CHAPTER V
DISCUSSION

Emotional reaction towards infertility is an acute crisis for the couple who is unable to produce their biological child. Infertility is highly associated with emotional though some biological evidence proved that it could be due to emotional and psychopathology also. Though the rates of infertility are higher in underdeveloped countries, there is evidence shown from the survey undertaken from the developed countries also. The investigator devised educative, therapeutic and steps of yoga interventions for the women who subjected to IVF treatment to have their own child that aimed at promoting wellbeing by maintaining good coping to lead near stress free life. As research findings has the potential to streamline and rationalize practice, the effectiveness of counseling and yoga on stress and coping among women subjected to IVF treatment were determined and discussed in this chapter based on the objectives.

The study includes only female infertility women, because, Abbey (1999) examined differences in distress between husbands and wives. Women reported thinking about infertility six days a week, where as men reported four days on average. It has been suggested in both the qualitative and quantitative research that infertility is more stressful for women because of a number of reasons. The relationship between husband, family members and relatives get disturbed. The women develop guilty which lead to failure in maintaining deep relationship. Women feel hopeless and worthless when her objective (of receiving their biological child) is not met. When these happen to women during IVF treatment, who are already in need of more support by her husband, family members, relatives, and friends and from the social network, they end with various stresses. Similar result was reveled from the Klemetti (2010) population-based study, reported that 20% of women and 9% of men
experienced infertility. Childless women with infertility experience had increased risks of dysthymia (OR 3.41, 95% CI; 1.01-11.5) and anxiety disorders (2.67, 1.00-7.12) compared to women who had not experienced infertility. The study states that infertility was associated with mental health, especially dysthymia and anxiety.

To help such problems’ couples, especially for women, Christopher (2000) developed a reliable, valid instrument to evaluate the perceived infertility-related stress through prospective study at University-affiliated teaching hospital among 1,153 women and 1,149 men who reported for infertility treatment. Participants’ infertility-related stress was assessed by written questionnaire using the Fertility Problem Inventory. Women described greater global stress than men and higher specific stress in terms of social concerns, sexual concerns, and need for parenthood. Study reports that the Fertility Problem Inventory provides a reliable measure of perceived infertility-related stress and specific information on five separate domains of patient concern. Patterns of infertility-related stress differed depending on gender, fertility history, and infertility diagnosis. Among patients receiving treatment, social, sexual, and relationship concerns appear central to current distress. He suggests that counseling interventions are likely to offer maximal therapeutic benefit on those domains.

**Characteristics of the study samples**

Women with infertility or those seeking assisted reproductive technology to achieve their child through IVF method of treatment procedure were selected for the study. Table 8(a & b & Figure 8-11) reveals that the majority of the background variables were not having any significant difference between study and control groups except religion, education, and residence, it may be due to the randomization done to
allot the samples. However, it showed homogeneity in samples, and it helped to compare the outcome measures as follows.

The data reported that majority of 40 & 41 (40.0% & 41.0%) women in study and 38 & 36 (38.0% & 36.0%) women in control group were aged between 26 – 35 years. The most of the 92 & 79 (92.0% & 79.0%) women in both study and control groups are belongs to Hindu religion. The majority, 38 (38.0%) women in study group and 40 (40.0%) women control group were graduated; Because of the Indian literacy rate is increased. Most of the 65 (65.0%) and 70 (70.0%) women in both study and control groups were home maker; due to the treatment purpose at the time of study they were at home. Majority of 38 (38.0%) women in study group and 34 (34.0%) women in control group husbands were earning up to Rs. 10,000 for month. In both study and control groups, 65 (65.0%) and 57 (57.0%) women’s treatment cost was supported by themselves. The nuclear family system was adopted by majority of 52 (52.0%) and 59 (59.0%) women in both study & control groups. Majority of 68 (68.0%) and 32 (32.0%) women in both study and control group were resided at urban and semi urban area. The significant difference was observed in the education and residence of women during pretest.

The significant difference was there between study and control, in age, religion, and residence at the level of p<0.001. Because education becomes the priority for all the Indian citizen especially India is emphasizing on women’s education is the mandatory to bring out best future citizens; another characteristics of sample was religion, majority of the population in India is belongs to Indian culture, and Hindu. Since current trend is people are moving towards modernization, people shift from rural to urban and city. This is because there are studies done by, Finamore (2007)
identified women disclosing about the infertility problem to their employer, the demographic characteristics associated with women who are more likely to disclose and an association between disclosure and lowering one's stress showed that most women who disclosed did so because they needed a reason to leave work for frequent doctor visits. Among women who did not disclose, the main reason for nondisclosure was to protect their privacy. Women with a high school education were more likely to disclose compared with those with a college and postgraduate education. African American/Caribbean American women were least likely to disclose. Those who were out of work more often because of their infertility were more likely to disclose. There was no association with disclosure and decreasing stress level. To conclude women who did or did not disclose their infertility status to their employer were different with regard to the level of education, race/ethnicity, and number of visits per month to the doctor. In investigations, both groups were similar. The descriptions are as follows, in relation to maternal variables (table 9 & Figure 12 - 14). The majority of 47 (47.0%) & 58 (58.0%) women in study & control groups were married at the age of 21 to 25 years. The number of years of marriage was observed among 52(52.0%) & 36(36.0%) women were between 6 to 10 years both in study and control groups. Both 52(52.0%) & 34 (34.0%) in study and 48(48.0%) & 33(33.0%) women in control group were suffered with infertility problem for 10 years. Majority of 63(63.0%) & 70(70.0%) women were on treatment for 5 years to get their own biological child both in study and control group. The significant difference was observed in age at marriage of women, number of years of marriage and history of infertility at p 0.05. Because it may contribute in delay conception and influence the outcome of the treatment. Kowalcek (2001) study also support the above variables that for both men and women, stress was directly correlated with treatment costs and number of tests and treatments received,
relate to age, number of years of marriage, or number of years of infertility. For women, attitudes about infertility treatments, importance of children, and level of social support significantly affected stress levels. Study conveyed that both male and female infertility patients were significantly more distressed than the average population, but women showed more anxiety, depression, hostility, cognitive disturbances, stress levels and decreased self-esteem than their partners. Study recommended that increasing patients' sense of control, realistic optimism and social support can reduce the stress level. Same concept was supported by Christensen (2005) from the findings of the social context of infertility and women's perceptions and experiences with IVF among 22 involuntarily childless Indian women/couples seeking in vitro fertilization (IVF) in two major Indian cities, New Delhi and Mumbai. The result revealed that infertility is deeply feared, women's status and security are affected, and they experience stigmatization and isolation, inadequate information/counseling is provided, success rates are low, IVF is commercialized and the process is physiologically, emotionally and financially stressful. Findings conclude that in Indian society fertility defines womanhood and motherhood, and infertility is stigmatized. Women faced a lot of pressures to produce a biological child, and go through all kinds of treatments, including the expensive ARTs, to have a child. The implications of the result for the practice recommend that the integration of infertility services into the state's reproductive health program and effective counseling on coping with psychosocial/sexual problems is the need of the hour.

Maheshwari (2008) also explored women's awareness on issues associated with delayed childbearing due to social and medical implications and the limitations of available treatment. Cross-sectional study was carried out at University-based tertiary care clinics among three hundred and sixty-two women attending a sub
fertility clinic and 362 pregnant women. The study results showed that sub fertile women were, on average, 3.3 years older (95% confidence interval 2.5-4.1) were more likely to have tried for their first pregnancy after the age of 30 years (37.3% vs. 24.6%). Despite awareness of the impact of age on fertility, 85% of the sub fertile group expected IVF treatment may overcome the effects of age compared with 77% of the pregnant population. Knowledge about age-related obstetric risks, such as trisomy 21, was similar in both groups (86.3% vs. 85%). Almost all participants (94.5%) believed that women should be informed about the implications of delaying childbearing at an early age. Study suggested that there is a need to provide accurate information in the community. Particularly in the field of reproductive medicine, in developing countries like Nigeria and India, infertility is considered as the public health problem because of its high prevalence and social implication. The duration of infertility is related to the magnitude of distress in couples. Thus, the longer one has been diagnosed as infertile, the greater their distress levels will be compared to fertile couples.

To understand the reason for infertility, Schmidt (2003) conducted an epidemiological study based on questionnaires among all new couples attending five fertility clinics with a response rate of 80.0% and a total of 2250 patients (i) to identify gender differences in motivations to seek assisted reproduction and gender differences in expectations about medical and psychosocial services and (ii) to examine factors that predict the perceived importance of, and intention to use, psychosocial services among infertile people. The vast majority of both men and women considered a high level of medical information and patient-centered care as important. Fewer respondents (women 10.0-20.8%, men 4.1-8.9%) felt that professional psychosocial services were important and had the intention to use these services. Although only a minority of the
participants perceived professional psychosocial services as important, they should be available for patients whose infertility causes them much strain, especially for patients whose marital relationship had suffered much because of infertility. As infertility becomes a public health problem, it has got a social implication and cause undue stress and strain on the family life and social life. Women tend to manifest behavioral conditions and maladjustments to social pressures and frustrations at the failure to have children. On the first day of identification of demographic variables, the stress was assessed in both the groups. The assessment before intervention (Table 10 & Figure 15-16) between both groups were also identified to find out their association with outcome variables of stress related to infertility problem, coping and pregnancy outcome. The findings again showed that, there were many similarities in the findings between the two groups. During pretest, in study group, the overall stress was very high stress in 75 (75.0%) women, 24 (24.0%) women had moderately high stress, only one (1.0%) had average stress, none of them had low stress. In the same way the control group 75 (75.0%) women had very high stress, 25 (25.0%) women had moderately high stress, none of them had average, and low stress. Whereas in the posttest I, the study group 60 (69.0%) women had came down to moderately high stress from very high stress, 26 (29.9%) to average stress, only one (1.0%) woman had very high stress and none of them had low stress and control group 60 (75.0%) women had very high stress, 20 (25.0%) women had moderately high stress and none of them had average and low stress. So there was no much change in the control group.

Similarly in the posttest II, the study group 19 (21.8%) women had came down to moderately high stress, 55 (63.2%) women had came down to average stress, 13 (14.9%) women had came down to low stress, none of them had very high stress and control group 52 (65.0%) women had very high stress, 25 (31.3%) women had
moderately high stress, 3 (3.8%) women had average stress and none of them had low stress. It shows that there was no change in the reduction of stress level in control group. Findings revealed that counseling and yoga had an influence on the level of stress during posttest I and posttest II among women in study group. This infers that moderately high stress of women in study group in posttest I was reduced to average level of stress after participated in counseling sessions an effective practice of yoga; whereas women in control group did not had any change, it shows that counseling with yoga contributed for reduction of stress level in posttest II among women in study group. To support the above results, the view on the impact of infertility on the psychological aspects of women with infertility, Maggini (2001) study also found out higher levels of anxiety and emotional tension among 101 women than controls during an initial IVF treatment as measured by the SCL-90 and the GHQ-30. Thus the impact of treatment and repeated experience of infertility may lead to increased distress.

The significant difference was there in stress level between study and control, in posttest I and posttest II at the level of p<0.000. But none of them were very high stress among women in study group in posttest I. Because infertility stress is the major life threatening experience, may influence the outcome of the pregnancy. Therefore, the investigator selected all the women with all level of stress during pretest. It was assessed in two periods to know whether they reduced during posttest I and posttest II. From the present study the significant difference in the level of stress was observed during posttest II at the level of p<0.000 with a $\chi^2$ value of 112.343. It is because of the influence of counseling and yoga session participated by women in the study group. This finding indirectly supports the outcome of this study as an effect of C&Y.
From another study by Volgsten (2010) identified the risk factors associated with depression and anxiety among 413 infertile women undergoing In Vitro Fertilization (IVF) at University hospital in Sweden during a 2-year period through prospective study. Primary Care Evaluation of Mental Disorders (PRIME-MD) was used for evaluating mood and anxiety disorders, and fertility history and outcome of IVF treatment collected from the patients' medical records. Result states the negative pregnancy test and obesity were the independent risk factors for any mood disorders in women. Study concluded that the negative pregnancy test is associated with an increased risk for depression in women undergoing IVF. In this study investigator considered only pregnancy outcome not the obesity. These findings strengthen the concept of homogeneity in sample selection, as well as the need of informative and therapeutic counseling towards promotion and empowerment of women during IVF procedure to have better outcome. If a woman does not counsel, they will not be able to share their emotional reactions towards infertility and experience with IVF treatment. This is supported by the studies of Helena, (2009) determined the prevalence of psychiatric disorders, such as mood and anxiety disorders and related risk factors and personality traits in women and men undergoing IVF. There were 1090 women and men were included, but the respondent rate was 862 (79%). Out of them 31% women and 10% of men had psychiatric disorders and major depression was prevalent in 11% women and 5% in men. The study findings reported that women expressed their emotional response in the way of grief, where as men did not express grief. The finding suggested that the professional support is needed to counsel such population to handle the grief response.

To reduce the stress among women, it is essential to assess the level of coping abilities of them. Because coping skills are typically unique in the individual, need for
guidelines and exposure to stress management strategies in the form of exercises, relaxation and behavioral modification at desirable level. As coping skill is a base for managing the stress, the investigator assessed the level of coping on infertility related problems during assisted reproductive treatment among both groups. It is also considered as one of the dependent variable, which can influence the outcome. On the first day of identification of demographic variables, the coping assessment was done in both groups. The ability of coping with infertility by a woman suffers personally, socially, sexually and relationship pattern with husband and longing for having their biological child. This may either directly and indirectly affect fertility outcome. These coping abilities in various components were assessed (table 17 – 20 & Figure 20 -22) and compared the level of coping during pretest, posttest I and posttest II between women in study and control group. Findings (table 17) reveals that the majority women among study group, the level of coping were 65 (65.0%) occasional, 35 (35.0%) sometimes, none of them were attained always coping to solve the problem and in the control group 48 (48.0%) had occasional coping, 50 (50.0%) had sometimes coping, 2 (2.0%) had always coping. This infers that both the study and control groups had equal level of coping during pretest. The positive distraction coping followed by the study group shows that 93 (93.0%) women had occasional coping, 7 (07.0%) women had sometimes coping, none of them had always coping and in the control group 96 (96.0%) women had occasional coping, 4 (04.0%) women had sometimes coping; none of them had always coping. The negative distraction coping among the study group women shows that only one (1.0%) woman had occasional coping, 2 (2.0%) women had sometimes coping, and 97 (97.0%) women had always coping and in control group 3 (3.0%) women had occasional coping, 24 (24.0%) women had sometimes coping, 73 (73.0%) women had always coping. The acceptance coping among the study group 95
(95.0%) women had occasional coping, 3 (3.0%) women had sometimes coping, 2 (2.0%) women had always coping and in control group 92 (92.0%) women had occasional coping, 7 (7.0%) women had sometimes coping; one (1.0%) woman had always coping. The religious coping in study group shows 15 (15.0%) women had occasional coping, 17 (17.0%) women had sometimes coping, 68 (68.0%) women had always coping. The denial coping in study group, reveals 3 (3.0%) women had occasional coping, 6 (6.0%) women had sometimes coping, 91 (91.0%) women had always coping. In relation to local support coping in study group, projects that all 100 (100.0%) women had occasional coping both in study and control groups. These findings interprets that there is a significant difference in all aspects of coping skills except positive distraction and acceptance coping at p<.000 level.

The same concept was repeated that the coping style adopted by them with the reality of prolonged childlessness is denial coping strategies (Van den Akkar, 2005). Because, infertility is conceptualized as a chronic, unpredictable psychological stress, Berghuis (2002) identified that women appraised infertility as threatening and the experience of emotional distress adopted avoidance of coping mechanism. Alesi (2005) state different emotional coping styles between men and women may further add to previous stressful experience. Thia (2007) said that women may find themselves experiencing some uncomfortable emotions like shock, denial, fantasizing, guilt, bargaining, blame, sadness and depression, helplessness, loss of control, anger and isolation from others. During that period they are in need of psychological counseling, which will be useful. Another study by Krueger, et al (2000) also identified the distress and social constraints on emotional expression among women diagnosed with fertility problems by using (SCS) social constraints scale. The spouse, family, and friend were significantly correlated with the global
index of distress (r’s ranged from .251 to .421, p< .05). The correlation with depression ranged from .299 to .301, p<.05. Study recommends the need for professionals and counselors who can identify these potential sources of distress may be able to provide compensatory outlets for emotional expression and, ultimately, better psychological adjustment.

To support the above findings, Pottinger (2006) said women coping with infertility may be at risk for self-depreciation and isolation because of their choice of coping strategies and the meaning they ascribe to the infertility. As a result, they are likely to experience more heightened distress than men who are also infertile. Counseling that is specific to gender-needs is indicated. Couples often reviewed their lives looking for a reason for their infertility, and partners may ask themselves “why me?” and “what did I do to deserve this?” They feel guilty on past events in their histories, such as premarital sexual activity, an abortion, contraceptive use, and extramarital affairs are the possible causes of their infertility said by Hart, (2002). They often experience sorrow and anger. Table 18 reveals that the level of coping skill attained by the women during posttest I between the study and control groups. The level of problem solving coping among the study group women were 28 (32.2%) occasional, 30 (34.5%) sometimes, 29 (33.3%) were attained always coping and in the control group 40 (50.0%) had occasional coping, 40 (50.0%) had sometimes coping; none of them had always coping.

The positive distraction coping among the study group shows that 35 (40.2%) had occasional coping, 25 (28.7%) had sometimes coping, 27 (31.0%) had always coping and in the control group 72 (90.0%) had occasional coping, 8 (10.0%) had sometimes coping, none of them had always coping. The negative distraction coping
among the study group women shows that 31 (35.6%) had occasional coping, 22 (25.3%) had sometimes coping, 34 (39.1%) had always coping and in control group 7 (8.8%) had occasional coping, 9 (11.3%) had sometimes coping, 64 (80.0%) had always coping. The acceptance coping among the study group women 60 (69.0%) had occasional coping, 3 (3.4%) had sometimes coping, 24 (27.6%) had always coping and in control group 62 (77.5%) had occasional coping, 17 (21.3%) had sometimes coping; one (1.3%) had always coping. The religious coping among women study group shows 37 (42.5%) had occasional coping, 17 (19.5%) had sometimes coping, 33 (37.9%) had always coping and in control group 14 (17.5%) had occasional coping, 22 (27.5%) had sometimes coping, 44 (55.0%) had always coping. The denial coping among women in study group reveals 36 (41.4%) women had occasional coping, 6 (6.9%) had sometimes coping, 45 (51.7%) had always coping and in control group none of them had occasional coping, 8 (10.0%) had sometimes coping, 72 (90.0%) had always coping. In relation to local support coping in study group reveals 24 (27.6%) had occasional coping, 2 (2.3%) had sometimes coping, 61 (70.1%) had always coping and in control group 79 (98.8%) had occasional coping, 1 (1.3%) had sometimes coping; none of them had always coping skill. These findings interprets that there is a drastic significant difference in all aspects of coping skills level at p<.001; infers that counseling and yoga influences the improvement in coping skills among women in study group. Peterson. B.D (2008) study examined the impact of partner coping on individual distress. Sample of 1169 women and 1081 Danish men prior to beginning assisted reproduction treatment were selected. Multilevel modeling using the Actor Partner Interdependence Model and follow-up analysis of variance were used to examine the couple as the unit of analysis. The study results showed that the partner’s use of active-avoidance coping was related to the increased personal,
marital and social distress for men and women. A woman’s use of active-confronting coping was related to increased male marital distress. Partner’s use of meaning-based coping was associated with decreased marital distress in men and increased social distress in women. Study concludes that physicians and mental health providers can help couples to understand the coping strategies that lead to increased and decreased partner distress.

The data (table 19) on the level of coping skill attained by the women during posttest II between the study and control groups was computed. In study group the level of problem solving coping followed were, 12 (13.8%) occasional, 14 (16.1%) sometimes, 61 (70.1%) attained always coping and in the control group 45 (56.3%) occasional, 34 (42.5%) sometimes, and only one (1.3%) always coping. The positive distraction coping among the study group shows that 17 (19.5%) had occasional coping, 31 (35.6%) had sometimes coping, 39 (44.8%) had always coping and in the control group 77 (96.3%) had occasional coping, 3 (3.8%) had sometimes coping, none of them had always coping. The negative distraction coping among the study group women shows that 28 (32.2%) had occasional coping, 28 (32.2%) had sometimes coping, 31 (35.6%) had always coping and in control group11 (13.8%) had occasional coping, 6 (7.5%) had sometimes coping, 63 (78.8%) had always coping. The acceptance coping among the study group women 26 (29.9%) had occasional coping, 10 (11.5%) had sometimes coping, 51 (58.6%) had always coping and in control group 72 (90.0%) had occasional coping, 6 (7.5%) had sometimes coping, 2 (2.5%) had always coping. The religious coping among women study group shows 9 (10.3%) had occasional coping, 5 (5.7%) had sometimes coping, 73 (83.9%) had always coping and in control group 11 (13.8%) had occasional coping, 33 (41.3%) had sometimes coping, 36 (45.0%) had always coping. The denial coping among
women in study group reveals 11 (12.6%) women had occasional coping, none of them had sometimes coping, 76 (87.4%) had always coping an in control group none of them had occasional coping, 8 (10.8%) had sometimes coping, 72 (90.0%) had always coping. In relation to local support coping in study group reveals 21 (24.1%) had occasional coping, 22 (25.3%) had sometimes coping, 44 (50.6%) had always coping and in control group 79 (98.8%) had occasional coping, none of them had sometimes coping, 1 (1.0%) had always coping skill.

These findings interprets that there is a drastic significant difference in all aspects of coping skills level at p<0.000; infers that counseling and yoga influences the improvement in coping skills among women in study group. Hart (2000) stated that infertility is a painful emotional experience. The psychological consequences of infertility have been equated with grief reactions by several authors. The sequence of responses in the reaction includes surprise, denial, anger, rage, guilt, depression, grief, and resolution. For many individuals, the diagnosis or belief that one is infertile can lead to an emotional experience similar to the grief process of someone experiencing loss. Schmidt. L (2005) also investigated coping strategies and communication strategies as predictors of fertility problem stress 12 months after start of fertility treatment. The study population included 816 men and women who had not achieved pregnancy by assisted reproduction or delivery at follow-up. The study results revealed that 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 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.

The overall level of coping (table 20) attained by the women during pretest, posttest I and posttest II between the study and control groups were 64 (64.0%) sometimes, 36 (36.0%) occasional, and none of them attained always coping in study group; whereas in control group 59 (59.0%) women had occasional coping, 41 (41.0%) had sometimes coping; none of them had always coping. This infers that both the study and control groups had equal level of coping during pretest. But in posttest I the overall coping among study group women shows that 22 (25.3%) had always coping, 24 (27.6%) had sometimes coping, 41 (47.1%) had occasional coping; whereas in control group 44 (55.0%) had occasional coping, 36 (45.0%) had sometimes coping, and none of them had always coping. Similarly in posttest II, 42 (48.3%) & 31 (35.6%) women shown the improvement as always coping and sometimes coping respectively in both the study groups; whereas in control group 44 (55.0%) women had occasional coping, 36 (45.0%) had sometimes coping; none of them had always coping. These result shows that there was an improvement in the level of coping in both posttest I and posttest II among women in study since they participated in counseling and yoga. These findings clearly interprets that there is a significant difference in the level of coping skill at p<0.001 in posttest I & II between study and control group. The study was undertaken to support the above results by Uschi Van den Broeck (2010) and validated self-report questionnaires that measured the concepts of the encompassing framework (personality characteristics self-criticism and dependency, attachment in the partner relationship, wish for a child, coping, intrusiveness, infertility-related stress and
general psychological distress) were completed by 106 women and 102 men before starting the first IVF/ICSI treatment at a university hospital-based fertility centre. Data were analysed by hierarchical multivariate linear regression analysis and path analysis. The overall conceptual psychological framework explained 55% of the variance in psychological distress. The strongest predictors of psychological distress were general psychological characteristics: passive and active coping, self-criticism and dependency and intrusiveness. A path analysis confirmed the framework and highlighted the mediating role of coping and intrusiveness. In the final analysis, none of the infertility-specific variables significantly predicted psychological distress. The study results suggests for infertility counseling.

To find out the above results of coping strategies, similar study was carried out by Lechner, L. (2007) through a cross-sectional study, was undertaken among couples who wanted to have children with their partner but were unable to conceive and had acknowledged their involuntary childlessness. The sample consisted of 116 couple (response 88%) with an average age of 39 years (SD = 6.0), with 75% women. The sample group completed a questionnaire consisting of passive and active coping styles from the Utrecht Coping List (UCL), the discrepancy variant of the Social Support List (SSL-D), the short version of the Questionnaire on Experienced Health Complaints (VOEG-21), the Hospital Anxiety and Depression Scale (HADS) and the Inventory of Complicated Grief-Revised (ICG-R), adapted for this study. The results revealed that women experienced more health complaints, anxiety and depression symptoms and more complicated grief than the general population. The concepts of passive coping style and dissatisfaction with social support were positively associated with health complaints, depression, anxiety and complicated grief. The concept of active coping style was negatively associated with depression, anxiety and
complicated grief. Explained variance of the different distress symptoms varied from 30 to 65%. A moderating association of perceived social support is only found between a passive coping style and health complaints. Results conclude that the psychosocial interventions should be continued after the childlessness has become definite. Study Suggest teaching couples on how to cope actively with their childlessness and how to ask for support, the negative consequences of their childlessness may be decreased.

**Based on the objectives the study findings are discussed as follows:**

- The first objectives of the study was to evaluate the effectiveness of counseling and yoga on stress, coping and pregnancy outcome among infertile women in study group when compared to women in control group.

The data, on the experience of stress (table 11- 14 & Figure 17) reveals that there is a significant difference in the pretest to posttest I at the level of p<0.000 in all dimensions of stress except relationship concern stress. The mean scores shows a drastic improvement with 6.0 in social concern, 2.793 in sexual concern, 0.63 in relationship concern, 0.908 in rejection of child free life and 2.48 in need for parenthood. These findings proved that counseling on infertility had an influence on reduction in the level of stress. This shows that counseling and yoga (C&Y) had a definite effect on reduction in the stress level about infertility and treatment in the study group women with the level of p at 0.000 when compared to control group.

The findings of the study during pretest to posttest II, (table 12) reveals that, there is a significant difference at the level of p<0.000 in all dimensions of stress. The mean scores shows a drastic improvement with 4.908 in social concern, 3.356 in sexual concern, 3 in relationship concern, 4.747 in rejection of child free life and
8.092 in need for parenthood. These findings proved that counseling on infertility and coping strategies had an influence on reduction in the level of stress. Counseling and yoga (C&Y) had a definite effect on reducing the stress level about infertility and treatment in the study group women with p at 0.000 levels. In posttest I to posttest II, (table 13) reveals that, there is a significant difference at the level of p<0.000 in all dimensions of stress. The mean scores shows a mild improvement with 1.092 in social concern, 0.563 in sexual concern, 2.368 in relationship concern, 3.839 in rejection of child free life and 5.609 in need for parenthood. These findings proved that counseling on infertility and coping strategies had an influence on reduction in the level of stress. Counseling and yoga (C&Y) had a definite effect on reducing the stress level about infertility in the study group women with p at 0.000 levels. In both posttest I and posttest II women had strong stress in relation to need for parenthood concern. Whereas in control group, there is no significant difference in the posttest I to posttest II except relationship concern stress.

The comparison of overall stress (table 14 & Figure 17) score showed between pretest to posttest I, pretest to posttest II and posttest I to posttest II among study group women. During the pretest all the infertile women may lack in coping skill thereby more experience with high stress. But the study group noticed there is a reduction in stress at the level of p<0.001. It shows that counseling session and yoga performance has got an influence on decrease stress score. Similarly in control group also shows the comparison of overall stress score between pretest to posttest I, pretest to posttest II and posttest I to posttest II. During the pretest all the infertile women may lack in coping skill thereby more experience with high stress. But the control group demonstrated a reduction in stress response at the level of p<0.000. In India the study of Shiney (2007) explored the general wellbeing and psychological distress of
infertile women attending infertility clinic. The findings revealed that 78.3% had moderate level of wellbeing, 18.3% had low level of wellbeing. The percentage accounted to high level of wellbeing is only 3.3%; in relation to psychological distress, only 5% of sample had experienced high level of psychological distress, 35% had moderate level and 60% had low level of distress. Study concludes that different program such as psychotherapy session can be carried out and evaluated for their effectiveness.

The data in the present study as well as above quoted review highlights the fact that during infertile period women suffer various levels of stress and requires need based intervention to manage the stress in everyday life. The paired ‘t’ value (table 15 & Figure 18) in the stress level of the social concern, sexual concern, relationship concern, rejection of child free life style and need for parenthood were decreased. These dimensions of stress were did not had significant difference at the level of p>0.05 in pretest when compared to control group. But the level of stress analyzed in posttest I and posttest II, showed a significant reduction at p <0.001 level between the groups. Though the women undergoing IVF procedure stresses are same for the groups, the study group had a significant reduction in the stress level. It showed the women participated in counseling and yoga had definite reduction in the stress level among women in study group.

The above report was emphasized by De Klerk (2007) also from 253 women who underwent two or more IVF cycles treatment failure after IVF treatment, explored more symptoms of depression 1 week after termination from treatment, which was compared with women who had undergone mild IVF. The adjusted mean was (±95% confidence interval) = 10.2 (±2.3) versus 5.4 (±1.8), respectively, $P =$
0.01. The independent ‘t’ value of stress comparison between the groups (table 16 & Figure 19) reveals the stress level. During pretest, there was a clinical difference between the groups with mean score of 251.39 with S D of 6.149 in study group and 251.81 with S D 6.2 in control group shows no significant difference between the groups. Whereas in the posttest I and posttest II there was a significant difference between the study and control group with decreased mean score of 238.7, 227.41 and 251.63, 250.94 respectively with the level of p at 0.000; this is because of the women in study group involved in counseling and yoga (C&Y) proved there was a reduction in stress. There is a significant association (table 37) of stress scores were observed at different durations with repeated measures of ANOVA among the women between study and control group with the level of p at 0.001. Similar study was done by Tarabusi (2004) to determine the effect of cognitive-behavioral group treatment on psychological distress in couples waiting for assisted reproduction. Study results showed significant decrease in the total value of psychological uneasiness from 17.7 ± 13.7 to 14.1 ± 14.0, p = 0.07 level. These finding suggests that the CBT could avoid ‘waiting stress’ and could be useful for stimulating discussion and awareness among couple. The corresponding first hypothesis was that there is a statistically significant difference in the level of stress between infertile women subjected to IVF treatment who participated in counseling than who do not. The outcome of the study results showed that there was a significant reduction in the stress level. Hence the study supported and accepted the hypothesis.

The method of coping skills followed by the women subjected to IVF treatment was assessed using paired’ test, the value, (table 21) reveals that there is a significant difference in the pretest to posttest I at the level of p<0.000 in all components of coping except negative distraction coping. The mean scores shows a
drastic improvement with 4.299 in problem solving coping, 11.529 in Positive distraction, 0.15 in acceptance coping, 2.621 in relationship coping, 4.126 in denial coping and 6.747 in local support coping. These findings proved that counseling on infertility had an influence on improvement in various aspects of coping. Counseling and yoga (C&Y) had a definite effect on improvement in the level of coping with infertility treatment in the study group women with p at 0.000 levels when compared to control group except problem solving, negative distraction and acceptance coping. To add further to the present study findings, Verhaak’s (2007) study gained more insight from 298 women entering their first IVF treatment cycle including ICSI, focused on new life goals as a mode of adaptation 3 – 5 years after IVF without a live birth showed lower levels of anxiety and depression compared with women persisted for attempting to get pregnant.

The observed values (table 22) in all components of coping reveals that there is a significant difference in the pretest to posttest II at the level of p<0.000 except negative distraction, acceptance coping, denial coping and local support. The mean scores show a drastic improvement with 6.609 in problem solving, and 14.414 in positive distraction. These findings proved that counseling on infertility related coping had an influence on improvement in the level of coping. Counseling and yoga (C&Y) had a definite effect on increasing coping level with infertility treatment in the study group women with p at 0.000 levels when compared to control group except problem solving, positive distraction, negative distraction and acceptance coping. Then from (table 23) reveals that there is a significant difference in the posttest I to posttest II at the level of p<0.000 in all components of coping except negative distraction, and acceptance coping. The mean scores shows a mild improvement with 2.31 in Problem solving, 2.885 in Positive distraction, 3.701 in Religious Coping, and
2.598 in Denial coping. These findings proved that counseling on infertility and coping strategies had an influence on increased level of coping. Counseling and yoga (C&Y) had a definite effect on increased coping level with infertility treatment in the study group women with p at 0.000 levels when compared to control group except acceptance coping.

The findings of the Panagopoulou (2009) study done using randomized-controlled method, examined whether written emotional disclosure would reduce emotional distress and increase pregnancy rates in women undergoing in-vitro fertilization treatment. Participants recruited from women who were undergoing IVF in the north of Greece (n=148) were randomized to an emotional-writing condition, a fact-writing condition and a control condition. Outcomes included fertility-related distress, general distress and a positive indication of pregnancy. Psychological and medical information about women who refused to participate were also collected, and this represented a fourth group for analysis (n=66). Results indicated no significant difference between groups in terms of emotional distress. Psychological factors have been found to be prospectively associated with the outcome of IVF treatments in several studies. However, the exact role of coping strategies, which are modifiable, and it remains unclear. Problem-focused coping may be more adaptive for controllable situations, whereas emotion-focused coping (EFC) may be more adaptive for uncontrollable situations, such as most stages of IVF treatment.

The comparison of overall coping score by using paired ‘t’ value (table 24 & Figure 23) shows between pretest to posttest I, pretest to posttest II and posttest I to posttest II among study group women. The results during the pretest all the infertile women might have suffered with more stress thereby lack in coping skill. But in
posttest I and posttest II the study group demonstrated an increased in coping skill at the level of p<0.000. It shows that counseling and yoga practice performed by the women has got an influence on increased coping level. Women in control group demonstrated a reduction in coping when compared to study group at the level of p>0.05 between pretest to posttest I, pretest to posttest II and posttest I to posttest II. This reflects that all period of their treatment, they might have had lack in coping skill thereby experience with high stress. Table 25 & Figure 24 shows an increased level of coping in positive distraction, acceptance, religious, denial, and local support and did not had significant difference at the level of p>0.05 in pretest when compared to study group except problem solving coping. Whereas, posttest I and posttest II, the level of coping was found with significant difference at p 0.001 between the groups. Though women undergoing IVF Procedure disturbing coping skills are same for both the groups, the study group had a significant increase in coping level. This was supported by descriptive study conducted by Laya Farzadi (2007) evaluated the stressors and coping strategies of 150 infertile women presenting to Tabriz Al-Zahra Hospital since Aug. 2000 to Feb. 2002. The results have been revealed that the tiredness due to frequent trips to the clinic was the most common physical stressor in 67.3% of cases 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, praying and trusting in GOD was the most used coping strategy (79.3%). Of the problem-oriented coping strategies, accepting the situation was used always in 74%. Psychosocial stressors were found to be more frequent in comparison with physical stressors. The study concludes that the health team of infertility clinic needs to offer ongoing counseling and psychological support to couples who experienced problems with fertility. Comparison of overall
coping using independent ‘t’ test (table 26 & Figure 25) reveals between the groups. During pretest, there was a clinical difference was indentified between the groups with mean score of 71.43 with S D of 12.862 in study group and 70.3 with S D 13.007. In control group no significant difference was shown between the groups. Whereas in the posttest I and posttest II there was a significant difference between the study and control group with increased mean score of 85.83, 101.11 and 71.29, 71.29 respectively with the level of p at 0.000. These because the women in study group involved in counseling and yoga (C&Y) might influenced improved coping.

The phenomenological study of Su (2006), explored the lived in experience of 24 women infertile women who terminated treatment after in vitro fertilization (IVF) failure. The theme of the lived in experience emerged from the data was “transforming hope”; included three categories: 1. Accepting the reality of infertility, 2. Acknowledging the limitation of treatment involving high technology, and 3. Re–identifying one’s future. The results illustrated that counseling for these women should involve the provision of both positive and negative information, evaluation of the response to treatment, and assistance in defining their future. To help such group of population, Holstein (2005) developed the coping measure in four categories: active-avoidance coping; active-confronting coping; passive-avoidance coping; meaning-based coping. These subscales were later confirmed by factor analysis. Occupational social class was measured in a standardized way. The sample of 1169 women and 1081 Danish men who began assisted reproduction treatment was recruited. Contrary to expectations, the logistic regression analyses showed that women from lower social classes V+VI and men from social classes III+IV used significantly more active-confronting coping. Women from lower social classes V+VI used significantly more meaning-based coping. Both men and women from social
classes III–VI used significantly more passive-avoidance coping and significantly less active-avoidance coping. Due to the significant social differences in coping with infertility, the study suggested that elements of coping may be learned from one's social network and reference group. Table 38 reveals that, there is a significant association of coping scores at different durations with repeated measures of ANOVA among the women between study and control group with the level of p at 0.001.

The study of Davis, D. C. (1991) explored the coping patterns of infertile women. Six ways of coping with infertility were identified: 1 increasing the space or distancing oneself from reminders of infertility, 2. Instituting measures for regaining control, 3 acting to increase self – esteem by being the best, 4 looking for hidden meaning in infertility, 5 giving in to feelings, and 6 sharing the burden with others. In order to help women to cope with psychological problems related to infertility, Lukse (1985) also conducted a study and supported the group counseling, could be effective in reducing the frequency of grief responses. The study confirmed that infertility counseling was effective in reducing the self reported symptoms of grief experienced by some infertile couples. To support the above study result Schmidt (2005) found counseling helps as a part of the initial infertility evaluation and an adjunctive measure during treatment, or can be a final measure to help patients cope with acceptance of their infertility problem.

Laffont, I., and Edelmann, R. J. (1994) stated that men women felt that a routinely provide information book let about the practical aspects of IVF would improve knowledge of and passage through an IVF cycle. There was a tendency for women who expressed a desire for some form of counseling or support to obtain higher general health questionnaire scores. Study implications revealed that there
should be counseling services for women when they undergo IVF procedure. In the present study, the investigator provided booklet to help infertile women to follow in future to improve their knowledge related to infertility, related psychological problems and guidelines on coping with the problem including some yoga steps. It is important for fertility clinic nurse, not only to treat the condition of infertility but also to deal with the couples’ coping with infertility. Evidence-based knowledge about coping strategies and their consequences is therefore a prerequisite for professional fertility treatment. Coping research is conceptually complex and coping strategies are categorized differently in different studies. This is congruent with the above study reviewed and the current study illuminating the fact that counseling can enhance the level of coping, this also reveals better the practice of coping abilities can bring better improvement in the level of coping.

The second hypothesis formulated for this study was that there is statistically significant difference in coping abilities between women subjected to IVF treatment who participated in counseling than who do not. The above discussed study results revealed that infertile women who underwent counseling had a significant improvement on coping abilities. Hence the formulated hypothesis was accepted. The description of yoga (table 27, 28 & ) reveals that the level of yoga performance practiced by the women in study group between posttest I and posttest II period. In posttest I Spinal flex step performed among the study group women were 03 (3.4%) poor performance, 05 (5.7%) moderate performance, 79 (90.8%) good performance and in posttest II none of them performed poorly, 03(3.4%) moderate performance, 84 (96.6%) had good performance; Titali asana step performed among the study group women shows that 03 (3.4%) poor performance, 04 (4.6%) moderate performance, 80 (92.0%) good performance and in posttest II none of them performed poorly,
04 (4.6%) moderate performance, 83 (95.4%) had good performance; Pranayama 02 (2.3%) poor performance, 04 (4.6%) moderate performance, 81 (93.1%) good performance and in posttest II none of them performed poorly, 04 (4.6%) moderate performance, 83 (95.4%) had good performance; Meditation 03 (3.4%) poorly performed, 05 (5.7%) moderate performance, 79 (90.8%) good performance and in posttest II none of them performed poorly, 06 (6.9%) moderate performance, 82 (94.3%) had good performance; Shavasana 03 (3.4%) poorly performed, 04 (4.6%) moderate performance, 80 (92.8%) good performance and in posttest II none of them performed poorly, 06 (6.9%) moderate performance, 81 (93.1%) had good performance. The overall performance of the women during posttest I reveals that 04 (4.6%) poorly and moderately performed, 79 (90.8%) good performed, whereas in there was increase in level of performance of all steps among study group women were 06 (6.9%) moderately performed and 81 (93.1%) performed as good. These findings reveal that as the practice continuous the performance skill also can improve.

Comparison on the percentage of yoga performance by the women in study group was high in posttest I. When it was compared, by using Chi-Square test, there was a significant difference in posttest I at the level of p<0.05 and no significant association in posttest II. It conveys that women after their embryo transfer were not practiced yoga though it is only involved minimum movement, might be due to fear of miscarriage. The comparison of the Mean and Standard deviation on various steps of yoga was projected in table 29 & Figure 27 reveals that the Spinal flex, Titali asana, Pranayama, Meditation, and Shavasana mean score of 12.03 with SD 1.271, 24.53 with SD of 1.987, 13.34 with SD of 1.055, 26.03 with SD of 1.581 and 6.00 with no S value in posttest 1 and 12.66 of mean value with SD of 1.032, 24.64 with SD of 1.855, 13.70 with SD of 0.990, 26.15 with SD of 1.581 and 6.00 with no SD
value in posttest 2 shows a minimal difference between two periods in all the yoga exercises. But the overall mean score of 81.94 with SD of 2.751 in posttest I have got improvement to 83.15 with SD value of 2.541 in posttest II period among women in study group. These results reveal that there was an improvement in performing yoga exercises in spite of fear about the conception but they were willing to perform yoga.

Regarding the mean performance during assessment in posttest I (table 29) showed that, the overall mean score was 81.91 with standard deviation of 6.045, and in posttest II the overall mean score was 83.15 with standard deviation of 5.458, which indicated that posttest II had higher level of mean than the posttest I, with a significant difference of ‘t’ value of 6.820 at the level of p<0.001*** The overall Mean and Standard Deviation score of stress, coping and yoga performance in posttest I and posttest II among women in study group shows, there was a reduction in stress score (table 30) was obtained for posttest I to posttest II with mean score of 238.70 to 227.41 (with SD of 7.643 to 21.520); similarly there is an increased level in coping score with mean score of 85.83 to 101.11 (with SD of 28.822 to 28.128) in study group; and same way the mean score of yoga practice also obtained with an improvement to 83.15 (with SD of 2.541) from the mean score of 81.94 (with SD of 2.751). Comparison of the percentage of pregnancy outcome (table 31 & Figure 28) by the women was high in study group when it was compared, to control group. The negative pregnancy result was observed as high when compared to study group. It shows that, women in study group participated in counseling and yoga exercise has improvement in pregnancy outcome. But (table 31(a) & Figure 29) there was no significant association between overall yoga performance and pregnancy outcome was found in the data collected at the time of confirmation of the pregnancy. It conveys that yoga practice alone not contributing for the outcome of the pregnancy it
might be due to other biological factors. When comparing Mean, Standard Deviation and independent ‘t’ value of pregnancy outcome scores with stress scores in pretest, posttest I posttest II among women in study group table 32 & Figure 30 shows that, there was a significant difference between pregnancy outcome and stress score in the study group with p at 0.05 level in posttest I; whereas there is no effect of counseling in positive pregnancy outcome scores in pretest and posttest II. Table 33 & Figure 31 reveals that, there is a mild increase in level of coping; which projects the possibility of occurrence of positive pregnancy outcome during posttest I as the coping increases from pretest to posttest I in the study group at the level of p<0.05*. This highlights the counseling has a significant influence on positive pregnancy outcome scores during posttest I; whereas in posttest II reveals no significant association because of the outcome of the result. Whereas while comparing Mean, Standard Deviation and independent ‘t’ value of Pregnancy Outcome score with Yoga performance Scores in posttest I and posttest II among women in study group findings reveals that, there is no significant association of positive pregnancy outcome with performance of yoga among women in study group in posttest II (table 34 & Figure 32).

To support present study results, Boivin (2003) study emphasized group intervention including education and skill training e.g., relaxation training were significantly more effective in producing positive changes where as counseling intervention emphasized emotional expressions and support and / or discussion about thought and feelings related to infertility. The third hypothesis formulated for this study was that there is statistically significant difference in pregnancy outcome between stress, coping and yoga performance among infertile women who participated in counseling and yoga and those who do not. The above discussed study results revealed that infertile women who performed yoga had a significant
improvement on coping abilities and thereby reduced the stress. Hence the formulated hypothesis was accepted. The second objective of the study was to correlate the stress and coping and stress, coping and performance of yoga with pregnancy outcome.

The correlation between stress and coping (table 35 & Figure 33) shows that, there was a significant negative correlation between pretest, posttest I and posttest II scores of stress and coping in all three durations of counseling, \( r = -0.667 \) for study group and \( r = -0.059 \) for the control group. These results reflect that as the coping increases the stress level also decreases. Ebbesen (2009) study explored the association between IVF-outcome and negative, i.e. stressful life-events during the previous 12 months. 809 women (mean age: 31.2 years) completed the List of Recent Events (LRE) and questionnaires measuring perceived stress and depressive symptoms prior to IVF. The result showed that women who became pregnant reported fewer non-fertility-related negative life-events prior to IVF (Mean: 2.5; SD: 2.5) than women who did not obtain a pregnancy (Mean: 3.0; SD: 3.0) (\( t (465.28) = 2.390, p = 0.017 \)). Logistic regression analyses revealed that the number of negative life-events remained a significant predictor of pregnancy (OR: 0.889; \( P = 0.02 \)), when related to the age. The total number of life-events that perceived stress within the previous month was depressive symptoms and relevant medical factors during the treatment, including duration of infertility, number of oocytes retrieved and infertility etiology.

The fifth hypothesis formulated for this study was (H5), that there is statistically relationship between stress and coping among women between study and control groups. The above discussed study results revealed that infertile women who attended counseling and performed yoga had a significant increase in coping. The study result reflects that as the coping increase, stress decrease and vise a versa.
Hence the formulated hypothesis was accepted. In relation to correlation coefficient between stress and coping scores with Yoga Performance Score among women in study group shows that, there was no significant correlation between scores of stress and coping with practice of yoga in posttest I and posttest II with -0.122 for the stress and 0.136 for the coping among women in study group. But the overall correlation between scores of stress and coping with yoga performance in two durations reveals significant correlation with 0.808; inferring as the performance of yoga increases, which enhance better coping, thereby decrease stress (table 36 & Figure 34). Zuttermeister (1992) study replicated the present study that the psychological and demographic data were collected before entering and after completion of a behavioral medicine program. Fifty two women receiving medical treatment for infertility were attended the 10 week group behavioral treatment program. The results showed that the Psychological improvement was statistically significant (Profile of mood states Tension/anxiety: P<.0001; Depression/Dejection; P<.0122; vigor/activity; P<.0431; confusion/Bewilderment; P<.0057; Spiel Berger anger expression; P<.0013; Spiel Berger state anxiety; P> .0037; and trait anxiety; P<.0001. Thus the study concluded that the behavioral treatment was associated with significant decreases in negative psychological symptoms.

Cousineau, T. M. (2007) studied about advances in reproductive technologies such as IVF which can offer hope to many couples. The process of IVF treatment caused emotional responses including distress, loss of control, stigmatization, and a disruption in the developmental crisis during the adulthood. Further author stated that there were studies showed on the association between stress of infertility and women drop out form the IVF treatment. Thus there were studies that proved that psychological intervention like stress management and coping- skills training have
been shown to have beneficial effects on women with infertility. Study suggested that psychological interventions especially stress management and coping skills training have been shown to have beneficial effects for infertility patients. Mandle (1990) documented decreased level of anxiety among patients who listened to a relaxation tape during their hospitalization. Goodale (1990) study stated decreased premenstrual symptoms in women who practiced relaxation techniques. Domar (1992) cited doubled the pregnancy rates for In Vitro Fertilization (IVF) patients who practiced relaxation coping techniques. Stuart (1987) used relaxation to help patients to reduce blood pressure without medication.

The fourth hypothesis formulated for this study was that there is statistically significant difference in the level of stress and coping between infertile women who participated in yoga and those who do not. The above discussed study results revealed that infertile women who attended counseling and performed yoga had a significant improvement on positive pregnancy outcome improved coping and decreased stress. Hence the formulated hypothesis was accepted.

- The third objective of the study was to associate the selected demographic variables with stress, coping, performance of yoga and pregnancy outcome.

Regarding association with demographic and maternal variables, (table 39 (a & b) & 40) none of the variables did not have significant association with pretest stress scores. Occupation of the women in the study group had significant association with level of stress scores during posttest I with p at 0.001 (table 41(a) & Figure 35). This result was supported by Schmidt. L (2005) study, analyzed the cross-sectional association between coping responses with infertility and occupational social class. The study results revealed that women from lower social classes V+VI and men from
social classes III+IV used significantly more active-confronting coping. Women from lower social classes V+VI used significantly more meaning-based coping. Both men and women from social classes III–VI used significantly more passive-avoidance coping and significantly less active-avoidance coping and study suggested that elements of coping may be learned from one's social network and reference group.

Table 39(b) & Figure 36, illustrates that the residence of the women in the study group had significant association with level of stress scores during posttest I with p at 0.01. The stated result was supported by Newton & Sherrod (2000) quotes the combination of the demographic variables age, education, religion, occupation. Family income and type of marriage and years of infertility caused 22.9% of variance in stress as reaction to infertility (F =3.900, p=0.01). The maximum predictable of reaction to infertility was by age and years of infertility i.e. one unit increases in age and education increases 38.50% and 26.30% of stress reaction to infertility respectively.(p<0.01). Study suggests that age and more number of IVF treatments were the significant predictors of reaction to infertility and heath care providers can anticipate the same and will consider those aspects while planning for the care. The combination of biological variable, menstrual, sexual patterns, ovulation and causes of infertility has 7% variance on reaction to infertility (F=1.557,p<.01). The maximum prediction of rejection to infertility was by causes of infertility i.e., one unit increase in the causes of infertility predicted 17.9% increases in relation to fertility (p<0.05).These finding suggests that causes of infertility as biological variable, was the significant predictors of reaction to infertility. But none of the maternal variables in the study group women were did not have association with level of stress scores during posttest I. There was no significant association between stress score and demographic variables were found in study group. The data indicates (table 40) that,
stress score and number of IVF done had significant association at the level of p<0.05 with 7.295. Hanson, B. (2003) belief that fertility problems derive from maternal age, increasing markedly at 35, reflects social constructions of biology in developed nations. These constructions perpetuate a negative view of female ageing. However study reveals that the minimal association between maternal age and problems was seen in women with fertility problem. All other variables had no association with stress score. There was no significant association between coping score and demographic variables in study group women. From the table 41 shows that, coping score and maternal related variables were not having significant association except in years of married life and years of infertility treatment at the level of p< 0.05 and p<0.01 with 7.385 and 5.270 respectively. Same result was discussed by Askhani (2006) study conducted to determine the depression rate and compared infertile and fertile couples with respect to the same. 91 infertile couples and fertile ones were randomly assigned in the study. Beck depression inventory (BDI) and demographic information were adopted. The Chi-square, t-test; and one-way analysis of Variance (ANOVA) was performed to find out the significant difference between infertility duration in various couples and its effect on the score of depression. The observed BDI mean scores showed the difference between infertile and fertile couples, which was significant at P=0.015. It was significantly more among couples with infertility from 1-3 years' duration compared to those with infertility of 1-year duration or less. The finding also suggests that it is necessary to pay more attention to offer psychological and psychiatric services. And no significant association between level of coping and demographic variables in study group in posttest II. The number of IVF done was statistically associated with coping scores of women in study group at p<0.01 during posttest II (table 42).
The association between Yoga performance score and demographic variables of women in study group in posttest I (table 43 & 44) illustrates that the age of the women, economically support from their husband’s income and family size was significant association with yoga performance scores at p 0.01 during posttest I and posttest II among women in study group. Qublan, H. S. (2005) also identified the factors affecting results and outcome of IVF in retrospective study. Total of 891 infertile women underwent IVF/ ICSI. The result reveals that women’s age, cause of infertility, basal concentrations of FSH, adequate ovarian responsiveness and the number of eggs collected. In some cases with poor outcome, the understanding of these factors may predict the results and lead to the development of new strategies to improve the outcome of IVF treatment. And none of the maternal variables of women in study group were associated with yoga performance scores during posttest II. No significant association of the demographic variables and pregnancy outcome scores of women was found in study group in posttest II (table 45).

An association of level of performance of yoga scores in posttest I with study group women reveals a significant association with income and economical support with p<0.05* level; during posttest II, age of women in study group and family size had significant association with p<0.05* level. Retrospective study of Tsafrir, A. (2007) summarized from the files of all patients aged 40 years an older adult at advent of IVF procedure. Embryo transfer was performed in 62.6% of initiated cycles. Result elicited that the success rates declined with each year after age 40: pregnancy and delivery rates were 13.9 and 9.1% at age 40 and 2.8 and 0.7% at age 45. There were no deliveries at an older age. The study concluded that in women between 40 and 41 years of age, ovarian response is a major determinant of success, but not in women
older than that. From table 56 identified that no significant association of pregnancy outcome scores and maternal related variables among women in study group.

Regression analysis showed (table 46) that the age of the women, age at marriage, and years of infertility had significant factor to influence post stress II scores. The other variables of religion, education, occupation, family income, economical support, family size, Years of married life, years of infertility, and number of IVF done variables were contributed for 29.6% variance in posttest II stress among women in the study group. The evidence from Latha Venkatesan (2001) co relational survey, on Bio- Psycho-Social dimensions and health behavior in infertile women, reveals that the self-concept, depression, marital adjustment, family support, attitude towards treatment option and treatment seeking behavior combined together associated on 26.5 % of variance on reaction to infertility (F=4.7313, p<0.001). In relation to reaction to infertility stress almost all levels of stress were equally distributed (low, average, moderate, high level of stress). There was a significant negative relationship between reaction to infertility and attitude towards treatment options (r = -0.210) and treatment seeking behavior (r= -.288). The association between reaction to infertility and age (x2 -2.8.513, P<0.01 ) and years of infertility, x2 = 7.73.0, p<0.05. The combination of demographic variables such as age, education, religion, occupation, family income, and type of marriage, years of infertility caused 22.9 % of variance in stress reaction to infertility F= 3.909,p< 0.01. The maximum predictability of reaction to infertility was by age and years of infertility.

Regression analysis of number of IVF done had a significant influence on the posttest II coping scores among women in the study group and other variables
contributed to a variability of 18.8% with posttest II coping scores (table-47).
Whereas no single background and maternal variables were had significant
association in posttest II on yoga performance scores and pregnancy outcome scores
contributed for 21.1% and 14.2% respectively. This infers that though the women did
not showed change in the pregnancy outcome, there was a change observed from the
stress and coping with demographic variables. To support the present study results,
Matalliotakis, I. (2008) evaluated the impact of epidemiological factors on the IVF
outcome from medical files of 297 infertile women who underwent laparoscopy and
women who conceived after IVF – ET and the control group of 146 women who
underwent 288 IVF – ET cycles without pregnancy were included for study. Study
found that the rate of duration of infertility tended to be lower in pregnant women
(35.9+ - 23.4 months) vs (42.3 + - 30.2) non pregnant women. As expected, there was
inverse association between the age of women and IVF outcome. Overall, body
attributes, lifestyle, family history, menstrual and reproductive factors were not
related to IVF - ET outcome.

The present study findings indicated that counseling and yoga for women
subjected to IVF treatment for achieving their own biological child had a positive
effect and hence can be implemented in the infertility clinic with available staffing
patterns. Study findings indicated that stress was only significant factor to influence
yoga performance scores. The coping and pregnancy outcome variables that found no
significant association with posttests II yoga performance scores accounted for 2.3%
variance on the yoga performance response of the women (table-48)
5.1 LIMITATIONS:

The limitation of this study precludes making definitive recommendations regarding psychological treatment for infertility patients.

- The posttest assessment was done on 14th and 28th day of the IVF treatment. It could have been followed for a month, 6th month and one year interval. But the investigator was unable to do it due to poor response. The study is limited up to the day on confirmation but they were given supportive psychological counseling. It was the nature of the study.

- Sample selection was tough and the sample size was 100 in study group and 100 in control group, as it was sensitive study and needed personal involvement while attending counseling and to do yoga.

- Performing yoga some of the samples were scared to involve in yoga in the beginning. Investigator explained the nature of each step, then only few of them accepted to practice it.

- The investigator tried to increase the sample size. But due to problems in getting client for other counselor who is appointed after investigator started study, investigator limited to 200 for both groups with expert’s suggestions.

- Attritions were unavoidable. The reasons were unable to meet the cost of the procedure, nature of the job, and attend the household routines, physical fatigueless and change of habitance.

- The control group was not restricted towards regular information, they were also reassured on coping skill to be applied whenever they face stressful situation, their doubts were clarified, and psychological support was given and encouraged as per need whenever necessary. This might have influenced the outcome of variables; it was beyond the nature of the study.
• Investigator prepared the yoga performance check list with literature support.

The reliability was checked through statistical formula. 13 experts were validated the tool and module.