Fert.QoL was found among women. Also infertile couples residing in rural areas had a lower Fert.QoL. Coping style, cognition of children, family net income, employment status, education level, and social support were the auxiliary factors considered for predicting Fert.QoL. A cross-sectional study (Batool Rashidi, 2008) on QoL receiving IVF or ICSI was conducted in Iran and the following results were found. The man showed better health-related QoL and more due to the male factor. Female gender and lower educational level, younger age are significant predictors for poor QoL. In Turkey in a study (Asli Goker et al. 2017) of infertile couples admitted to the hospital, physical health, psychological health, social relation showed no significant difference in the couple. But environmental pressure and unemployment are more affecting male infertile. Turkish research on QoL found that women had a lower overall quality of life. Women and men who were married for fewer than 10 years had a significantly lower emotional score. Women who had a history of infertility treatment and men who lived in the town or village with primary infertility, men who is lacking primary education, had lower scores for mind/body subscale. In Haryana, India an exploratory study (Rebecca Dillu, 2013) reveals that male QoL is more than female in most of the domains: Emotional, mind/body, relational, social, environmental, and tolerability. The emotional domain was correlated with all except the environmental domain. Fert.QoL is significantly associated with the occupation of the male partner, age, religion, type of family, age at marriage, duration of the marriage, trying for conception and several miscarriages of the female partner. The general health of more than half of the infertile women indicated a degree of disorder. These women face the risk of anxiety, social dysfunction, and depression. Educational status, monthly income, and rural/urban residency are the major factors influencing the QOL. Coping strategies and QoL among infertile women in Egypt (Nemat Ismail Abdel Aziz Ismail, 2017) is described by Core Ferti QoL and Treatment Ferti QoL and the active and passive level of women in it is discussed showing the difference of scores in the infertile women. According to a Palestinian study, the males' total scores of Fert.QoL was higher than females' scores. With better education the mean total of Fert.QoL can be increased, however, it decreases with an increase in age, duration of marriage, duration of infertility, and the number of IVF attempts. Zahra Royani et al in their study in Yazd, Iran exposed the predictors of QoL (Zahra Royani, 2019) and explained that resilience, gender, and education predict the quality of life of infertile couples and the counseling program and resilience should be considered as coping factors.

METHODOLOGY

The study was conducted on 100 couples taking treatment for infertility in private hospitals in Malappuram District, Kerala, India during 2016—17. Standard Fert.QOL questionnaire was distributed to assess various domains of QoL to all individuals. PW, SR, SCR, PF, EA, ES, DC are the predesigned domains in the questionnaire and the response of the questions was assessed from extreme acceptance to not at all on the framed positive answerable questions in numerical Likert scale 1-5. Components of the domain are identified using principal component analysis and each domain is estimated separately for males and females. Using paired t-test, the significant differences if any on the factors were studied. ANOVA was used to study the effect of demographic characteristics on QoL regarding each factor. The linear regression model of QoL on males and females, as well as the logistic model, were determined. There are 7 dimensions to assess the QoL and these dimensions are derived from the following set of questions.

| Dimensions | Abbreviation | Questions |
|-------------------------------------|--------------|-----------|
| Psychological Wellbeing | PW | 114 |
| Sexual Relation | SR | 1520 |
| Economic Sustainability | ES | 2125 |
| Social contacts and Couple Relation | SCR | 2639 |
| Physical Fitness | PF | 4044 |
| Environmental Atmosphere | EA | 4549 |
| Desire for Child | DC | 5056 |

RESULTS and DISCUSSIONS Comparison of age and marital age

| | Age | | Marital Age | |
|---------|-------|--------|-------------|--------|
| Age | Male | Female | Male | Female |
| Average | 34.84 | 28.23 | 25.21 | 19.45 |
| SD | 3.93 | 3.48 | 2.72 | 2.84 |

Age of pair are significantly different (t=15.037, p-value =0.000). There is an average age difference of 6 years existing between the paired couple. Marital age of male and female are significantly different (t= 10.34, p-value =0.000). The average duration of fertility treatment is 2.72 years.

Other demographic characters

| D. Character | Significant | Not Significant | p-value |
|-------------------|-------------|-----------------|---------|
| Occupation | yes | | 0.000 |
| Educational Level | | yes | 0.147 |
| Family History | | yes | 0.709 |
| Illness | | yes | 0.322 |
| Risks | | yes | 0.083 |
| Reasons | | yes | 0.083 |
| Treatment | yes | | 0.000 |

Female Components of QoL

1.Psychological wellbeing -Female (PWF)

| Components | Subjects facing | Average | SD | p-value |
|------------|-------------------------------------|---------|--------|---------|
| PWF1 | Self- valuing, ability to decisions | 2.9905 | 0.8642 | 0.4592 |
| PWF2 | be positive, self-confident | 2.5576 | 0.9983 | 0.0168 |
| PWF3 | feel sadness, depression | 3.7365 | 1.0634 | 0.0014 |
| PWF4 | anxiety and the negative feeling | 3.1092 | 1.0402 | 0.0205 |
| PWF5 | disturbed of sympathy | 2.0393 | 1.0620 | 0.0028 |
| PWF | psychological wellbeing | 2.8867 | 0.5476 | 0.0476 |

There are 5 components comprised on the psychological well-being of the infertile woman as confidence, depression, decision making, feelings and sympathy. Except PWF1, all the components show lacking of response on moderate opinion. PWF is centered at 2.8867 with SD=0.5476 and it is significantly less than moderate psychological wellbeing expected. PWF is reliable as variance explained of this factor is 75.27% with the least commonality of the factor with the subjects is 0.675 >0.6

2.Sexual Relationship Female (SRF)

| Components | Subjects facing | Average | SD | p-value |
|------------|---|---------|--------|---------|
| PWM1 | Self- valuing | 1.9920 | 0.7715 | 0.4581 |
| PWM2 | negative feeling, disturbed by sympathy | 2.5474 | 0.9919 | 0.0000 |
| PWM3 | confidence, enjoy free time | 3.0054 | 1.0011 | 0.0000 |
| PWM4 | sadness, depression | 3.5313 | 1.1161 | 0.0000 |
| PWM5 | anxiety, contended | 3.1821 | 0.8951 | 0.0000 |
| PWM6 | Self- satisfied, feel solitude | 3.3194 | 1.0986 | 0.0000 |
| PWM7 | positive attitude | 2.0134 | 0.9534 | 0.8737 |
| PWM | | 2.7987 | 0.3700 | 0.0002 |

| Components | Subjects facing | Average | SD | p-value |
|------------|---|---------|--------|---------|
| SRF1 | adverse on sex feelings, less interested in sex, mechanical | 2.1049 | 1.0310 | 0.0000* |
| SRF2 | instrumental for conceiving | 2.0189 | 0.9355 | 0.0000* |
| SRF3 | satisfying sex with husband, feel successful as a woman | 1.8904 | 0.8554 | *00000 |
| SRF | | 2.0047 | 0.5513 | 0.0000* |

Over a range, 1.08-3.46 with a mean of 2.00 the position is 38.84% implying the response on sexual relation is reasonably less stable. Standardized Likert scaling shows a mean of SRF is 2.55 (within 1-5) and it is strictly less than moderate level. (H₁: Mean<3, p-value 0.0000).

3.Economic Sustainability Female (ESF): ESF is framed by ESF1 (sound finance, expensive but effective) and ESF2 (treatment hindering future, discontinue treatment on huge expense).Ranged (1.62-4.42) with mean 2.79 shows mean at 4.02 implies that financial constraints is reasonably high. The standardized range shows a mean of 2.68 accepting a hypothesis that the average response is less than the middle value.(0.026 < 0.05). Thus on economic sustainability, the feeling is high for female infertile.

4.Social contact & Couple relationships Female (SCRF): There are 4 components for SCRF as SCRF1 (personal relations, support from family, support from friends, friends understand feelings, getting positive suggestions), SCRF2 (satisfied with family support, spending time with husband, going happily with husband, conscious of needs to husbands), SCRF3(spending time with husband, discuss personal and family matters with husband, free to express matters to husband, free with personal relationships) and SCRF4(avoid interaction with a family with children, avoid attending functions, creating disharmony due to childlessness). Average SCRF is 2.30 on a general range of 1.21-3.87 positioning at 41.1% showing their average response is strong or very high. The converted (1-5) data range had a mean of 2.65 with response less than moderate (<3, p-value 0.011<0.05). The social contact and couple relationship are not moderate and so strong opinion was hold by an infertile woman.

5.Physical fitness Female (PFF): PFF is framed with PFF1 (doing daily duty, the proper concentration, feel healthy) and PFF2 (sleeplessness, the habit of smoking, drinking, taking fast-food). Average of PFF is 2.47<3 (pvalue=0.000) in Likert scale 1 to 5. The actual dimension takes value 1.24-3.71 showing an average of 2.15 on the left-side of scaling at 37.11 % of span. Thus physical fitness is very much accepted by an infertile woman.

6.Environmental Atmosphere Female (EAF): EAF is developed with a unique component varying over (1.23,4.51) having mean 2.01 placed at 23.94 of range implying the negative feelings on the environment. Place of living, accessibility, healthy and safe atmosphere is considered on the environment. The range over 1-5 showed a mean of 1.95 far less compared to 3 ascertaining the dissenting of females in their living environment. (p-value 0.000)

7. The desire for Child Female (DCF): DCF1(Life surrounding to have a child and future planning disturbed, fertility as personal problem and fed up with it.) DCF2 (distressed by remarks and thinking inability of being mother) DCF3 (child alone can make happiness) are the components leading an average 3.46 of the range 1.19-5.18. The shifted 1-5 range hold an average of 3.28 with a high positive response for DCF accepting response is more than moderate (>3, p value=0.016<0.05)

| Factor | Cronbach's Alpha | Variance explained |
|--------|------------------|--------------------|
| PWF | 0.664 | 75.27 |
| SRF | 0.518 | 66.46 |
| ESF | 0.791 | 62.62 |
| SCRF | 0.835 | 7097 |
| PFF | 0.762 | 61.71 |
| EAF | 0.624 | 96.12 |
| DCF | 0.572 | 76.23 |

The factors of QoL of the infertile female are consistent with Cronbach's alpha >0.5 for all factors. Also, the factors are more befitting as variance explained by each is >60%.

Weightage of Components: The linear regression model of QoL Female on the above seven components determines the weightage of components and the model holds 97.4% R square showing the goodness of fit with only standard error 0.061 All the standardized coefficients are positive indicating the positive contribution of components to QoL of Female. Also the significance of each component is established as p values are all 0.0<0.05. Also, the model fit is established by ANOVA with p-value 0.000<0.05.

| | Minimum | Maximum | Mean | Std. Deviation | % response |
|------|---------|---------|--------|----------------|------------|
| PWF | 2.22 | 5.26 | 2.8867 | 0.5476 | 48.96 |
| SRF | 1.08 | 3.46 | 2.0047 | .5513 | 38.84 |
| ESF | 1.62 | 4.42 | 2.7974 | .6836 | 42.02 |
| SCRF | 1.21 | 3.87 | 2.3082 | .6221 | 41.10 |
| PFF | 1.24 | 3.71 | 2.1543 | .5841 | 37.11 |
| EAF | 1.23 | 4.51 | 2.0119 | .8283 | 23.94 |
| DCF | 1.19 | 5.18 | 3.4689 | .8085 | 57.14 |
| QoLF | 1.47 | 3.53 | 2.5722 | .3975 | 53.43 |

Regression Model Female

| Model | Unstandardiz | ed Coefficients | Standa | ardized Coefficients | t | Sig. |
|-------|--------------|-----------------|--------|----------------------|--------|-------|
| | В | Std. Error | Beta | | | |
| | (Constant) | 017 | .063 | .000 | 277 | .783 |
| | PW | .169 | .021 | .287 | 8.195 | .000* |
| | SR | .116 | .017 | .181 | 6.896 | *000 |
| | ES | .068 | .012 | .173 | 5.850 | .000* |
| | SCR | .241 | .021 | .372 | 11.581 | .000* |
| | PF | .075 | .018 | .124 | 4.233 | .000* |
| | EA | .087 | .013 | .204 | 6.815 | *000 |
| | DC | .108 | .013 | .247 | 8.134 | .000* |

The highest contributing factor is SCRF and another major one is PWF and DCF and EAF. There is a significant difference in SCRF, PFF, and QoL Female among different education groups of an infertile woman.(p values 0.007, 0.015, 0.005) . The minimum score to the female QoL F model is 0.83 and the maximum 4.303 with average 2.575

Male Components of QoL

1. Psychological wellbeing -Male (PMF)

| Components | Subjects facing | Average | SD | p-value |
|------------|---|---------|--------|---------|
| PWM1 | Self-valuation | 1.9920 | 0.7715 | 0.4581 |
| PWM2 | negative feeling, disturbed by sympathy | 2.5474 | 0.9919 | 0.0000 |
| PWM3 | confidence, enjoy free time | 3.0054 | 1.0011 | 0.0000 |
| PWM4 | sadness, depression | 3.5313 | 1.1161 | 0.0000 |
| PWM5 | anxiety, contended | 3.1821 | 0.8951 | 0.0000 |
| PWM6 | Self-satisfied, feel solitude | 3.3194 | 1.0986 | 0.0000 |
| PWM7 | positive attitude | 2.0134 | 0.9534 | 0.8737 |
| PWM | | 2.7987 | 0.3700 | 0.0002 |

There are 7 components on psychological well-being of the infertile man. All components except PWM1, PWM7 show a lack of response from moderate opinion including PWM which is centered at 2.7987 with SD=0.3700 and it is significantly less than moderate psychological wellbeing expected. PWM is reliable as the variance explained of this factor is 80.82% with the least commonality of the factor with the subjects facing is 0.729 >0.6. There is no significant difference between PW of male and female of the couple. (t=0.813 p value=0.420>0.05). The correlation between PWF and PWM of the couple is 0 .845 showing a strong relationship between their response in PW. It is found that the Male and Female components are not similarly distributed in each factor and the responses are also combined in different ways. For example, PWF is composed of 5 components while PWM is formed by 7 components. Similarly, PWF1 is based on self-valuing and ability for decision while PWM1 is composed of self-evaluation only. But as a whole many questions are considered in both male and female infertility factors.

| Factor | Cronbach's Alpha | Variance explained |
|--------|------------------|--------------------|
| PWM | 0.666 | 80.82 |
| SRM | 0.69 | 65.10 |
| ESM | 0.536 | 85.11 |
| SCRM | 0.688 | 73.37 |
| PFM | 0.702 | 80.6 |
| EAM | 0.876 | 67.08 |
| DCM | 0.697 | 68.16 |

The factors of Male infertility shows a consistent outcome as all the reliability measures by Cronbach's alpha is greater than 50%. Also, the factors are well representing the objectives as the variance explained by each factor is more than 65%. QoL Male is linearly regressed with a befitting model having R square =97.6% and Standard error 0.06558. Also by ANOVA, the fit is ascertained suitably (p value=0.000). All the standardized coefficients are significant in the model and

Components and its compositions Male

| DVVD 61 | 10. 1. |
|---------|---|
| PWM1 | self-valuing |
| PWM2 | negative feeling, disturbed by sympathy |
| PWM3 | confidence, enjoy free time |
| PWM4 | sadness, depression |
| PWM5 | anxiety contended |
| PWM6 | self-satisfied, feel solitude |
| PWM7 | positive attitude |
| SRM1 | sex is mechanical for conceiving and getting mechanical |
| SRM2 | feel good as a man but less satisfied with sex as before |
| ESM1 | satisfactory economy and enough money for treatment |
| ESM2 | expensive treatment will solve the problem but hinder future |
| ESM3 | discontinue due to high expense |
| SCRM1 | spending time, freely behaving, conscious on wife relation |
| SCRM2 | getting suggestions and keeping relation with friends |
| SCRM3 | no interaction with children or participating functions |
| SCRM4 | infertility creates disharmony |
| PFM1 | ability to perform live, Satisfied health, Concentrate on activities |
| PFM2 | bad habits of smoking, drinking, fast food |
| AEM | healthy, safe atmosphere accessible to health service and transport |
| DCM1 | childless is distressing, life limits to have a child and future is limited |
| DCM2 | life round about having a child and distressing the comments |
| DCM3 | infertility is personal and life becomes a difficulty |

SCRM (0.493) is most contributing followed by PWM (0.307) and EAM (0.226). The minimum score as per the model is 1.192 with an average score of 2.078 and a maximum score of 4.224.

Regression Model Male

| Model | | Unstand | dardized | Standardized | t | Sig. |
|-------|------------|---------|------------|--------------|--------|------|
| | | Coeffic | ients | Coefficients | | |
| | | В | Std. Error | Beta | | |
| | (Constant) | .434 | .078 | | 5.565 | .000 |
| | PWM | .178 | .023 | .307 | 7.821 | .000 |
| | SRM | .035 | .016 | .090 | 2.218 | .032 |
| | ESM | .085 | .017 | .176 | 4.865 | .000 |
| | SCRM | .260 | .025 | .493 | 10.327 | .000 |
| | PFM | .045 | .022 | .092 | 2.068 | .045 |
| | EAM | .084 | .016 | .226 | 5.363 | .000 |
| | DCM | .071 | .014 | .192 | 5.150 | .000 |

Comparison of Factors wrt Sex: From the table, it is clear that except in the psychological wellbeing of women and the economic sustainability of man there is a strong or feeble opinion holds for the participants. Economic sustainability is strongly accepted by females as well as the desire for a child is so strong in both males and females.

| | Mean | Std. Deviation | Std. Error Mean | p-value |
|------|--------|----------------|-----------------|-----------|
| PWF | 2.8867 | 0.5476 | 0.0849 | 0.09107 |
| PWM | 2.7987 | 0.3700 | 0.0673 | 0.001396* |
| SRF | 2.0047 | 0.5513 | 0.0779 | 1.31E-37* |
| SRM | 2.2910 | 0.7162 | 0.1012 | 1.28E-12* |
| ESF | 3.6396 | 0.9068 | 0.1282 | 3.06E-07* |
| ESM | 3.1155 | 0.5726 | 0.0809 | 0.92310 |
| SCRF | 2.1354 | 0.5459 | 0.0772 | 2.08E-29* |
| SCRM | 2.2591 | 0.5227 | 0.0739 | 6.12E-24* |
| PFF | 2.1543 | 0.5841 | 0.0826 | 6.84E-25* |
| PFM | 1.9921 | 0.5632 | 0.0796 | 5.31E-37* |
| EAF | 2.0119 | 0.8283 | 0.1171 | 1.65E-17* |
| EAM | 1.9826 | 0.7457 | 0.1054 | 2.52E-22* |
| DCF | 3.4689 | 0.8085 | 0.1143 | 2.06E-05* |
| DCM | 3.5055 | 0.7449 | 0.1053 | 8E-07* |
| QoLF | 2.7217 | 0.4047 | 0.0572 | 5.79E-07* |
| QoLM | 2.5211 | 0.3482 | 0.0492 | 1.19E-22* |

Comparison of components on male and female model

| Pairs | t | Sig. | Correlation | Sig. |
|------------|--------|-------|-------------|---------|
| PWF , PWM | 11.57 | 0 | 0.685 | 0.0019* |
| SRF, SRM | -2.187 | 0.034 | -0.05 | 0.729 |
| ESF, ESM | 4.216 | 0 | 0.363 | 0.01* |
| SCRF, SCRM | -1.399 | 0.168 | 0.316 | 0.025* |
| PFF, PFM | 1.463 | 0.15 | 0.066 | 0.647 |
| EAF, EAM | 0.23 | 0.819 | 0.352 | 0.012* |
| DCF , DCM | -0.247 | 0.806 | 0.093 | 0.519 |
| QoLF,QoLM | 3.333 | 0.002 | 0.369 | 0.008* |

Sex wise comparison of dimensions on various demographic groups

| Male | | | Female | | |
|----------------|------------|-------------|------------|------------|-------------|
| Demography | Dimensions | Significant | Demography | Dimensions | Significant |
| Age | PW | 0.011 | Education | PF | 0.015 |
| Religion | ES | 0.041 | | QoL | 0.005 |
| | SCR | 0.021 | Religion | SRF | 0.038 |
| | PF | 0.045 | | | |
| | QoL | 0.02 | | | |
| Occupation | ES | 0.02 | | | |
| | QoL | 0.029 | | | |
| Risk | SCR | 0.006 | | | |
| Social Status | SCR | 0.036 | | | |
| Family Status | SCR | 0.015 | | | |
| | PF | 0.014 | | | |
| Family History | PW | 0.002 | | | |
| | PF | 0.039 | | | |
| Reason | PW | 0.049 | | | |
| | EA | 0.02 | | | |
| Treatment | EA | 0.002 | | | |

In all other factors including the quality of life of males and females, it is strictly less than a moderate level according to an infertile couple. Notably, there is no significant correlation between male and female opinions on many factors. In PW, SR, PF and DC even though there is no correlation, showing that there is no connivance between the infertile couple. ES, SCR, and EA are showing a significant correlation (0.316, 0.352, 0.363) but it is also meager (not strong <0.5 only). Also by the paired t-test, there is a significant difference in the opinion of male and female infertile couples in PW, SR, and ES but no significant difference is found in PF, EA, DC, and SCR. Overall Quality of life of females and male are significantly different with only a limited correlation on overall response.

Significant difference in Demography of QoL and its dimensions: Male dimensions and QoL are more distinctive compared to the female response. SCR is more distinct in four dimensions of male. From the table, religion and occupation contribute positively to the QoL of infertile women while treatment is also influencing their QoL. The model is adequate as Hosmer and Lemeshow's test shows a Chi-square =5.172 with value =0.395 >.05 indicating the befitting of the model. Also by the classification analysis 62% identification of real QoL is achieved by the model. Concerning the demographic factors, the QoL is classified into two groups as better QoL and Lower QoL among the infertile couple. It is found that for Male education, family status and history substantiate for better QoL. Also, some religion and risk factors contribute to the lower QoL for male infertile. The model is adequate as Hosmer and Lemeshow's test shows a Chi-square =8.204 with value =0.414 >.05 indicating the befitting of the model.

Logistic model on QoL

| Variable | В | S.E. | Wald | df | Sig. | Exp(B) |
|------------|--------|-------|-------|----|------|--------|
| Religion | .467 | .587 | .633 | 1 | .426 | 1.595 |
| Occupation | .539 | .307 | 3.085 | 1 | .079 | 1.713 |
| Treatment | 034 | .373 | .008 | 1 | .927 | 1.022 |
| Constant | -3.000 | 1.941 | 2.389 | 1 | .122 | .050 |

From the logistic models for female, religion occupation and treatment are the factors for QoL and Odds ratio shows more than one times effect on them. But the treatment effect is adversely affecting their QoL. Only occupation depicts significant effect (<0.10)

Model for Male

| Variable | | В | S.E. | Wald | df | Sig. | Exp(B) |
|----------|----------------|--------|-------|-------|----|------|--------|
| | Education | .463 | .359 | 1.670 | 1 | .196 | 1.590 |
| | Religion | .476 | .640 | .552 | 1 | .457 | 1.609 |
| | Risk | .996 | 1.324 | .566 | 1 | .452 | 2.708 |
| | Family Status | 1.159 | .726 | 2.547 | 1 | .111 | 3.188 |
| | Family History | .820 | 1.315 | .389 | 1 | .533 | 2.271 |
| | Constant | -8.014 | 4.737 | 2.862 | 1 | .091 | .000 |

For male the factors promoting the QoL based on Odds ratio is Education status, Family status, Family History, Religion and Risk of treatment. Family status is very highly influential followed by risk of treatment and family history. Religion and Education also substantiate QoL among males.

CONCLUSION

QoL of the male and female infertile couple are significantly different and they are not reasonably correlated. Thus there is distress and difference of opinion on many issues. Psychological Wellbeing, sexual relations, and economic sustainability are considerably different by husband and wife. The desire for children is very high in both and they believe that future planning of life is spoiled by the lack of children. QoL and most of its dimensions were strongly favored from moderate or no opinion level indicating their concern on most of the dimensions. Social contacts and Couple Relation and Psychological Wellbeing are most contributing factors in QoL male regression model while in addition to these factors Environmental Atmosphere and Desire for Child is contributing high on QoL female regression model SCR is scoring differently by males wrt 4 dimensions, followed by PW and PF in 3 dimensions. Among female grouping wrt demography, there is the only difference of scoring is found in QoL and PF in education and SR in religion.

REFERENCES

Barcaccia, Barbara (2013). Quality of life: Everyone wants it, But what is it? Forbes/Education.

Quality of life Research Unit, (2017). Quality of Life model, Centre for health promotion, University of Toronto.

M. Moura-Ramos, S. Gameiro, M.C. Canavarro, I. Soares (2012). Assessing infertility stress: re-examining the factor structure of the Fertility Problem Inventory, Human Reproduction, Volume 27, Issue 2.496-505.

Newton CR, Sherrard W, Glavac I.(1999). The fertility problem inventory: measuring perceived infertility-related stress. Fertility and Sterility; 72.No.1,USA.

Lechner L, Bolman C, van Dalen A. Definite involuntary childlessness: associations between coping, social support, and psychological distress. Human Reproduction 2007; Vol.22, 288-294.

Peterson BD, Newton CR, Feingold T. Anxiety, and sexual stress in men and women undergoing infertility treatment. Fertility and Sterilisation, 2007; 88: 911-914.

Gourounti K, Anagnostopoulos F, VaslamatzisG.(2011). The relation of psychological stress to pregnancy outcome among women undergoing in-vitro fertilization and intracytoplasmic sperm injection. Women Health; 51: 321-339.

AzamNamdar, Mohammad Mehdi Naghizadeh, Marziyeh Zamani, Farideh Yaghmaei, and Mohammad Hadi Sameni (2017), Quality of life and general health of infertile women, Health and Quality of life outcomes, Vol. 15, No.139.

Swarnali Bose, Bharati Roy (2017), Fertility Related Quality of Life in Primary Infertile Couples: A Comparative Study from Eastern India, International Journal of Indian Psychology, Vol.5, Issue.1.

Yousri El Kissi, Badii Amamou, Samir Hidar, Khadija Ayoubi Idrissi, Hedi Khairihttps:// www.sciencedirect.com/science/article/pii/S0020729214000599#! (2014), Quality of life of infertile Tunisian couples and differences according to gender, International Journal of Gynecology and Obstetrics,Vol.125,issue.2.

Yuezhi Dong, Feijing Zhou (2016), Comparison of fertility quality of life between urban and rural infertile couples, International Journey of Clinical Experimental Medicine, Vol.9, No.5.

Batool Rashidi, Ali Montazeri, Fatemeh Ramezanzadeh, Mamak Shariat, Nasrin Abedinia, and Mahnaz Ashrafi (2008), Health-related quality of life in infertile couples receiving IVF or ICSItreatment, BMC Health Service Research, Vol. 8. No. 186.

AsliGoker, Emre Yanikkerem, Ozer Bridge, Naci Kemal Kuscu 2017. Quality of life in Turkish infertile couples and related factors, Human Fertility (Cambridge) Issue.3, 195-203.

Rebecca Dillu, Poonam Sheoran, Jyoti Sarin (2013), An Exploratory Study to Assess the Quality of Life of Infertile Couples at Selected Infertility Clinics in Haryana, Journal of Nursing and Health Science, Volume 2, Issue 3.

- Nemat Ismail Abdel Aziz Ismail, Amal Awad Abdelnabi Moussa (2017), Coping Strategies and Quality of Life among Infertile Women in Damanhour City, Journal of Nursing and Health Science, Vol.6, Issue.2.
- SuhaBaloushah, Samira Barjasteh, Aymen Elsous, Ali Alderawi, SohaAboueid, Atef Masad (2020) Quality of Life among Infertile Couples in Gaza city, Palestine. Research Square, Version 1.
- Zahra Royani, Mohammad Heidari, Mahboubeh Vatanparast, FaridehYaghmaei, Athareh Kalantari Sarcheshme, Jamileh Khademi Majomerd (2019). Predictors of Quality of Life in Infertile Couples, Journal of Menuapuasal Medicine. 25(1) page 35-40.
