

Spiritual Well-Being, Quality of Life and Fertility Related Distress Among Infertile Individuals

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ABSTRACT

The present study was conducted to compare the relationships between Spiritual well-being, quality of life and fertility related distress among infertile individuals. The study was conducted on a group of 30 individuals, who have the diagnosis of infertility and are undergoing infertility treatment for the same. The age group of the participants was from 25-50 years. The tool that was used to administer the spiritual well-being of the group was Spiritual Well-Being Scale, for psychological distress was Fertility Problem Inventory and for Quality of life was World Health Organization- BREF. The data collected was analysed using correlation. Results showed that there is no significant relationship between spirituality & infertility related distress due to difference in their religious perspective. Infertility related distress & QOL because of the social support, supports from friends and their self-efficacy. A significant relationship was found between Spirituality & QOL due to satisfaction and happiness receiving through prayer.

Keywords: *Infertility, Spirituality, Infertility related distress, Quality of life*

I*nfertility* Infertility has been recognized as a very relevant social and public health issue globally. The Oxford English Dictionary defines 'infertile' as 'not able to have babies or produce young', which implies a state of sterility rather than 'difficulty in conceiving', which represents the view of many clinicians. Infertility is defined as the disease of the reproductive system resulting in the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse (Adamson, de Mouzon J, GD, J, & Ishi, 2009). There are two types of infertility i.e., primary and secondary infertility. If the couple has never conceived then it is said to be primary infertility while secondary infertility is when the couple has experienced a pregnancy before and failed to conceive later (Zahid, 2016).

Causes of infertility are numerous in males and females such as anatomical i.e., menstrual or ovulation dysfunction, uterine factors, abnormal sperm production or function etc..., physiological i.e., endometriosis, fallopian tube damage or blockage, problems with delivery of sperm etc, and genetic factors i.e., If men has two X chromosomes and one Y

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Spiritual Well-Being, Quality of Life and Fertility Related Distress Among Infertile Individuals

chromosome as in Klinefelter's syndrome, the testicles will develop abnormally and there will be low testosterone and a low sperm count or no sperm, mumps, etc.. (Masoumi, 2015) Other factors influencing fertility and leading to infertility are environmental and acquired factors. Etiology of infertility prevalence and patterns of causes of infertility in different regions are diverse. This discrepancy is due to existence of differences in environmental conditions associated with reproductive behaviors, such as age at marriage, environmental pollution, smoking and alcohol abuse, changing in lifestyle and diet (Macaluso, Schnapp, A, & Johnson, 2010). Aging has an effect with both male and female infertility. Female age is the single most important determinant of spontaneous as well as treatment-related conception, with a gradual decline in fertility especially after the age of 35 years (Templeton, Morris, & Parslow, 1996). Among male, sexual function, fertility and sperm parameters, causes increased time to conception and increased miscarriage rates (Harris, Fronczak, & Roth, 2011).

Infertility is not a disease, it and its treatment can affect all aspects of people's lives, which can cause various psychological-emotional disorders or consequences including turmoil, frustration, depression, anxiety, hopelessness, guilt, and feelings of worthlessness in life (Cousineau & Domar, 2007). Infertility had some level of psychological effects which were low self-esteem, frustrations and despondency on infertile couples. The social consequences of infertility included social exclusion, verbal and physical abuse as well as divorce. Also, infertile couples excluded themselves from social activities because people did not invite them, even functions organized and hosted by their close relatives (Reindolf Anokye, 2017). Also, the majority of infertile women do not share their story with family or friends, thus increasing their psychological vulnerability. The inability to reproduce naturally can cause feelings of shame, guilt, and low self-esteem. These negative feelings may lead to varying degrees of depression, anxiety, distress, and a poor quality of life (Rooney & L, 2018).

As per the estimate of World Health Organization the overall prevalence of primary infertility in India is between 3.9 to 16.8%. In Indian states prevalence of infertility varies from state to state such as 3.7 per cent in Uttar Pradesh, Himachal Pradesh and Maharashtra, to 5 per cent in Andhra Pradesh, and 15 per cent in Kashmir and prevalence varies in same region across tribes and caste.

Psychological Distress

Psychological distress is the deviation from the healthy state of being. It implies maladaptive patterns of coping. It is mild psychopathology with symptoms that are common in the community. It is negative feelings of restlessness, depression, anger, anxiety, loneliness, isolation and problematic interpersonal relationships (D & Mui, 1997). Men and women show different rates of psychological distress. Women further show difference depending on whether they are from urban area or rural area whereas in men irrespective of the area they are from distress is the same (Ayuso-Mateos, 2001).

Studies have found that, poverty remains the most critical parameter for developing psychological distress and psychiatric symptoms (Muntaner, 2004; J, A, & Liu A, 2000). The physical environment and poor social conditions are producers of chronic stress and highly stressful life events (Brown, 1987; Galea, 2007). Social variables are the best protective factors of mental health, among these the perceived availability of social networks of support is the single best protective factor (Caron, 2005). Social cohesion in communities also plays a significant role in maintaining healthy populations, the concept of social cohesion refers to the degree of interaction, relationships and solidarity of social groups

(Kawaguchi & L, 2000; Moore, et al., 2010). Infertility related psychological distress is defined as a type of emotional and mental upset or turmoil that is grounded in the inability to conceive and bear children. Women for whom motherhood is a central life identity experience significantly higher levels of psychological distress when they remain childless (McQuillan & L Arthur Greil, 2003). There are studies that have described psychological distress caused by harassment, verbal abuse, rejection, and stigmatization from the families of the husband of infertile women (PT Tabong, 2013; RA Dimka, 2013). Though both men and women share the problem, the adverse psychosocial effect is strong for women because culturally, motherhood is considered as the primary role for women in Indian context. In most part of India children are considered as a treasure for women's life which strengthens the ties between marital partners, increase the value of women in their society and families, increase one's self-value and earn respect from others, and a means of psychosocial and economic support, especially during old age. Therefore, being childlessness, bring about discrimination and insult from colleagues, neighbors, in-laws, especially from mother-in-laws, moreover, childless women feel a sense of unfulfilled creature. Childlessness makes marriage less pleasurable, motivates men to engage in extramarital relationship and consequently leads to divorce (Yohannes, 2018). Also, studies have found that anxiety and depressive symptoms in infertile women were associated with age, sexual concern, social concern, and maternal relationship stress (Enikő Lakatos, 2017; Sejbaek & Hageman, 2013).

Spirituality

Spirituality is distinguished from all other things such as humanism, mental health, values and morals by its connection to that which is sacred, the transcendent. The transcendent is present outside the self, and yet also within the self and in the Western traditions it is called as God, Allah or a Higher Power. While in Eastern traditions it is called as Brahman, manifestations of Brahman, Dao, Buddha, or ultimate truth/reality. Spirituality is very well connected to the mystical, supernatural and to organized religion, although also extends beyond organized religion (and begins before it). Spirituality comprises both a search for the transcendent and the discovery of the transcendent and so this involves traveling along the path that leads from non-consideration to questioning to either staunch nonbelief or belief, and if belief, then ultimately to devotion and finally, surrender (H. G. Koenig, 2001). Spiritual well-being can be defined as a sense of connection with others to have a meaningful and purposeful life, and to believe in and have relationship with the Almighty. Spiritual well-being consists of two dimensions; first, the religious dimension, which refers to the relationship with God, and second, the existential well-being, which refers to individuals' feelings, what they do, why they do it and to where they belong (E Jafari & F Sohrabi, 2010). Spirituality is a different concept from religiosity, although the two may be intertwined in specific situations. Studies indicated that women scored higher than men in religiosity or spirituality. (Bryant, 2007; Hammermeister, 2005). Alice, Allan, & MD, (2005) found that strong religious/spiritual beliefs may help or interfere with coping and healing. On the one hand, some may find comfort by believing that infertility is part of a divine plan, while others may interpret infertility as punishment from a higher power for past sins and indiscretions. Some infertile women who display strong religious or spiritual beliefs may achieve relaxation through prayer. Others may experience heightened levels of distress from feeling that their prayers for a child have gone unanswered, or from agonizing over whether to pursue a treatment that may be specifically banned by their religion. The study showed that there is a significant relationship between the symptoms of depression and stress in people undergoing infertility treatment and their spiritual wellbeing; the higher level of spiritual well-being was associated with lower level of stress and fewer symptoms of depression.

Quality of life

QOL is a mental concept which deals with the positive and negative aspects of someone's life from his/her perspective. In fact, QOL is a perception one may have about his life and other personal life aspects and is a sort of reaction he/she may show in a certain condition. Although there is not any consensus about the definition of QOL, WHO has offered a definition which is recognized by various entities: QOL is an individual's perception of their position in life in the context of the value systems and culture in which they live and in relation to their goals, standards, concerns and expectations (Marzieh, Nikvarz, & Zangiab, 2017). Different studies come up with different risk and protective factors associated with health-related quality of life based on their disease (Emlet, Karen, & Goldsen, 2013). In his study found that comorbidity, limitations in activities, and victimization are significant risk factors for decreased physical and mental health-related quality of life and social support and self-efficacy serve as protective factors. The World Health Organization (WHO) believes that although infertility is not considered as a disease, it can develop several emotional and social disorders with consequences. The results of various studies showed that infertility is accompanied by a lack of sexual desire and marital dissatisfaction, stress, anxiety, and depression in the infertile couples. Many studies have been conducted about the analysis of QOL in infertile people but most of them have focused on QOL in one of the spouses especially women, and there are few and rare studies which have considered QOL in both spouses as a unit. As some studies showed since women are subject to most infertility tests and treatment while in most culture, childbearing is a womanly duty, so women experience more stress than men (S, H, & RA., 2011; MR Sargolzaie, 2002). However, on the other hand, studies have also shown that more men experience psychological disorders than women (G Ragni, et al., 2005; Chachamovich J & Chachaovich E, 2010). In general, mental pressures caused by infertility both in men and women are always accompanied with reduced quality of life in all aspects (G Ragni, 2005). Studies have found that Infertility will result in lower QOL for infertile people through developing mental and social stress, decreasing life satisfaction, and increasing marital problems (Kraaim C, & A Koyil; CM, T, & AY, 2010).

F Yazdani, (2016) indicated that the QOL of infertile men is reduced over time when they get older, maybe it is because older men have experienced more treatments and more failures in their life which resulted in their QOL decreasing but in women their infertility will be less important for others over time and also experiencing several treatments will decrease their stress and fear of treatment which does not lead to any effect on their QOL.

Rationale

Though most of studies have shown that there is a relationship between the three variables namely spiritual wellbeing, infertility related distress and quality of life, the present study was undertaken to explore the same in the Indian context. Most of the studies have been conducted in the west and hence a study of this nature would be meaningful as culture would have an impact on all the three variables.

Significance of the study

Result arising from the study can help in enhancing the overall wellbeing of an individual who is undergoing treatment for infertility. The study will help to identify the patterns of relationships existing between the variables in the Indian scenario and help to compare the same with those already existed in the west.

REVIEW OF LITERATURE

This chapter focuses on the articles in the area of infertility and other variables like spiritual well-being, fertility related distress and Quality of life to get an in-depth understanding of the topic and to identify the gaps if any. The aim of the study is to understand the relationship between spiritual wellbeing, fertility related distress and quality of life among infertile individuals in India.

J Romeiro (2017), A qualitative empirical research was conducted to identify the spiritual aspects of patients experiencing infertility and seek a deeper and broader meaning of the involuntary childlessness experience. An aggregative synthesis was conducted according to Saini & Shlonsky (2012), using thematic analysis. A total of 26 studies were done on female, male and couples. Interviews were done in different infertility phases such as diagnosis, assisted reproductive technologies and following fertility treatments for the collection of data. Two main themes emerged from the study i.e., spiritual needs and spirituality as a coping resource for infertility. The result shows that Infertility affects the holistic existence of the couples. This difficulty awakens spiritual needs along with unmet needs of parenthood. Coping strategies incorporating spirituality can improve the ability of couples to overcome childlessness and suffering.

A study by R.L Allan (2011), examined how Muslims and Christian women experienced infertility in a spiritual and religious context and how their beliefs affected the attempts they made to deal with different aspects of infertility. They used a grounded theory approach and the participants included in the study were 30 infertile women affiliated to different denominations of Islam (Shiite and Sunni) and Christianity (Protestantism, Catholicism, Orthodoxies). Data collection was done through semi-structured in-depth interviews at fertility clinics in the UK and Iran. The result indicated that infertile women initially reacted to their condition in disbelief, uncertainty and questioned it. However, gradually they tried to not end up having a mental breakdown by using a spiritual/religious meaning making framework. They associated their condition to God's will. As a result, they were able to accept their condition and tried coping with it through spiritual & religious strategies. Their faith in God gave them hope, made them optimistic and confident despite having their condition. They also believed that they will be cured of this condition one day which motivated them to proceed with their treatment, encountering infertility showed attributes such as uncertainty, disbelief and questioning as their first reactions. However, they gradually tried to preserve themselves from emotional collapse through using a spiritual/religious meaning-making framework. They looked at infertility as God's will and believed that nothing can happen without God's contribution and he has absolute control over people's lives. As a result, they acknowledged their new identity as infertile and tried to cope with the situation adopting spiritual and religious coping strategies. Their trust and dependence on God and their benevolent reappraisal helped them to be hopeful, optimistic and confident, as they believed in God's wisdom, beneficence and power. At the same time, they believed that they would be blessed one day and this divine hope motivated them to go ahead with their treatment procedures. In summary, Religious infertile women after experiencing ups and downs in their long-term spiritual journey were convinced that they could have a fruitful and dynamic life even without child. This spiritual strength helps them to handle infertility.

Enikő Lakatos (2017), did a study on 225 (134 primary infertile and 91 fertile) women, recruited in a clinical setting and online from Hungary to assess the psychological state of women with & without fertility problems, and to investigate the background factors of

Spiritual Well-Being, Quality of Life and Fertility Related Distress Among Infertile Individuals

anxiety-related and depressive symptoms in women struggling with infertility. They used Spielberger Trait Anxiety Inventory (STAI-T), Shortened Beck Depression Inventory (BDI) and Fertility Problem Inventory (FPI). They also interviewed the participants to identify the presence of other sources of stress (the quality of the relationship with their mother, financial and illness-related stress), and described socio demographic and fertility-specific characteristics. The level of depressive and anxiety-related symptoms in fertile vs. infertile women and in infertile women with or without ART history was identified using independent-samples t-tests. And to identify underlying sources of depressive and anxiety-related symptoms in women with infertility problems, in the infertile group they implemented a linear regression analysis with depression and trait anxiety as dependent variables of two different models. The results showed that the infertile women were younger but had significantly worse psychological well-being than fertile subjects. Anxiety and depressive symptoms in infertile women were associated with age, sexual concern social concern, and maternal relationship stress. The model was able to account for 58% of the variance of depressive symptoms and 62% of the variance of trait anxiety.

L.A Pasch (2012), conducted a cohort study over an 18-month period on 202 women who initiated their first IVF cycle, to examine whether IVF treatment outcome predicts subsequent psychological distress as well as whether psychological distress predicts IVF treatment outcome. Women completed questionnaires and interviews at baseline and at 4, 10, and 18 months follow-up. Using binary logistic model including covariates (woman's age, ethnicity, income, education, parity, duration of infertility, and time interval) they found that pretreatment depression and anxiety were not significant predictors of the outcome of the first IVF cycle. Using linear regression model including covariates (woman's age, income, education, parity, duration of infertility, assessment point, time since last treatment cycle, and pre-IVF depression or anxiety) they also found that experiencing failed IVF was associated with higher post-IVF depression and anxiety. Therefore, the study shows that IVF failure predicts subsequent psychological distress, but pre-IVF psychological distress does not predict IVF failure.

I.M Hassanin (2010), conducted a study to assess the effect of infertility on the health-related quality of life and sexual function of infertile women in Upper Egypt. The study population included 116 women with primary infertility and 116 fertile women with similar socio demographic characteristics. For the collection of data, they used Quality-of-Life Questionnaire (QLQ) C30, version 2, and a visual analog scale. They also looked for associations between the results and infertility duration. The study found that when compared with the fertile women, the women with primary infertility had significantly lower scores for both health-related quality of life and sexual function, and their sexual function was the most disturbed during the fourth, fifth, and sixth years of their marriage. They concluded the study by stating, women with primary infertility need to be treated medically and psychologically to improve their quality of life and sexual functioning.

Research by G Casu (2018), consisted of a sample of 152 infertile couples starting their first fertility treatment at a private clinic in Brazil by adopting a dyadic approach using the Actor-Partner Interdependence Mediation Model. The study was to investigate whether and how women and men's spirituality was associated with their own and their partners quality of life directly and indirectly, through the mediation of their own and their partners infertility related stress. Participants completed self-reports of spirituality, infertility related stress and quality of life. The results indicated that there is a significant positive direct effect of women and men's spirituality on their own quality of life but the direct effect of their

Spiritual Well-Being, Quality of Life and Fertility Related Distress Among Infertile Individuals

spirituality on their partner's quality of life was non-significant. There were significant negative effects of women and men's spirituality on their own as well as on their partners infertility related stress, with non-significant contrast analysis indicating that these effects had the same strength. Finally, there was a significant negative effect of women and men's infertility related stress on their own quality of life, but not on that of their partners.

Sobhanian Saed (2014), conducted a study to find the unique impact of spiritual group therapy on the infertility consequences. The study population included 800 infertile women who were referring to gynecological clinics of Jahrom University of Medical Sciences. Those who have inclusion criteria selected, then sampling continued by 63 people that randomly divided into two groups of experimental and control groups. The experimental group received 13 sessions of spiritual group psychotherapy. There wasn't any psychological and educational approach for control group (this group received routine care). For gathering data they used Persian version of Depression Anxiety Stress Scale (DASS) to assess psychological distress and Penn State Worry Questionnaire (PSWQ) in pre- posttest. The Results showed the severity of psychiatric symptoms in the experimental group was lower than control group. There was significant difference in psychological distress (depression, anxiety, stress and worry) pretest-posttest between and within groups by repeated measure analysis of variance (ANOVA). The control group was provided with 2 sessions of Spiritual therapy. In the first session they aim to create trust in the group and promote group dynamics, help them to identify their personal identity and to search for meaning in life through strengthening family ties. In the 2nd session they help them in understanding their characteristics and capabilities as a center of self-consciousness and finding all of strategies to expose it, help them find the meaning of their suffering, and provide information about all types of treatment as a way to create hope in them. The findings indicated that the spiritual group therapy could decrease psychological severity symptoms. The study states that psychological interventions as a group education is a good choice for improved mental health among infertile women.

Etemadifar (2016), aimed to determine the relationship between spiritual well-being and its dimensions (existential and religious) and life satisfaction in females with infertility. The study was conducted on 190 females with infertility referred to Isfahan fertility and infertility center, Isfahan, Iran. The participants were selected through a convenience random sampling method in three months by the satisfaction with life scale (SWLS) and spiritual well-being scale (SWBS) through face-to-face interview. Collected data was then analyzed by SPSS. Descriptive statistical methods (frequency distribution, mean, variance and standard deviation tables) and analytical statistical methods (Pearson correlation test, Spearman correlation coefficients, one-way ANOVA and t-test) were used. The results of the study indicated a direct relationship between the scores of life satisfaction and religious dimension of spiritual well-being, as well as the score of existential dimensions of spiritual well-being, and the overall score of spiritual well-being. The score of existential dimensions had a closer relationship with that of life satisfaction, compared to the score of religious dimensions and the overall score of spiritual well-being, because patients with chronic diseases experience stressful psychological and social changes, such as existential struggles related to the meaning and purpose and the suffer resulting from the disease, which often challenge the meaning and purpose in their lives. This decreases their life satisfaction. Therefore, the study shows that there is a significant positive relationship between spiritual well-being and its dimensions (existential and religious), and life satisfaction in females with infertility.

Spiritual Well-Being, Quality of Life and Fertility Related Distress Among Infertile Individuals

J Chachamovich (2009), conducted a study to explore the congruence of Quality-of-Life perception within infertile couples and to estimate the effect of depression levels on the congruence among 162 couples who were interviewed in an assisted reproduction clinic cross-sectionally. Participants were asked to fill up socio-demographic form, World Health Organization Quality of Life-BREF and the Beck Depression Inventory independently. The result showed that out of the five Quality of life domain scores, only two showed a significant discrepancy between partners i.e., psychological and social relationship domains. Male depression was a significant predictor for all five Quality of life difference scores, whereas female depression was associated with three i.e., overall, psychological and physical. Also, it was established that, except for the psychological domain and for the female depression on the physical domain, the load of depression as a predictor of the Quality of life difference scores was markedly low, accounting for not more than 7.5% of the variance of congruence between men's and women's Quality of life.

Hee-Jun Chi (2016), conducted a study to investigate psychological distress and fertility quality of life (FertiQoL) in infertile Korean women, and to investigate whether a correlation exists between psychological distress and FertiQoL. 141 infertile women and 65 fertile women participated in the study. They conducted a survey on psychological distress (using the Depression Anxiety Stress Scales [DASS]-42 questionnaire) and administered a FertiQoL questionnaire. The result showed that depression, anxiety, and stress among the infertile women were significantly higher than the fertile women and that there is a negative relationship between psychological distress and FertiQoL.

The existing review of literature shows that there is a significant impact of infertility in spiritual well-being, infertility related distress and quality of life. There is only one research study which has investigated the possible relationship between the spiritual wellbeing and quality of life of infertile individuals along with the psychological distress experienced by them. However, an examination regarding the possible relationship between the three variables needs to be conducted in India since there are no studies been conducted till date for the same in Indian scenario.

METHODOLOGY

Aim

To study spiritual wellbeing, infertility related distress and quality of life among infertile individuals.

Objectives

- To study the level of spiritual wellbeing among infertile individuals.
- To study the level of fertility related distress among infertile individuals.
- To study the Quality of Life among infertile individuals.
- To examine whether there is a significant relationship between spirituality and infertility related distress.
- To examine whether there is a significant relationship between spirituality and QOL.
- To examine whether there is a significant relationship between Infertility related distress and QOL.

Participants

Participant characteristics. Total of 30 individuals between the age of 25-50 years, having the diagnosis of infertility and undergoing infertility treatment, voluntarily participated in

Spiritual Well-Being, Quality of Life and Fertility Related Distress Among Infertile Individuals

the study. The participants belonged to various ethnic backgrounds, speaking a diverse range of languages including Kannada, Hindi and Malayalam. The participants were approached at various private infertility clinics and ART centers in Bangalore urban area. Informed consent was obtained from all participants and they are informed about the confidentiality and privacy of the responses they would provide and encouraged to respond as honestly as possible.

Sampling procedures. The sample was selected through purposive sampling method. Inclusion and exclusion criteria were established prior to approaching the participants, The inclusion criteria specified that the sample should comprise of those diagnosed with infertility (primary or secondary); the individuals has been undergoing treatment via artificial reproductive techniques; ability to comprehend; read and write English; and the individual is a resident of Bangalore urban area. The exclusion criteria decided was a history of major psychiatric or psychological disorder (personality disorder, schizophrenia or mood disorder spectrum etc.)

Materials

The Spiritual Well-being Scale (SWBS) was developed by Dr. Ellison and Dr. Paloutzian (1982), for the assessment of both individual and congregational spiritual well-being. It provides an overall measure of the perception of spiritual quality of life and subscale scores for Religious & Existential Well-Being. The SWBS have good reliability. For total SWBS, the coefficients are .93, .99, .99, and .82. The index of internal consistency, coefficient alpha, also shows high reliability. The SWBS has good face validity as is evident by the content of the items.

The Religious Well-Being subscale (RWB) provides a self-assessment of one's relationship with God, while the Existential Well-Being Subscale (EWB) gives a self-assessment of one's sense of life purpose and life satisfaction. The instrument is composed of twenty questions, ten of which assess religious well-being specifically, and ten of which assess existential well-being, and has a six-point Likert response scale (strongly agree to strongly disagree). It is a paper-pencil instrument currently available in English and Spanish. The scale is self-administered and it takes 10-15 minutes to complete. Three measures are produced: an overall SWB score, plus two sub scales, existential well-being (EWB) and religious well-being (RWB). The scale was initially developed using a sample of 206 American college students, and then administered to 100 university students. "Test-retest reliability coefficients were 0.93 (spiritual wellbeing), 0.96 (religious well-being), and 0.86 (existential well-being). Internal consistency was evaluated using coefficient alpha, yielding 0.89 (spiritual well-being), 0.87 (religious well-being), and 0.78 (existential well-being)" (Ellerhorst-Ryan). Ellison reports that the SWBS has been used with over 500 respondents of both genders, across a range of ages, locations, and degrees of professed religiousness.

The Fertility Problems Inventory (FPI) by C.R Newton, W. Sherrard and I. Glavac (1999). The Fertility Problem Inventory (FPI) has been used in multiple investigations to examine infertility-related stress. It describes the experience of infertility-related stress through five domains: social concern, sexual concern, relationship concern, need for parenthood, and rejection of childfree lifestyle. This Inventory contains a total of 46 items. The FPI was developed with participants who were referred for assessment and treatment with IVF, controlled ovarian hyper stimulation and IUI, or therapeutic donor insemination at a university-affiliated teaching hospital. A composite score of the sum of the five domains is referred to as the global measure of infertility-related stress.

Spiritual Well-Being, Quality of Life and Fertility Related Distress Among Infertile Individuals

World Health Organization Quality of Life (WHOQOL-BREF) instrument by WHOQOL group. It assesses the individual's perceptions in the context of their culture and value systems, standards, concerns and their personal goals. This instrument was developed collaboratively in a number of centers worldwide, and has been widely field-tested. The WHOQOL-BREF instrument comprises of 26 items, which measure the following broad domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environment (2 items). Two other items measure overall QOL and General Health. The WHOQOL-BREF is a shorter version of the original instrument called WHOQOL-100, which is more convenient for use in large research studies or clinical trials. The WHOQOL-BREF can be self-administered if respondents have adequate ability; otherwise, interviewer-assisted or interview-administered forms should be used. WHOQOL-BREF can be administered among people with 18-64 years of age. Items are rated on a 5-point Likert scale (low score of 1-high score of 5) to determine raw item score.

Procedure

The participants were collected through purposive sampling method. Their informed consents were obtained and were briefed about the necessary instructions for completing the questionnaires. Participants provided their demographic details such as age, gender, ethnicity and socio-economic status along with the 3 questionnaires (WHOQOL-BREF, FPI & SWBS) They were provided with enough time to read and comprehend all that they can. The responses provided by them was scored and interpreted using answer keys and norms provided. The results from each of the assessments were interpreted and analyzed using SPSS statistical tool. Using descriptive statistics on SPSS, Pearson's correlation was conducted to determine if there is a significant relationship among the variables.

Research design

Correlational research design

Hypotheses

- H0 (a) There is a no significant relationship between spirituality and infertility related distress among infertile individuals.
- H0 (b) There is no significant relationship between spirituality and Quality of Life among infertile individuals.
- H0 (c) There is no significant relationship between Infertility related distress and Quality of Life among infertile individuals

Variables

Independent variable. Diagnosis of infertility

Dependent variable. Spirituality, Infertility related distress, Quality of Life

Inclusion criteria

- Individuals diagnosed with infertility (primary or secondary infertility)
- The individual has been undergoing treatment via artificial reproductive techniques.
- Ability to comprehend read and write English.
- The individual is a resident of Bangalore urban area.

Exclusion criteria

- History of a major psychiatric or psychological disorder (personality disorders, schizophrenia or mood disorder spectrum etc.)

Data Analysis

- Pearson r correlation was used to analyze the data

Ethics

In order to maintain the ethical validity of the study the researcher observed strictly the following guidelines while carrying out the data collection. Consent will be obtained from the participant before collecting data. Data obtained is kept confidential. The confidentiality of the participants at no point during the course of the study or afterwards was breached for any reason. The research participants were given the right to withdraw their participation from the study if and when they asked for it. All the inclusion and exclusion criteria for the sample for the following study were ensured and followed. Confidentiality and anonymity of the participants were maintained throughout the study.

RESULT AND DISCUSSION

The present study aims to understand infertility related psychological distress, quality of life and spiritual wellbeing among infertile individuals in India. This study consisted of 30 participants (7 male and 23 female) who were diagnosed with infertility, currently undergoing any treatment for the same and administer with 3 questionnaire each. The data was obtained was subjected to statistical analysis of correlation to draw inferences. It was hypothesized that,

- There is a no significant relationship between spirituality and infertility related distress among infertile individuals.
- There is no significant relationship between spirituality and Quality of Life among infertile individuals.
- There is no significant relationship between Infertility related distress and Quality of Life among infertile individuals

RESULTS

Table1 Demographic details of participants

	Males	Female	Total
N	23.33%	76%	100%
<u>Age range</u>			
25-30	-	33%	33%
31-35	20%	30%	50%
36-40	3%	13%	16%
41-45	-	-	-
<u>Years of marriage</u>			
0-5	20%	66%	86%
6-10	3.33%	10%	13.33%
<u>Religion</u>			
Christianity	10%	43%	53%
Hindu	13%	26%	39%
Islam	-	6.66%	6.66%

An observation of the above table reveals that for the current study, the sample size was 30 (having 7 males and 23 female participants), majority (50%) are in the age range of 31-35 years, followed by 25-30 (33%) and (16%) for remaining 36-40 years. All participants required to be married with the majority (86%) being married for 0-5 years, followed by few

Spiritual Well-Being, Quality of Life and Fertility Related Distress Among Infertile Individuals

who were married for 6-10 years (13.33%). Christianity was the most followed religion (53%) among the participants, followed by Hinduism (39%) and Islam (6.66%).

Table 2 Patterns of distribution of scores obtained on the three questionnaires for the sample.

	Male	Female	Total
Level of spiritual well-being			
Low	6.66%	3.33%	9.99%
Moderate	16.66%	56.66%	73.32%
High	-	16.66%	16.66%
Quality of life			
Low	3.33%	3.33%	9.99%
Average	16.66%	66.66%	83.32%
High	3.33%	6.66%	9.99%
Level of psychological distress			
Low	-	-	-
Average	20%	63.33%	83.33%
Moderately high	3.33%	13.33%	16.66%
Very high	-	-	-

An examination of the pattern of distribution of the scores obtained by the participants on the various questionnaires shows that 16.66% males reported moderate level and only around 6.66% reported low level of spiritual well-being. While in females 56.66% reporting an average spirituality, 16.66% high spirituality and 3.33% low spiritual wellbeing. For quality of life 3.33% of the both males and females showed low level of quality of life, 16.66% males and 66.66% of females showed average quality of life and 3.33% males and 6.66% females showed high quality of life. For level of psychological distress 20% of male and 63.33% of females reported average level of distress, 3.33% of males and 13.33% of females showed moderately high distress. While no males and females reported low or very high level of distress.

Table 3 Descriptive statistics for the group

	N	Mean	Std.dev
SWBS			
Males	7	72.40	20.10
Females	23	74.17	21.08
Total	30	72.8	22.03
QOL			
Male	7	74.77	13.51
Female	23	75.13	12.82
Total	30	74.6	12.94
FPI			
Male	7	159.81	9.31
Female	23	159.31	9.02
Total	30	154.56	9.02

Table 3 above displays the descriptive statistics for the sample, i.e., the sample size, mean scores along with the std.dev scores on the three scales. The sample consisted 7 men and 23 females, totalling to 30. The mean score on SWB obtained by the males was found to be

Spiritual Well-Being, Quality of Life and Fertility Related Distress Among Infertile Individuals

72.4 with the standard deviation of 20.10 and for females it was found to be 74.17, standard deviation of 21.08, giving total mean of 72.8 and standard deviation of 22.03, indicating the level of spirituality occurring as a result of infertility. Similarly, the mean scores for males for the QOL scale was 74.77, standard deviation of 13.51, for females mean found was 75.13, std.dev was 12.82 giving the total mean of 74.6 and total std.dev of 12.94. For FPI the mean scores obtained by males was 159.81 and std.dev was 9.31, while for females mean was 159.31 and std.dev was 9.02, giving the total mean score of 154.56 and total std.dev of 9.02.

There are minor variations in the mean values obtained for all the three scales for males and females indicating that the levels of distress experienced the spiritual well-being and quality of life is similar in both the genders in the sample included in the current study.

Table 4 Table shows the Pearson's correlation between quality of life and fertility related distress, spirituality and infertility related distress, spirituality and QOL.

		WHOQOLBREF	FPI	SWBS
SWBS	Pearson Correlation Sig. (2-tailed)		-110 .561	
WHOQOLBREF	Pearson Correlation Sig. (2-tailed)			.471** .009
FPI	Pearson Correlation Sig. (2-tailed)	-.035 .855		

A Pearson product-moment correlation coefficient was computed to assess the relationship between spirituality and infertility related distress. There is a negative correlation between the two variables with the value $r = -.110$, and is not significant at 0.01 level. Therefore, we accept the null hypothesis that there is no significant relationship between spirituality and infertility related distress among infertile individuals. Hence spiritual well-being does not have any influence on infertility related distress.

There is a positive correlation between the two variables, with value of .471 for spirituality and quality of life, which is significant at 0.01 level. Therefore, we reject the null hypothesis that there is no significant relationship between spirituality and Quality of Life among infertile individuals. Hence spiritual well-being increases and quality of life increases.

There is a negative correlation between fertility related distress and quality of life, with the value $r = -.035$, which is not significant at 0.01 level. Therefore, accept the null hypothesis that there is no significant relationship between quality of life and infertility related distress in infertile individuals. Hence fertility related distress does not have any influence on quality of life.

DISCUSSION

The aim of this research was to study the spiritual wellbeing, infertility related distress and quality of life among infertile individuals and the hypothesis was to see whether there is significant relationship between spirituality & infertility related distress, spirituality & QOL and Infertility related distress & QOL.

Spiritual Well-Being, Quality of Life and Fertility Related Distress Among Infertile Individuals

Table 1 shows that the majority of the participants in this study was female, male participants were not ready to answer the questionnaire due to their time constraints, do not want to answer about their infertility and unacceptance of their infertility problem. Unequal number of males and female participants definitely make a huge difference in the overall score obtained.

Majority of the participants who are infertile falls under the age group of 31-35 years. Females in between this age group make choices such as financial stability, family planning regarding conceiving, and effecting lesser chances of reproducing as they advance in age. (Lofti, Rajabi, Naeeni, & Tizvir, 2017) This probably is due to late marriage, eating habits and smoking. Similarly, it's found that majority of them are married for 0-5 years, considering this much time was necessary for family planning and financial stability. Christianity showed having high infertile participants due to influence of western culture resulting in late marriage along with the consumption of alcohol (DE, Hofstetter, & Irvin, 2013).

Table 2 shows that majority of male and female participants are showing moderate level of spiritual well-being whereas only few females are showing high spiritual well-being, with no high spiritual well-being among males. Women demonstrated greater commitment to religion in beliefs than men, in line with their higher level of religiousness, women also exhibited somewhat greater religious or social conservatism than men causing women in thinking that people who don't believe in God will be punished (Bryant A. N., 2007). Majority of the participants, from both genders, have moderate quality of life, indicating that there is more hope in having children as most of them has been married for only 5 years. Factors such as financial resources, recreational activities, personal relationship, social support, sexual activity, religion or personal beliefs as well as self-esteem, dependence of medicinal substances, energy and fatigue and work capacity influences their quality of life. None of the participants fall under the category of very high and low psychological distress, whereas majority of the participants are showing moderate psychological distress, as facilities regarding the treatment is high in urban areas and are more open about the options available.

Table 3 shows the mean value of QOL of infertile individuals has an average level with women having high QOL than men. It's also shown that women have high spiritual well-being when compared with male indicating that women are finding relaxation through prayer while men do not engage in any coping styles regarding the same. Hence increasing women's quality of life when compared with men. FPI score shows average distress in total. Men has shown comparatively more distress than women which indicates that infertile childless men of reproductive age have desires to experience parenthood that are similar to those of female counterparts, in addition, diagnosis and initiation of treatment are associated with elevated infertility specific anxiety, and unsuccessful treatment can lead to a state of lasting sadness (Fisher & Karin, 2012).

Table 4 established that there is no significant relationship between spirituality and infertility related distress. The result from this study is not in accordance with other studies which show that higher level of spiritual wellbeing is associated with lower level of stress. This would be because some of the infertile women who display strong religious or spiritual beliefs may achieve relaxation through prayer but others might experience heightened level of distress from feeling that their prayers for child have gone unanswered or from agonizing

Spiritual Well-Being, Quality of Life and Fertility Related Distress Among Infertile Individuals

over the treatment they have selected because it might be specifically banned by their religion (Alice, Allan, Jeffery, & Dusek, 2005).

From the given score in table 4, the people with higher spiritual wellbeing have a higher QOL, which supports the research done by G Casu (2018). This would be due to the satisfaction and happiness receiving through prayer, increased life satisfaction and due to decreased marital problems. Involvement in the religious activities increases social and community support which gradually increases life satisfaction, their hope and quality of life, leading to a reduction in spiritual disorder such as feeling of loneliness, depression and loss of meaning in life (S, Hosseiny, Zeraki, Omrani, & Masoome, 2015). Spirituality is involved in meaning-based coping, which includes also positive reinterpretation, revised goals, and the infusion of ordinary events with positive meaning. In patients with various chronic medical conditions, spirituality plays a protective role in adjustment to illness and promotes quality of life (Folkman, 1997, 2008)

The table 4 also shows that there is a negative relationship between fertility related distress and QOL as expected but the result showed that there is no significant relationship between the two variables. In general, mental pressures caused by infertility both in men and women are not always accompanied by decreased QOL which shows that our result from the study is not in accordance with the study by (G Casu, 2018). Distress can be associated with many factors such as age, sexual concern, social concern, and maternal relationship stress, but the QOL may or may not be affected by psychological distress because of the social support they receive from their religious community (if they are spiritual) or friends and if their self-efficacy is high. Similarly, if momentary support is higher in current participants, no relation would have been found between the QOL and distress. Whereas if there was no much momentary support, the result of the study would have been significant as long term QOL would have been achieved.

SUMMARY AND CONCLUSION

Summary

The study was aimed at finding the relationship between spiritual wellbeing, QOL and infertility related distress among infertile individuals. The study was carried out from February to May 2019 in Bangalore urban area settings. The sample of the study consisted of 30 infertile individuals aged between 25-50 years located in Bangalore, who were currently undergoing any artificial reproductive treatment, selected using purposive sampling techniques from clinics treating infertility and related issues. A quantitative research design having a descriptive study method was utilized for data collection and the obtained data was analysed using descriptive statistics (means and standard deviation) along with correlation (Pearson's Product Moment Correlation) technique to draw inferences. The study arrived at the following conclusion that there is no significant relationship between spirituality & infertility related distress, and infertility related distress & QOL and it was found that there is a significant relationship between spirituality & Quality of life.

CONCLUSION

Most of the studies as stated in the literature were conducted abroad and their culture and socio demographic details are much different from that of the Indian population. The majority of the participants in the present study are from middle class background who themselves or their parents have migrated from different parts of India. Hence, culture, financial status could play a substantial role in the perception of spirituality, distress and QOL subjectively with respect to Infertility.

Limitations

- Since the sample is only 30, it does not represent the whole population
- The availability of male population was very low, therefore it would make a huge difference in the overall result obtained.
- The participants were selected through purposive sampling technique and thus there would be a difficulty in generalizing the obtained results to the entire population.

Recommendation

- Gender differences and comparative studies on infertility related distress, spirituality and quality of life can be studied recruiting equal number of males and females diagnosed with infertility.
- The sample size could be increased to allow generalizability of the results to the population.
- A study can be done by grouping spiritual and non-spiritual individuals in to two groups and assessing them with quality of life questionnaire and FPI inventory to understand the spiritual influence in the participants.
- Psycho education about infertility related problem can be implemented and distress can be included as a module in the treatment of infertility and can encourage psychological intervention.

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Conflict of Interest

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