Chapter II:

Review of Literature
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Infertility is defined as inability to conceive naturally, carry or deliver a healthy baby. The World Health Organization’s definition is based on 2 years of trying to get pregnant and still not been able to be useful in research among different disciplines and clinical practices. 10-15% of couples who fall under the reproductive age all over the world are affected by infertility. It is a very critical situation that the couples are exposed to. Couples who face this problem of infertility have reported poor psychological status as they perceive and then exert a huge stress on them. These couples wish to have a child and because of the problem of infertility they can’t conceive naturally and so they face a lot of stress and this has been associated with emotional squeal such as marital problems, anxiety, depression, anger and feelings of worthlessness among the intended parents. Since infertility related stress plays a pivotal role to determine psychological status of infertile couples, the present study focused on this construct as a key criterion and was studied in relation to gender of infertility couples and method of infertility treatment. Simultaneously infertility related stress was also analysed as a predictor of some psychological phenomenon of infertile couples namely quality of life, life satisfaction and sexual satisfaction in this study.

In context of aforementioned the existent body of literature has been reviewed which is described as follows-
Infertility and stress

Martins et al. in 2011 did a research to study the relationships between social support contexts and infertility stress domains, and tested if they were mediated by infertility-related coping strategies in a sample of infertile women. To fulfil the aim of the study, a sample of 252 women undergoing the treatment of infertility was taken. The tools used for data collection were The Multidimensional Scale of Perceived Social Support, the Copenhagen Multi-centre Psychosocial Infertility coping scales and the Fertility Problem Inventory. The hypothesized multiple mediation model was tested using the structural equation modelling analysis. The final model of the obtained results showed negative effects from perceived partner support to various domains of stress, that is, relationship concern ($\beta = -0.47$), sexual concern ($\beta = -0.20$) and rejection of childfree lifestyle through meaning-based coping ($\beta = -0.04$). It also showed that Perceived friend support had a negative effect on social concern through active-confronting coping ($\beta = -0.04$). Besides that a direct negative association with social concern was observed ($\beta = -0.30$), perceived family support was negatively and indirectly related with all infertility stress domains ($\beta$ from -0.04 to -0.13) through a positive effect of active-avoidance coping. Variance of outcomes between 12 and 66% was shown by the model.

Joshi et al. (2009) did a study to investigate the psychological distress, coping resources and subjective well-being of women facing the problem of infertility and compared it with normal women. A total of 200 women became the part of the study equally divided into women facing infertility and normal women. Subjective Wellbeing Inventory, Coping Resources Index, and General Health Questionnaire-12 (GHQ-12) were used as measures to assess the considered sample. Discriminant Analysis was used to process the data. When compared, results clearly revealed out of eight variables of coping, the infertile and normal women show significant difference in five variables. Scores of normal women were significantly higher than the infertile women. Even on the measure of
Subjective Well-being (SWB), on nine domains out of eleven, both infertile as well as normal women differ significantly. Confidence in Coping and Perceived Ill Health has shown no difference between the two groups. It was seen from the results that both the infertile and normal group differ on the measure of psychological distress. The F-ratio for the considered measure being 39.64 is significant at .01 level of probability. The mean score for infertile women and normal women was 3.35 and 1.24 respectively. It can be anticipated that infertile women face more psychological distress as compared to their normal women. The present study concluded that infertile women have subjective well-being, high level of psychological distress, and inappropriate coping as compared to their normal counterparts.

Abedinia N. et al. (2009) aimed to determine factors affecting depression in infertile couples and the effect of psychological intervention on pregnancy rate of these couples. A total of 638 infertile patients visiting to a university infertility clinic were assessed for this study. In 140 couples one of the spouses were found to have different levels of depression and so the study was randomly divided into two groups and it became a randomized clinical trial. The intervention received by the case group was 6-8 sessions of psychotherapy before any sort of infertility treatment, in addition to that Fluoxetin 20- 60 mg at the same period was given daily and the control group did not receive any intervention. Beck Depression Inventory (BDI), Stress Scale (Holmes-Rahe) and a socio-demographic questionnaire were used as tools to obtain the data from the patients. Pregnancy rate was also compared for both the groups. The results revealed that initially the depression was found in 48% of women and 23.8% of men. The mean±SD of the Beck scores fell from 18.7±9.7 to 10.7±5.8 in the case group that received intervention (P<0.001). Differences were even observed in the pregnancy rate which was 47.1% in the case group and 7.1% the in control group. Pregnancy rate revealed a significant relation with duration and cause of infertility and the level of stress in both the groups (P< 0.001). Pregnancy rate was higher in couples with a second level of education in men (P<0.001).
Farzadi L, et.al (2007). conducted a descriptive study whose main aim was to examine the stressors as well as the coping strategies of 150 infertile women going to Tabriz Al Zahra Hospital between August 2000 to February 2002. Convenience sampling method was used to select the sample and was evaluated. Interview as well as questionnaire method having closed-ended questions were used as techniques to collect the data. The 31 questions in the questionnaire helped to reach to the study goals (determination of psychosocial stressors and their intensity), and to reach to assessment of coping strategies, the 40-item Jalowiec scale (including 25 affection-oriented and 15 problem-oriented coping strategies) was used. 67.3% of cases reported tiredness due to frequent visits to the hospital as the most common physical stressor. With severe and very severe intensities; and anxiety about effectiveness of treatment was the most common mental stressor in 87.3% of cases with severe and very severe intensities. Of affection-oriented coping strategies, 79.3% of the sample used praying and trust in GOD to cope. Of the problem-oriented coping strategies, accepting the situation was used always in 74% of the sample. Physical stressors were not so frequent as compared to the psychological stressors. So, it can be said from the study that the affective problems of infertile women had a significant role in decrease of their stress and anxiety.
Infertility related stress and Gender Differences of the infertile couple

Mariana Moura-Ramos, Sofia Gameiro, Isabel Soares, Teresa Almeida Santos & Maria Cristina Canavarro (2010) did a cross-sectional study to check the psychosocial adjustment and infertility related stress of infertile couples and couples undergoing Assisted Reproductive Technologies (ART). To serve the purpose of the study, a total of 148 couples were recruited. Out of these 148 couples, 79 couples were taking some ART treatment and 25 infertile couples were in their first medical appointment in an infertility centre with no previous ART treatments and the rest 44 couples didn’t have any children but were in their reproductive age without any history related to infertility. Emotional adjustment, quality of life, marital relationship and infertility stress were measured in this study. Couples were the focus of the analysis. Results indicated that couples undergoing ART treatments faced more adjustment difficulties, especially the wives. No significant differences were found in marital adjustment; although ART couples idealized their marital relationship to a higher degree.

Prasanta Kumar Deka and Swarnali Sarma (2010) did a study which addressed psychological aspects of infertility. It showed that among infertile couples; women were more distressed than their male partners. The study also focused on the fact that various other research studies also support the theory that distress is associated with lower pregnancy rates among women pursuing infertility treatment. They even stated that because psychological factors play an important role in the pathogenesis of infertility, exploration of this is also an important task to manage this devastating problem, which has cultural and social impact.

Sreshthaputra O., Sreshthaputra R. and Vutyavanich (2008) studied infertility-related stress present in both men and women and also examined its relationship with their level of perceived social support. The Fertility Problem Inventory (FPI)
was used to measure the infertility-related stress and to assess the level of perceived support the Personal Resource Questionnaire (PRQ) was used. Both these tests were translated into Thai language. The sample consisted of 111 infertile couples, 3 infertile males and 13 infertile females, that is, a total of 238 infertile subjects. The results revealed that the mean age of the males was significantly higher than that of the females (34.1 ± 5.8 and 31.8 ± 5.1 years, respectively; p = 0.002). Most of them had primary infertility. Average duration of infertility and treatment in the male and female subjects (50.3 ± 38.7 versus 49.2 + 37.8 months; and 23.7 ± 23.6 versus 23.4 ± 22.9 months, respectively) showed no significant difference. The stress levels of both male and female subjects were seen high in the subscales of sexual concern, relationship concern as well as the need for parenthood and moderate stress was observed in the subscales scores of social concern and rejection of childless lifestyle. Global stress was high for the subject and there was no significant difference among males and females. Positive correlation was found between the global stress scores of infertile females and their partners (r = 0.562, p = 0.000). There was no significant difference in the mean PRQ scores between the male and female subjects (134.0 ± 16.7 and 137.8 ± 14.0, respectively). A significant negative correlation was observed between the global stress scores and the scores of perceived social support in infertile women (p < 0.001), but not in men.

**Brennan D. Peterson (2000)** conducted a study to explore the impact of congruence between couples’ infertility related stress and its effects on depression and marital adjustment in infertile men and women. The sample consisted of total 525 couples who were referred to a university-affiliated teaching hospital for assessment and treatment with advanced reproductive technologies. Fertility Problem Inventory (FPI), the Beck Depression Inventory (BDI), and the Dyadic Adjustment Scale (DAS) were given to the sample three months before they start their first treatment cycle. The impact of differences between couples’ perceptions of infertility-related stress was examined in relation to their effect on individual levels of depression and marital adjustment in both men and women. The results elicited that the differences between couple’s
evaluations of infertility-related stress predicted female depression, but not male depression. Women in couples who reported high levels of congruence (e.g., agreement) concerning the impact of infertility-related stress reported significantly lower levels of depression when compared to couples in which females experienced a greater amount of stress than their partners. Furthermore as far as marital adjustment was concerned, men and women in couples reporting high levels of congruence concerning the impact of infertility-related stress showed significantly higher levels of adjustment when compared to couples who differed in their appraisals of the stress.

Christopher R Newton, Wendy Sherrard, Irene Glavaca (1999) made a reliable and a valid instrument to evaluate perceived infertility-related stress. 1,153 women and 1,149 men who were consecutively referred and were treated for infertility treatment were taken as subjects. Infertility-related stress for the sample was assessed by a written questionnaire using the Fertility Problem Inventory. Their current levels of anxiety, depression, and marital satisfaction at the time of giving the questionnaire also were determined. The results showed that women described greater global stress than men and higher stress in the domains of social concerns, sexual concerns, and need for parenthood. Both men and women facing male infertility reported higher global stress and more stress on social concern and sexual concern than men and women who were diagnosed with female infertility. Social, sexual, and relationship concerns related to infertility more effectively predicted depression and marital dissatisfaction than the expressed need for parenthood or attitude towards a child-free lifestyle. It was concluded that Fertility Problem Inventory is a reliable measure of perceived infertility-related stress and provides specific information on five separate domains of patient concern. Infertility-related stress differed depending on various other variables that are, gender, fertility history, and infertility diagnosis. For patients who were receiving treatment, social, sexual, and relationship concerns were causing more distress.
Andrews FM, Abbey A, Halman LJ. (1992) compared the dynamics of fertility-problem stress experienced by both the husbands and wives in infertile couples with the dynamics of stress from other sources experienced by members of couples presumed to be fertile. The sample consisted of husbands and wives of 157 couples with primary infertility and 82 couples presumed-infertility couples. Relationships of stress were studied with four marriage factors and four aspects of life quality (subjective well-being) within a causal modelling framework using the data collected. The data was collected from structured face-face interviews that were conducted at participant’s homes. Final outcome measures were four multi-item scales assessing life quality with regard to the marriage, own self-efficacy, own health and appearance, and life as a whole. Intervening outcome scales were used to measure four marriage factors namely marital conflict, sexual self-esteem, sexual dissatisfaction, and frequency of intercourse. The results indicated higher levels of stress, regardless of whether that stress was from attempting to solve a fertility problem or another problem, were found to be related to reduced marital functioning and also decreased life quality. For husbands, the strengths of the linkages did not depend on the source of the stress. However, for wives, the causal model suggested that very strong negative impact was found on the sense of sexual identity as well as the self-efficacy by the fertility-problem stress than did stress from other problems (P less than 0.05). Stress from any source had impacted lives of wives more than that of the husbands, more impact on satisfaction with self and general well-being was observed than on satisfaction with the marriage or health, and affected life quality was mostly indirectly affected through its impacts on the marriage factors.

Abbey, Antonia; Halman, L. Jill; Andrews, Frank M (1992) conducted a study to see how psychological, treatment and demographic factors relate to the amount of perceived stress infertile men and women experience. Cross-sectional structured interview method was used to collect the data and personal interviews were conducted at the subject’s home. The sample consisted of 185 couples with primary infertility at South-eastern Michigan. The age of wives was between 22-43 years whereas the age of husbands was between 23-44 years. A 9-item rating
scale of perceived stress associated with infertility was used as a tool for data collection. Stress had a positive correlation with treatment costs and number of tests and treatments received but a negative correlation with the level of confidence that one will have a child for both the men and the women. A significant relation with perceived stress was seen in attitudes about infertility treatments, importance of children, attributions of responsibility to physicians, and social support for the women whereas for men income, number of physicians seen, and self-attributions of responsibility related to perceived stress. Demographic factors such as age and number of years a couple was married did not show any relation with the perceived stress. Results of this study suggested that attempts to increase the patients sense of control, optimism within realistic limits and social support should be made by the health care providers which would help in reducing the stress in them.

Mohammed Tawfeeq Ali. AL-Yazori (2012) investigated the relationship if any between infertility related stress and type of coping among infertile couples-Gaza Strip in five infertility clinics, and to determine the variables which may be related to study variables including age, sex, educational level, occupation, duration of infertility etc. Descriptive analytical approach was employed for the investigation. 129 infertile couples from both sexes who were diagnosed as infertile living in Gaza Strip governorates, and who were visiting infertility clinic were taken as the sample. The data was collected after checking the inclusion criteria for the study by using the Fertility Problem Inventory (FPI) and Lazarus Way of Coping strategy with seven types and biographical data questionnaire. A significant relationship between infertility related stress and coping strategy was found. Infertility-related stress was significantly high, and most of the sample (93.0 %) experienced very high stress, furthermore, all male participants suffer from very high stress, while, 91.3% of female participants suffers from very high stress. To conclude the findings of the study revealed statistical significances which were related to factors like duration of infertility, level of education, type of infertility, the type of family, and number of treating doctors whereas no significant differences was found in factors like sex, work, type of infertility related to fertility
related stress, and psychological counselling. The conclusion drawn was there exists a relationship between fertility related stress and coping strategy.

**B.D. Peterson, C.R. Newton, K.H. Rosen and G.E. Skaggs (2006)** examined the coping behaviours of 1026 subjects (520 women, 506 men) consecutively referred patients at a University-affiliated teaching hospital. Participants completed the scales used for data collection, that is, Ways of Coping Questionnaire, Fertility Problem Inventory and the Dyadic Adjustment Scale. The results obtained revealed that women used proportionately greater amounts of confrontative coping, accepting responsibility, seeking social support and escape/avoidance as compared to men, whereas men used significantly greater amounts of distancing, self-controlling and planful problem-solving. For both men and women, infertility stress showed a positive relation to escape/avoidance and accepting responsibility and was negatively related to seeking social support, planful problem-solving and distancing. On analysing the relative coping scores, the study identified key gender differences as to how men and women cope with infertility. This was particularly true for men’s coping processes that had previously remained hidden because of less frequent use of coping strategies when compared with women.

**Collins A, Freeman EW, Boxer AS, Tureck R (1992)** investigated gender similarities as well as gender differences in perceptions of infertility and anticipated treatment stress in couples enrolling for the treatment of in vitro fertilization (IVF). Both husbands and wives were evaluated when they were enrolled for IVF treatment. The evaluation was a part of the screening procedure. The total of two hundred consecutive couples who entered an IVF treatment program was taken as the sample. Main outcome measures were Self-report questionnaire which included items on the duration of infertility, degree of social support, effect of infertility on sexual relationship, expected likelihood of achieving pregnancy, anticipation of stress during treatment, and also a self-rating scale which measured emotional reactions to infertility. The results revealed that the women anticipated more stress in IVF treatment but also rated
greater degree of social support as compared to the men. Both husbands as well as wives overestimated their chances of a successful treatment outcome. Factor analysis of the Infertility Scale was done and it produced three factors that were similar for both men and women. The first factor represented the desire to have a child as a major focus of life with inadequacy of the male role, social functioning and work efficiency, and pressure to have a child. It overall concluded that though women reported more stress, but the factors affecting stress of infertility were very similar for both the partners. The intense focus on having a child was the predominant factor in anticipated stress of IVF treatment for both husbands and wives.

**Infertility related stress and Method of treatment**

A descriptive correlative study on 75 couples (150 subjects) was done by Ehsanpour et al. in the year 2009. The sample consisted of patients who were referred to clinics of Isfahan for professional treatment of infertility. The sampling method was simple and the subjects were selected based on the inclusion criteria of the study. Data was collected by a questionnaire which was completed by interview method. It included questions on personal and social characteristics, infertility treatment stress and social support. The results revealed that 86.7% of couples experienced average to severe stress. The mean score of infertility treatment related stress was 58.68. The highest and lowest score of social support were 23.28 and 84.45, for spouse support and 2nd and 3rd level relatives, respectively. Social support and infertility treatment related stress were inversely co-related\( p = 0.0001 \). Age, sex, and career also significantly contributed to the infertility treatment stress. Considering the findings of the study, it was concluded that it seems necessary to provide educational courses for couples on stress management, counseling and psychoeducation as well as emotional support by health personnel as well as general education of families on how to provide support for couples.
Mcnaughton-Cassill et al. (2002) conducted a research to know about the efficacy of Brief Couples Support Groups which was developed with an aim to manage the stress level of couples undergoing In Vitro Fertilization Treatment. The couples in IVF treatment were given the option of participating in a biweekly support group at the IVF clinic at Wilford Hall Medical Centre, San Antonio, Tex. At least 1 member of 26 couples participated in the brief couples support groups, and at least 1 member of 19 other couples completed the questionnaires but did not attend the support group sessions and so comprised the control group. Facilitators used cognitive behavioural techniques to help participants process their feelings and cognitions about their infertility. Both before and after group assessment of emotional as well as cognitive factors was done using the following tools: Beck Depression Inventory; the Beck Anxiety Inventory; the Life Orientation Test (assesses optimism and pessimism), the Survey of Personal Views (measures irrational beliefs) and the Social Provisions Scale, which measures social support. Women who attended group sessions reported significantly lower anxiety after the IVF treatment in comparison to the time when they began the treatment (P<.001). Men attending the group sessions were found to be more optimistic than non-group men or the women at the completion of the IVF cycle (P<.001) but endorsed greater numbers of irrational beliefs (P<.001). It was very hard to form and maintain such groups though it was not expensive because of the logistics. Nevertheless it benefited both the men and the women attending it.

**Infertility related stress and Quality of life**

An exploratory study of Rebecca Dillu, Poonam Sheoran and Jyoti Sarin (2013) was done at certain selected infertility clinics of Haryana. The main aim of this study was to assess the quality of life of infertile couples. 100 infertile couples visiting at MMIMSR & Hospital, Mullana, infertility clinics at district Ambala and Karnal respectively were taken as sample. Purposive sampling technique was used to select the considered sample. Data was collected using a standardised
tool i.e. FertiQol. Along with this tool an informational booklet on “Coping with Infertility” were also given to the infertile couples. The results of the study revealed that the male partners had better quality of life than female partners in all the domains of quality of life i.e. emotional, mind/body, relational, social, and environmental and tolerability domain. On finding the correlation between the various domains of infertile male and female partners, it showed that the emotional domain had a positive co-relation with other domains (except the environmental domain in female partners). Though it was observed that infertility had influenced all the domains of infertile couples but it had the major impact on the emotional domain. A significant association between levels of Fertility Quality of life scores and occupation of male partners and age, religion, type of family, age at marriage, duration of marriage, trying for conception self and with doctor’s help and number of miscarriages of female partners was also observed. The study concluded that as infertility has a major impact on the emotional aspect of the infertile couples, therefore health professionals need to include assessment of psychological symptomatology to plan more efficient interventions for infertile patients.

*Seyyed Abbas Mousavi& others (2013)* conducted a systematic review to assess various general and specific questionnaires related to quality of life and the other aim was also to identify different factors affecting infertile couples based on the questionnaires under review. General and specific terms related to couples’ infertility and their quality of life were involved in the research strategy. Studies that were published from 1982 to 2012 and were indexed in Medline, ISI Web of Science and Scopus as well as abstract books on this subject were reviewed. We also corresponded with the authors of the references in related studies for introducing more resources and references. In all the reviewed studies, different aspects of the quality of life in couples were evaluated. The aspects included were sexual, psychological, social, communicational, environmental, occupational, medical, as well as economical. In total, after initial screening of all studies, 10 general and 2 specific questionnaires were retrieved. No meta-analysis was found in the review but still it was concluded that infertility
had a negative effect on quality of life in couples. This study revealed that general questionnaires such as SF-36 and WHO-QOL were used most of the times for assessing quality of life in infertile couples and some specific questionnaires such as Ferti-QoL and Fertility Problem Inventory were rarely used.

**Chachamovich JR, (2010)** did a systematic review to investigate the quality of life and health related quality of life in infertility. 14 studies published between January 1980 and July 2009 was reviewed published in peer reviewed journals in English, Portuguese, French or Spanish. Factors like the educational level, will to have a child, poor marital relationship, previous in-vitro fertilization treatments if any and duration of infertility predicted lower scores on mental health in infertile men, whereas women had significantly lower scores on mental health, social functioning and emotional behaviour. Women had lower scores in many QOL and HRQOL domains as compared to men.

**Manoj Mongaa, , BogdanAlexandrescub, Seth E. Katzb, Murray Steinc, Theodore Ganiatsd (2004)** evaluated the hypothesis that infertility leads to a decreased quality of life and increased marital discord and sexual dysfunction. Couples taken as sample were seeking treatment for infertility. The data collection was done using standardized and validated questionnaires assessing quality of life (Quality of Well-Being Scale-Self Administered, version 1.04), marital adjustment (Locke-Wallace Marital Adjustment Test), and sexual function (Brief Index of Sexual Functioning for Women and International Index of Erectile Function for men). Couples seeking elective sterilization served as the control subjects. The sample consisted of 18 infertile couples and 12 couples seeking elective sterilization. The mean age, years together, and household income were also compared. Infertile couples had made a mean of 14.5 office visits for infertility, and 83% of couples reported feeling societal pressures to conceive. The Marital Adjustment Test scores showed no difference in the scores of men of infertile couples as well as the controls but for the women of the infertile couples it was significantly lower than the scores of the controls (P = 0.01). A trend
toward lower quality-of-life scores was noted in women ($P = 0.09$) but not in the men of infertile couples. No statistically significant impact on sexual functioning in women was noted; however, the men in the infertile couples had lower total International Index of Erectile Function scores ($P = 0.05$) and intercourse satisfaction scores ($P = 0.03$). Women in infertile couples reported poor marital adjustment and quality of life compared with controls. Men experienced less intercourse satisfaction, perhaps because of the psychological pressure to try to conceive or because of the forced timing of intercourse around the woman’s ovulatory cycle.

Andrews, et al., (1991) studied the effects of stress related to infertility on life quality and marital factors. Very little empirical research had been conducted on this issue and that the majority of conclusions made concerning the effects of infertility on marital factors and life quality were anecdotal. This study examined subjective wellbeing as their outcome variable and examined how the stress related to infertility directly and indirectly impacted their wellbeing, including measures of self, marriage, intimacy, and personal health. In 1988, husbands and wives in 157 infertile couples were interviewed separately by the staff of the Michigan Survey Research Centre. Participants were recruited from infertility clinics, support groups, newspaper advertisements, and referrals from other study participants. The inclusion criteria of the participants were, they had to be white people who belonged to the middle-class economic strata and did not have any children within their marriage or from previous marriages. Infertile couples who had attempted In Vitro Fertilization were not included in the sample as the researchers sought to include couples who were in the early stages of infertility. The study examined six major areas: stress linked to the fertility problem, marital conflict, sexual self-esteem, sexual dissatisfaction, frequency of sexual intercourse, and subjective well-being. Age and marital years were also used as additional variables. Wives consistently reported higher levels of fertility problem stress than their husbands. However, there were no significant differences between the husbands and wives as far as their life quality were concerned. When examining bivariate relationships, greater stress was related to greater
marital conflict and sexual dissatisfaction and with lower sexual self-esteem and life quality. The study also found a positive relationship between fertility problem stress reported by the wife and fertility problem stress reported by the husband, but showed that members of the same couple may experience different levels of fertility problem stress. This finding is particularly important to the proposed study as it shows that differences exist in couples with regard to fertility perceived stress, however, the ramifications of how these differences affect the couple relationship remain unexplored. Results also showed that the total effects of fertility problem stress were consistently negative in the lives of men and women with regard to life quality. They also empirically showed that fertility problem stress had a greater impact on the lives of wives than it did their husbands, thus confirming the anecdotal literature that consistently states this claim. Furthermore, the results from this study provide quantitative documentation of the wide-ranging and substantial deleterious effects that fertility problem stress may have on the marriages and life quality of couples trying to cope with infertility.

Sharma V, Ahmed Z, Verma R.(2013) did a study to explore the quality of life and quality of marital relationship, in association with the presence of anxiety and depressive symptoms, in infertile women under treatment from an Infertility clinic of a Govt. hospital. Data was collected form 30 infertile women and 30 fertile women using General Health Questionnaire, Quality of Life Scale by WHO(brief), Marital Quality Scale and Hospital Anxiety and Depression scale. Statistical analysis was done using the t-test and Pearson’s co-relation co-efficient. The results revealed that fertile women were more significantly better in their quality of life especially in the physical, psychological and social relationship domain compared to fertile women. The women with secondary infertility had comparatively better quality of life compared to ones with primary infertility. Quality of marital relationship showed no significant difference between the experimental and control groups. The total Qol as well as the Quality of marital relationship was found to be significantly correlated with anxiety and depression in infertile women.
Awtani M, Mathur K. (2015) studied the quality of life of couples undergoing the treatment of Intra Uterine Insemination (IUI). The FertiQol questionnaire was used to collect the data of 30 couples selected using purposive sampling method. The results were analysed using the t-test. It was observed that husbands had better quality of life compared to their wives as far as emotional and mind/body aspect of quality of life was concerned. Wives showed higher quality of life on the treatment subscale of the questionnaire.

**Infertility related stress and Life satisfaction**

Kahaki, F.; Nazari, M.; Khosravi, M. (2014) did a casual-comparative study to compare various psychological responses namely depression, stress, and anxiety with life satisfaction in fertile and infertile women. The sample consisted of total 160 females (80 fertile and 80 infertile) women who were selected by convenient sampling method. The tools used to get the data were DASS21 and life satisfaction questionnaires. Statistical analysis was done using the T-test. Results showed significant differences between fertile women and infertile women in the psychological responses under study. To conclude, the results made it clear that infertile women need support from their husbands, relatives, treatment team, and authorities.

Julia McQuillan and Rosalie A. Torres Stone and Arthur L. Greil( 2007) tried to explore if there is any association between lifetime infertility and life satisfaction. Random sample of 580 mid-western women was taken under the study. It was observed that they reported no direct effects of lifetime infertility, regardless of perception of a problem, on life satisfaction; however, there are several conditional effects. It was also seen that women who have ever met the criteria for infertility and perceive it as a fertility problem, life satisfaction is significantly lower for non-mothers and those with higher internal medical locus of control, and the association is weaker for employed women. On the other hand for women with infertility who do not perceive it as a problem, motherhood is
associated with higher life satisfaction compared to women with no history of infertility.

Link PW, Darling CA. (1986) did a survey to check the perceived life, marital satisfaction, and sexual satisfaction of married couples undergoing the treatment for infertility. 43 married couples were taken as the sample for the study. The results showed that the husbands had a significantly higher level of satisfaction with life as compared to their wives and that there existed significant relationships between the husband-wife pairs for both marital as well as sexual satisfaction. The responses of 17 wives whose husbands did not choose to respond to the survey indicated higher levels of dissatisfaction in all three dimensions of life satisfaction as compared to the paired wives. In addition to that, a majority of the scores for this group also indicated clinical levels of depression. It was evident that couples, especially females, undergoing the treatment for infertility experienced stress in various areas of their lives. With the help of this study, suggestions should be given to the caregivers in their endeavour to enhance the life satisfaction for infertile couples.

**Infertility related stress and sexuality**

Peng Tao, Rosemary Coates, Bruce Maycock did a study in 2011 in which a literature review was conducted to see the impact of infertility on sexuality. A literature that was published from 1990 to 2011 via the electronic databases PubMed, PsycInfo and Scopus, focused on sexuality in infertile subjects or couples were analysed. This review included all those descriptive quantitative studies which mapped the different aspects of sexuality in the context of infertility. The results concluded that infertility and its treatment approaches for fertilisation could lead to changes in sexual self-esteem, sexual relationship and sexual function. Overall they reported that the literature substantiated that many infertile subjects experienced trouble in various aspects of sexuality.
Elanza van der Merwe (2010) examined the nature of the relationship between perceived infertility-related stress, experienced by husbands and wives in infertile couples, and four specific aspects of the marital relationship. Furthermore, it even examined whether there existed a significant difference in the four specific aspects of the marital relationship between infertile couples at the initiation of different types of infertility treatment, and a control group in which women are pregnant. This cross-sectional, baseline study utilised standardised self-report questionnaires to make once off assessments of infertility-related stress and four specific aspects of the marital relationship that is, communication, satisfaction with the sexual relationship, intimacy, and marital adjustment. Demographic characteristics of the participants were also taken into consideration. A total of 116 subjects out of which 84 were women and 32 were men were selected from two infertility clinics in the Western Cape. Statistical analysis was done using Pearson’s correlation coefficients and multiple regression analysis and ANOVA. High significant correlations (p < .001) were found between all aspects of the marital relationship as measured in this study and the infertility-related stress. Communication was revealed as an important predictor of aspects of the marital relationship, in addition to infertility-related stress as a predictor. In addition to that, ANOVAs revealed no significant differences in specific aspects of the marital relationship between both the groups (the infertile groups and the pregnant control group). The findings of this study suggested high levels of infertility-related stress as a determinant of the wellbeing of the marital relationship of couples experiencing infertility. Furthermore, the importance of communication as a buffer against the potential negative effects of infertility-related stress was emphasised. Future research should have a longitudinal study design to investigate the nature of the relationship between infertility-related stress and the marital relationship.

A cross section study was done by Ramezanzadeh, F., Aghssa, M. M., Jafarabadi, M., &Zayeri, F. (2006). The main aim of the study was to evaluate the state of sexual desire and satisfaction, with relevant parameters in men, of couples with infertility. Two hundred infertile couples referred to a reproductive
health research clinic were taken as sample. Investigation of the sample was done by a self-administered structured questionnaire about demographic data, infertility history, and several relevant psychological variables. Clinical and andrological examinations were also completed to find predictors for sexual state. Reduction in sexual desire in 41.5% of cases was observed and reduction of satisfaction in 52.5% compared with recalled sexual satisfaction before diagnosis of infertility was reported. The results revealed no relationship between the andrological findings and the present status of sexual desire (P>.05). Education level, mutual understanding between couples, and recalled state of sexual satisfaction had a direct influence, but the duration of infertility and duration of desire for a child had a significant inverse impact on sexual satisfaction (P<.05). Overall it was concluded that less than 50% of patients observed a reduction in sexual desire and satisfaction after infertility diagnosis, and the frequency of coitus could be regarded as an acceptable indicator of sexual satisfaction in male partners of infertile couples. Overall the men showed decreased sexual desire and satisfaction after infertility diagnosis, regardless of the cause of infertility.

L. Schmidt, B.E. Holstein, U. Christensen and J. Boivin (2005) did a study whose main aim was to investigate whether coping strategies and communication strategies proved to be predictors of fertility problem stress one year after the start of fertility treatment. This was a prospective and longitudinal cohort design. A total of 2250 people beginning fertility treatment with a 12-month follow-up were included in the study. To collect the data self-administered questionnaires measuring communication with partner and with other people, coping strategies which included active-avoidance coping, active-confronting coping, passive-avoidance coping, meaning-based coping, and fertility problem stress were given. Results showed that among men and women, difficulties in partner communication predicted high fertility problem stress (odds ratio for women, 3.47, 95% confidence interval 2.09–5.76; odds ratio for men, 3.69, 95% confidence interval 2.09–6.43). Active-avoidance coping (e.g. avoiding being with pregnant women or children, turning to work to take their mind off things) was
seen as a significant predictor of high fertility problem stress. Among men, high use of active-confronting coping (e.g. letting feelings out, asking other people for advice, seeking social support) predicted low fertility problem stress in the marital domain (odds ratio 0.53, 95% confidence interval 0.28–1.00). Among women, medium or high use of meaning-based coping significantly predicted low fertility problem stress in the personal and marital domain.

Hirsch and Hirsch (1989) investigated whether infertility had an effect on the marital as well as sexual satisfaction and self-esteem in comparison to couples not experiencing fertility problems. A total of 92 subjects were studied. (N = 92). The tools used were the Hudson clinical measurement scales and a brief questionnaire developed by the authors to check the level of depression, self-esteem, marital discord and sexual dissatisfaction. The results revealed that infertile couples indicated less sexual satisfaction compared to their fertile counterparts.

This review reflects that a more comprehensive outlook on psychological issues and emotions faced by couples facing the problem of infertility and undergoing the treatment of infertility is required. The present research is done in the same attempt.

Next, that follows is a complete view of the research methodology which is the heart of any research study in order to reach out the objectives of this study.