CHAPTER III

STATEMENT OF THE PROBLEM

“BIO-Psycho-social Dimensions and Health Behaviour in Infertile Women”

3.1. Justification for the Study

Parenting is viewed by most of the couples as their central role in life, and the thought of not achieving it can be very upsetting. Women in particular traditionally have been raised to view motherhood as their primary role. Many infertile women say that they cannot imagine a life that does not include children and that their childless status makes it difficult to maintain friendships with other women who have children. Several authors have found that infertile husbands were less disappointed than their wives at the thought of not having children.

The investigations and treatments for infertility are also highly stressful. The initial medical interview focuses on the couple’s sexual performance and history taking, including frequency of sexual intercourse, premarital relationships, previous pregnancies, including abortions and miscarriages, attitudes about sex and usual sexual practices. The patient may see such questions as threatening, embarrassing, intrusive, demeaning and even inappropriate. Side effects from medication, recovery from surgery, time loss at work because of frequent physician’s appointments and the high financial costs of infertility treatments have all been described as stressfully by the infertile couples.

The relationships between the perceived stress associated with infertility and demographic (age, number of years married, income), treatment (number of years trying, physician seen, tests and treatment received) and psychological variables (importance of children, confidence, perceived control, attributions, social support) were explored in a study of 185 infertile couples in Michigan, USA. For both women and men, stress was significantly positively correlated with treatment costs and number of tests and treatments received; stress was negatively and significantly correlated with confidence of getting a
child as well as with their perceived control. (Abbey, Halman and Andrews 1992). The results of the study suggest that attempts by health care providers to increase patient’s sense of control, optimism (within realistic limits), and social support could reduce stress.

The influence of infertility of women’s personality was investigated using State Trait Anxiety Inventory (STAI). Seventy females experiencing infertility and fifty healthy women were examined and it was identified that in comparison with healthy women, women treated because of infertility displayed significantly higher level of anxiety as a state.

Where as a study on emotional impact of In Vitro Fertilization and any possible influence due to the type of diagnosis of infertility, number of cycles and types of diagnosis of infertility was significantly lower (P< 0.05). Women who have experienced infertility of medium to longer duration presented a significantly lower anxiety value (P < 0.01). And the failure of fertilization caused a significant increase in state anxiety level (P < 0.01), (Ardenti 2000).

The influence of stress and state anxiety on the outcome of IVF treatment was studied through psychological and endocrinological assessment of 22 Swedish women entering IVF treatment. The findings of the study revealed that infertile women had more suspicion, guilt and hostility and their stress levels in terms of circulating prolactin and cortisol levels were elevated (P < 0.05) compared to the fertile controls. The authors have further explained that psychological stress may affect the outcome of IVF treatment since state anxiety levels among those who did not achieve pregnancy were higher than among those who became pregnant (P < 0.05). (Osemickky, Landgren and Collins 2000).

It was also found that women with menstrual cycle disturbances had a lower pregnancy rate in IVF and higher state anxiety levels. Furthermore prolactin levels were also higher in women with menstrual cycle disturbances. The findings contribute to the
hypothesis that menstrual cycle disturbances could be associated with higher psycho-endocrinological stress levels. (Demyttenaere, Nijs, Kiebooms and Koninck 1994).

IVF is one of the newest techniques for the treatment of infertility. In a descriptive study 20 couples who had experienced at least one IVF procedure were interviewed. The results indicate that while IVF offers hope for infertile couples, the procedure, if unsuccessful, can be emotionally traumatic. In addition, the results suggest that comprehensive information and emotional support are the primary needs of couples undergoing IVF. (Milna 1998).

Hynes, Callan, Terry and Gallois (1992) identified that IVF women were more depressed and had lower self esteem prior to the treatment cycle, and both before and after the treatment cycle they were less self confident. After the failed IVF procedure, IVF women were more depressed and had lower levels of self-esteem than they were prior to the treatment cycle. The use of avoidance coping and seeking social support was associated with low levels of Well-Being.

Thus the literature clearly suggested that bio-psycho-social dimension of infertility and the behaviour of infertile women are important aspects to be studied especially when its magnitude is increasing due to advancing age at marriage. In India there is only limited research literature available pertaining to psycho-social dimensions of infertility. It is also observed that less attention is paid in the clinical area while caring for infertile women to understand their stress levels, support measures and treatment seeking behavioural patterns. These factors prompted the researcher to select the present problem of study.

3.2. Objectives of the Study

1. To identify the demographic variables of infertile women such as age, educational status, religion, occupation, type of family, type of marriage and years of infertility.
2. To determine the biological variables of infertile women such as menstrual cycle pattern, sexual pattern, ovulation, causes, investigations, treatment for female infertility and semen characteristics of husband.

3. To assess the psychological variables of quality of life, self-concept, anxiety, depression, and stress in infertile women.

4. To assess the social variables in terms of the marital adjustment between the husband and wife and the family support of infertile women.

5. To identify the health behaviour of infertile women through their attitude towards treatment options and treatment seeking behaviour – sequential tracking, backtracking, paralleling, taking a break and withdrawal.

6. To determine the association between demographic variables and psycho-social and health behavioural variables of infertile women.

7. To determine the association between biological variables and psycho-social and health behavioural variables of infertile women.

8. To determine the inter correlation between the psycho-social variables and health behavioural variables of infertile women.

9. To predict the variance between psycho-social and health behavioural variables upon the self-concept in infertile women.

10. To predict the variance of demographic, biological, psycho-social and health behavioural variables upon the self-concept in infertile women.

3.3. Assumptions

The study assumes that

1. The person is a bio-psycho-social being

2. Persons have their own creative and reproductive power

3. Negative feedback in the form of performance compared with idea leads to feelings of inadequacy

4. To cope with the changing world, the person uses both innate and acquired mechanisms, which are biological, psychological and social in origin

5. A person’s opinions and viewpoints reflect his / her belief, thinking and feeling.
3.4. **Null Hypothesis**

H₁ There will be no significant association between quality of life and the demographic variables such as age, educational status, type of family, type of marriage and years of infertility.

H₂ There will be no significant association between self-concept and the demographic variables such as age, educational status, type of family, type of marriage and years of infertility.

H₃ There will be no significant association between anxiety and the demographic variables such as age, educational status, type of family, type of marriage and years of infertility.

H₄ There will be no significant association between depression and the demographic variables such as age, educational status, type of family, type of marriage and years of infertility.

H₅ There will be no significant association between stress and the demographic variables such as age, educational status, and type of family, type of marriage and years of infertility.

H₆ There will be no significant association between marital adjustment and the demographic variables such as age, educational status, type of family, type of marriage and years of infertility.

H₇ There will be no significant association between family support and the demographic variables such as age, educational status, type of family, type of marriage and years of infertility.
There will be no significant association between attitude towards treatment options and the demographic variables such as age, educational status, type of family, type of marriage and years of infertility.

There will be no significant association between treatment seeking behaviour and the demographic variables such as age, educational status, type of family, type of marriage and years of infertility.

There will be no significant association between quality of life and the biological variables such as menstrual cycle pattern, ovulation pattern, sexual patterns, causes, investigations, treatment of female infertility and the semen characteristics of husband.

There will be no significant association between Self-concept and the biological variables such as menstrual cycle pattern, ovulation pattern, sexual patterns, causes, investigations, treatment of female infertility and the semen characteristics of husband.

There will be no significant association between Anxiety and the biological variables such as menstrual cycle pattern, ovulation pattern, sexual patterns, causes, investigations, treatment of female infertility and the semen characteristics of husband.

There will be no significant association between depression and the biological variables such as menstrual cycle pattern, ovulation pattern, sexual patterns, causes, investigations, treatment of female infertility and the semen characteristics of husband.

There will be no significant association between stress and the biological variables such as menstrual cycle pattern, ovulation pattern, sexual patterns, causes, investigations, treatment of female infertility and the semen characteristics of husband.
$H_{15}$ There will be no significant association between marital adjustment and the biological variables such as menstrual cycle pattern, ovulation pattern, sexual pattern, causes, investigations, treatment of female infertility and the semen characteristics of husband.

$H_{16}$ There will be no significant association between family support and the biological variables such as menstrual cycle pattern, ovulation pattern, sexual pattern, causes, investigations, treatment of female infertility and the semen characteristics of husband.

$H_{17}$ There will be no significant association between attitude towards treatment options and the biological variables such as menstrual cycle pattern, ovulation pattern, sexual pattern, causes, investigations, treatment of female infertility and the semen characteristics of husband.

$H_{18}$ There will be no significant association between treatment seeking behaviour and the biological variables such as menstrual cycle pattern, ovulation pattern, sexual pattern, causes, investigations, treatment of female infertility and the semen characteristics of husband.

$H_{19}$ There will be no significant relationship between the psycho-social and the health behavioural variables in infertile women.

$H_{20}$ The psycho-social and health behavioural variables will not be significantly predicted by the demographic variables of infertile women.

$H_{21}$ The psycho-social and health behavioural variables will not be significantly predicted by the biological variables of infertile women.
H$_{22}$ There will be no significant prediction of variance between the psycho-social and health behavioural variables of infertile women.

H$_{23}$ The self-concept will not be significantly predicted by the demographic variables of infertile women.

H$_{24}$ The self-concept will not be significantly predicted by the biological variables of infertile women.

H$_{25}$ The self-concept will not be significantly predicted by the psycho-social and health behavioural variables of infertile women.

3.5. Operational Definitions

3.5.1. Biological dimension

It conceptualizes health biologically as a state in which every cell and every organ is functioning at optimum capacity and in perfect harmony with the rest of the body (Park 1998).

In the study the biological dimension refers to the menstrual cycle patterns, ovulation pattern, sexual patterns, causes, investigations, treatment of female infertility and semen characteristics of husbands.

The causes of female infertility are disorders of ovulation, transportation of egg or sperm (Tubal factors) or implantation of fertilized ovum (Uterine disorders).

The investigations of female infertility are hormonal studies, follicular studies, endometrial biopsy, hysterosalpingogram and diagnostic laparoscopy to evaluate the tubal structure.
The treatment for female infertility includes induction of ovulation, tubal surgeries, artificial insemination and assisted reproductive technologies like Gamete Intra Fallopian Transfer of Oocytes (GIFT) or Zygote Intra Fallopian Transfer (ZIFT).

Semen characteristics of husband includes normal sperm count, oligospermia (low sperm count), asthenozoospermia (slow movement of sperms), azoospermia (absence of sperms) or any other characteristics. The semen test not done is also included.

3.5.2. Psychological dimension

It is defined as a state of balance between the individual and the surrounding world, a state of harmony between oneself and others, a coexistence between the realities of the self and that of other people and that of the environment. A mentally healthy person is free from internal conflicts, well adjusted, searches for identity, has a strong sense of self-esteem and tries to solve the problems intelligently (Park 1998).

In the study the psychological dimension refers to the quality of life, self-concept, and level of anxiety, level of depression and stress level of infertile women.

Quality of life: It refers to the level of cheerfulness, relaxation, activity, rest and the interest present in infertile women as measured by General Well-Being Index (WHO 1998).

Self-concept: It is the individual’s personal judgement of her own worth by analyzing the conformity with self-ideal. Self-concept is threatened during infertility when concepts of self are modified. It is the estimation that infertile woman has regarding herself and reveals the extent to which they believe themselves to be worthy. Self-concept may be altered during infertility and it depends upon their values, aspirations and success.

Anxiety: It is a state of tension which affects both mind and body.
Depression: A diffuse apprehension associated with feelings of uncertainty and helplessness. It occurs as a result of a threat to the woman’s identity in terms of their inability to conceive.

Stress: Refers to reactions to stressors; physical, emotional, social, sexual, rejections of child free life style and need for parenthood reactions.

3.5.3. Social dimension

Social well being implies harmony and integration within the individual; between each individual and other members of society and between individuals and the world in which they live. It has been defined as the “quantity and quality of individuals’ interpersonal ties and the extent of involvement with the community”

Social support systems can be helpful in emphasizing the strength of individuals and families. Marriage is considered a primary relationship in our society and also is a social construct of community. Infertility can cause a couple to question the biological and social function of marriage.

3.5.4. Health behaviour

Behaviour is any observable, recordable and measurable act, movement or response of the individual. There are three interrelated elements in explaining human behaviour, which are:

- Cognitive – thoughts about the situation
- Affective – emotional or feeling responses
- Behavioural – outward actions

An assessment of each one of these areas has important implications for understanding the problem and effectively treating it. (Stuart and Sundeen 1995).

In the study the health behaviour of infertile women is determined through their:
**Attitude towards treatment options:** It is the attitude of infertile women towards ovulation induction, artificial insemination, tubal surgeries, In Vitro Fertilization, surrogacy and adoption as the treatment options available for female infertility.

**Treatment seeking behaviour:** It is the pattern of behaviour demonstrated by couples as they move through the choices of infertility management.

**These patterns include:**

**Sequential tracking:** In which infertile women exhaust one treatment option before considering another treatment to parenthood.

**Back tracking:** In which infertile women retry the same treatment regimen with a new physician.

**Paralleling** which is an attempt to pursue multiple treatment options simultaneously.

**Taking a break:** The infertile women take a period of break and again try the treatment options.

**Withdrawal:** The woman withdraws herself from all the treatment options

### 3.5.5. Infertile women

The married females who are unable to conceive within 12 months of their intention and trial to become pregnant.

### 3.6. Conceptual Framework

Conceptual framework for a particular study is the abstract, logical structure that enables the researcher to link the finding to nursing’s body of knowledge. It is developed from the existing theory and helps in identifying and defining concept of interests and proposing relationships among them. The model gives direction for planning research design, data collection and interpretation of findings.
The present study aims at describing the bio – psycho – social dimension of infertile women and their adaptive responses to the stress. The framework for the study is based on “Roy’s Adaptation model”.

The core of Roy’s adaptation model is the belief that a person’s adaptive responses are a function of the incoming stimulus and the adaptive level. The adaptation level is made up of the pooled effect of three classes of stimuli:

- **Focal stimuli** – which immediately confront the individual
- **Contextual stimuli** – which occurs as a result of the focal stimuli
- **Residual stimuli** – those factors that are relevant but cannot be validated.

Roy further conceptualizes the person as having four modes of adaptation – physiological needs, self – concept, role function and interdependence relations. These categories established are valid and useful for nursing assessment. (Tomey 1994)

The conceptual framework presented explains the application of Roy’s adaptation model in the care of infertile women.

**Focal stimuli** is the stimulus most immediately confronting the person and the one to which the person must make an adaptive response. In the study the focal stimuli is the inability to conceive.

**Contextual stimuli** all the other stimuli that contribute to the behaviour caused or precipitated by the focal stimuli. In the study the contextual stimuli is the causes of infertility, the process of investigation and treatment of infertility and also the economic requirement for the same.

A regulator is a subsystem coping mechanism, which responds automatically through neural – chemical – endocrine processes. In the present study, the variable is not studied.
A cognator is the subsystem coping mechanism, which responds through complex processes or perception and information processing, learning, judgement and emotion. The variable is not included in the present study.

Adaptive (effectors’) modes are the ways of coping that manifest the regulator or cognator activity, i.e., physiological, self-concept, role function and interdependence. In the study infertility may be manifested as:

**Physiologically** – Causes / results of investigations and outcome of treatment procedures.

**Self – concept** – Depression, anxiety and stress caused by inability to conceive and its effect on self – concept and quality of life.

**Role function** – Role deficit of unable to become a mother and its impact upon marital adjustment.

**Interdependence** – Changes in the relationship of family members as the women are unable to conceive.

Adaptive responses are the responses that promote integrity of the person in terms of goals of survival, growth and reproduction. In the study the adaptive responses can be measured through their health behaviour in terms of their reactions to infertility – physically, emotionally, sexually and socially and also through their treatment seeking behaviour.
Fig. 1 Conceptual Frame Work on Adaptation of Infertile Women (Based on Roy’s Adaptation Model)

* These variables are not under study
3.7. Delimitations

The participants suffering from primary infertility only will be included in the study. The study will be restricted to include the participants who will be attending Centre for Reproductive Medicine at Apollo Hospitals, Chennai only.

Summary

This chapter has dealt with the background of the study, need for the study, statement of the problem, objectives of the study, assumptions, research hypothesis, conceptual framework, operational definitions, and delimitations.

Organization of the Report

Further aspects of the study are presented in the following 4 chapters.

In Chapter IV – Methodology is presented which includes research approach, design, setting, population, and sample and sampling technique, data collection tools description, validation and reliability of tools, pilot study, data collection procedure and plan for data analysis.

In Chapter V – Results and discussion is presented in terms of descriptive and inferential statistics.

In Chapter VI – Summary, conclusions, implications, recommendations are presented.