CHAPTER I

INTRODUCTION

Enlightened masses all over the world are greatly perturbed and concerned at man's uncontrolled fertility. In 1963, Huxley stated that man was fast becoming the cancer of the whole planet. Obviously, rapid growth of population is causing enormous problems which are uprooting the very existence of the human race.

In the past, population was limited by epidemics, war, natural calamities like – famines, floods, earthquakes, accidents, etc. In addition to these, high death and infant mortality rate, supplemented the natural forces in limiting the human population. But during the past half century, advances in medical science, public health, agriculture and overall improvement in the general standard of living of the people have eliminated most of the factors which limited the population. The result is that population has outstripped the natural resources of many countries.

A glimpse of the progressive increase in population of the world presents a horrifying picture. The world population remained fairly constant, at around 500 million, till the 16th century
FIG. 1 SHOWING THE INCREASE IN POPULATION FROM 1947 TO 1991.
after which it slowly started increasing and doubled its size i.e. about 1000 million, by 1830. A century later, it doubled itself to 2000 million. In the next 30 years, i.e. by 1960, it had reached 3000 million and only ten years later, it had crossed 4000 million (Chandershekher, 1974). The total population of the world had crossed 5000 million on July 11th, 1989. It appears that by 2000 A.D. the world population would be between 6000 to 7000 million. This is evident from the fact that all over the world three babies are born every second. The fact that would there be enough food to eat and enough space to live in for 6.7 billion people, and even if there is, what will be the quality of life, is being questioned throughout the world. Infact, this problem had been predicted in the 18th century by Mathews (1778), in his famous theory of geometrical progression of population and arithmetical progression of resources. Later, sociologists tried to project this in dynamic terms, like in the theory of demographic transition (Coal & Hoover, 1958).

In India, the most crucial problem facing the country today is the galloping population, which has been growing at an alarming rate. The population of our country which has been only 342 million at the time of Independence in 1947, grew to 361 million in 1951, 439 million in 1961, 548 million in 1971, 685 million
in 1981 and was 844.3 million as per census in 1991 (Figure 1) i.e. the population is increasing by about 1.6 crores per year. Thus it appears that we would cross the mark of the thousand million by the turn of the 20th century at the current rate of growth and would be double of that in the next 35 years. Such a rapid increase in population has serious repercussions on the socio-economic development of our country. Various social customs and beliefs favour large family size which impede the process of change which could accelerate the adoption of modern methods of contraception. A universal desire to have atleast one or two male children and a mean age of 18.3 % of women at the time of marriage are the major factor which result in large families. Moreover, there exists a large scale diversity in the demographic, socio-economic and cultural milieu between and within states and regions of the country which make the programme of population control a very challenging task.

During the past few years, family-planning has emerged from whispers in private quarters to the focus of the nation's concern, as a means to counter population explosion. Family planning is now looked upon as a necessary ingredient to promote and maintain the quality of life apart from its relationship to the population problem. India is the first country which has paid attention to
the population programme right from attaining Independence in 1947. After promulgation of the constitution in 1950, the family planning programme was made an integral part of the first five year plan. Attempts were made to create an awareness among the masses that unplanned growth adversely affects all development programmes. An extension approach was adopted in the mid-sixties and since the late seventies the family planning service delivery system has gradually expanded into a community oriented service net-work in which family planning services are offered as a part and parcel of the overall health package. The message of small family norms to the masses, motivational, educational and persuasive efforts are made without resorting to any form of coercion.

Family planning is generally considered to be synonymous with birth control. However, it is more than mere birth control. A WHO Expert Committee (1970) had stated that family-planning includes in its purview, the proper spacing and limitation of birth, sex education, genetic counselling, screening for pathological conditions related to reproductive system, pre-marital consultation, carrying out pregnancy test, preparation of the couple for arrival of first child, providing services for unmarried mothers, teaching home economics and
nutrition and providing adoption services. However, these activities vary from country to country according to the national objectives and policies with regard to family-planning. This fact has been emphasised by Valfour in 1961, according to whom the most important element in determining action for fertility control in any country is the knowledge and attitude of the people and their decision to act in the regulation of family size.

Today, more than at any time in the history, couples are able to plan their families. They can effectively decide if they want any children. They can manipulate the spacing of their children. Never before have couples been in such a happy situation, in which such reliable methods of contraception were freely available. The term contraception includes all the temporary and permanent measures designed to prevent pregnancy resulting from coitus. It is recognized that there can never be an ideal contraceptive which is safe, inexpensive, effective, acceptable, reversible, simple to use and requires little or no medical supervision. Thus the present approach is to provide a cafeteria choice so that individuals can choose the contraceptive according to their needs and wishes. The method of contraception can be broadly grouped as below:
Behavioural Methods

The main behavioural methods are abstinence, coitus interruption and safe period. Abstinence, amounts to repression of natural forces and is liable to manifest itself in some other direction. Coitus Interruption is a widely practised method. In this the semen is not allowed to be discharged into vaginal canal. The chief draw-back of this method is that the practical secretion of the male may contain sperms, which if deposited may result in pregnancy. In the Rhythm method, a week before and a week after menstruation is called the safe period. Thus, couples resort to abstinence during the unsafe period.

Chemical Methods

In these methods, chemical substances which can act as a barrier to the sperm, are introduced into the vagina prior to intercourse. Foam tablets are to be introduced deep into the vagina, five to 10 minutes before the intercourse. The foam which is generated distributes itself throughout the vagina and acts as a chemical and mechanical barrier to immobilize the sperm and prevent their passage through the cervix. Jellies, Paste and Creams are also available, which are introduced in the vagina just before the intercourse. Being chemical contraceptive they are spermicidal.
Another chemical contraception is the cent-square, which is a two inch paper thin substance made of cellulose material impregnated with urea. It is to be inserted deep into the vagina before intercourse.

Mechanical Methods:

In these methods a mechanical barrier is created so that the sperm does not enter the cervical canal. The condom is the most widely accepted contraceptive device used by males. It is made of synthetic rubber or latex.

Diaphram and Cervical Cap. are mechanical appliance for use of females. They form a barrier to the entrance of sperm to the cervical canal.

A Vault Cap is generally prescribed for a patient with a short health cervix. The cap fits into vault of the vagina and contains the cervix in its bowl. A new chapter in mechanical contraceptive devices opened in 1929 when Graphenberg, a German gynaecologist invented and demonstrated the successful use of an intrauterine device (IUD) in preventing conception. In 1934, a new device the Ota ring, was reported by Ota in Japan. Within a few years many new devices were designed and tested e.g. marguilies spiral lipperloop, Birnberg's bow, Sonawala's device, saf.T.Coil and many others. The device most commonly used in India today is
the lippers loop. A recent advance is the 'T' shaped polyethylene IUD made of a copper popularly known as Copper T. A totally novel method of contraception using electric current to kill sperm is being tried in USA. According to a recent report (1990) the device is somewhat similar to a heart pace-maker in the sense that it is a battery which supplies the current. This tiny battery which is no thicker than a cotton bud is placed in the cervix. The fifty microamp current conducted by the fluid kills the sperm cell in about four minutes while it passes the cervix, before any fertilization can take place. Studies show that it can kill sperms with a hundred percent efficiency. The device has been tested in laboratory dishes and in female baboons. The device is expected to have no harmful effects.

Oral Contraceptives: These are pills that are to be taken by the women to prevent her ovaries from releasing Ova so that she can not become pregnant. Pills must be taken on a prescribed monthly schedule to be effective. The contraceptive steroid currently in use can be classified as combined pills sequential pills, micro or mini pills, slow release combination - The entire group of current oral contraceptives are popularly known as 'The Pills'. 
Sterilization: The most effective and permanent method of birth control is sterilization in which the male / female partner is rendered unable to procreate. In males the operation is known as vasectomy and in female as tubectomy. The first tubal-legation was performed by Bundle in 1823. The oldest method was abdominal tubectomv in which the fallopian tubes were legated with or without cutting, so that the egg released by the ovaries each month could not be fertilized by the sperm. Later, laparoscopic tubectomy was performed in which rings are thrown over the fallopian tubes. Another method which is widely used is miniminilaparotomy. It is performed through a very small super pubic incision. It was first described by Uchhinda in 1961 in Japan and pioneered in Thailand by Sathanoridh (1973). Since then, it has been widely used. Both these methods are preferred by a majority of women as they require only a few hours of hospitalization and the women can resume normal work much earlier than in conventional tubectomv. The Government of India initially gave approval for sterilization in 1958. (Lippit-Ranganathan & Hulka, 1969) During the 7th five year plan the total number of acceptors in 1985-86 were 18.92 million and during 1986-87 the figure touched an all time record since the inception of the programme, when 20.57 million acceptors were recorded while 1988-89 ended with 24.38 million. Out of
couple protection rate, which was 44.1% in 1991, 30.3% were sterilization and proportion of tubectomies was 24.6% and Vasectomy, 5.6% i.e. out of a total of 4,21,980 sterilizations performed in 1990-91, 3,872,963 were tubectomies, thus resulting in 94% of sterilization on females.

Thus it is apparent that female sterilization is increasingly becoming the most popular and acceptable method of contraception in India. But there are a number of misconceptions about the tubectomy operation. Since the operation is a traumatic experience, the women tend to exaggerate even minor physical complaints and associate them with the surgical procedure. Retrospective reports have suggested that the procedure may be followed by both physical and psychological complications, particularly some disruption in sexual, menstrual and psychological functioning. It has also been observed by the researchers that these complications, generally, have no organic base.

PSYCHOSOMATIC DISORDERS:

The psycho-somatic disorders are defined as a disorder of body (the Soma) and are influenced by the mind (the psyche.). Psycho-somatic symptoms represent physiological concomitance of an emotional state. This physiological expression is due to the
failure of ordinary psychological defenses to maintain the state of homostatis. These are physiological disorders caused by psychological factors involving a single organ system, usually under the control of automatic nervous system. One of the most frequently seen somatoform pattern is hypochondriasis which is characterized by multiplicity of complaints about possible physical illness. Displacement of anxiety on the body with resulting somatic complaint is called hypochondriasis. Individuals with this disorder may complain of uncomfortable and peculiar sensations in the general area of stomach, the chest, the head, the genital or anywhere else in the body. Hypochondriacs usually have trouble in giving a precise description of their symptoms. However, their mental orientation keeps them constantly alert for manifestation of new illness. Such individuals are sure they are seriously ill and can not recover. Hypochondriasis is more likely to occur in over-strained, over-persistent and asthenic personalities. Their worry over their health restricts the range of their activities and interpersonal relations. It is more frequently manifested by persons who have learned through childhood transactions to solicit attention or to evade
responsibilities of life through illness. In short, hypochondriasis can be viewed as a disorder involving abnormal pre-occupation with disease.

Another type of psychosomatic disorder is menstrual disorders. Under premenstrual tension women generally become moody and show anxiety symptoms, restlessness, inability to concentrate, unreasonable emotional outbursts, crying spells without any cause and irritability. These psychological changes may be accompanied by backache, headach or insomnia. Psychological factor also play an important role in dysmenorrhoea and psychogenic amenorrhoea. Stressful situational factors precipitate this condition, for example some of the conditions related to physchogenic amenorrhoea are emotional shock, sexual conflict, tensions created by quarrelling and arguments, intense desire for pregnancy etc.

Similarly pathological lack of sexual feeling and diminished desire for sex are some of the common psychosomatic disorders. Excessive feeling of guilt or fear of disease or hostility towards members of opposite sex are emotional reason which leads to impotency in men and frigidity in women. Similarly psychological factors can effect many physical conditions in a large number of
organ systems: such as skin, the skeletal-musculature, respiration, cardiovascular, gastrointestinal, endocrine system or the sense organs.

It is difficult to pinpoint a single cause of psycho-somatic disorders. A combination of psychological, environmental and stressful life situations could be viewed as potential factors. According to Alexander (1950, 1968), the most influential psycho-analytic theorist of psychosomatic disorders, a voluntary organ system, an underlying conflict and precipitating life situations interact to produce this disorder. These disorders occur when an individual is both constitutionally vulnerable to a particular physical problem and is faced with an acute stressful and uncontrollable life situation. These stressful life situations play a major role in influencing certain psychological factors which in turn cause and aggravate some physical illness. Besides this, biological and socio-cultural factors have also been found to be related to psychosomatic disorders.

The symptoms and severity of psychosomatic disorders depend on the personality of the individual. The term personality is generally used in a much wider sense i.e. regarding personality as the total integrated expression of the various 'levels' of which the individual is constructed—the lowest level,
(endocrine-autonomic) the sensory-motor level, (central nervous system) and the psychomotor level. Certain personalities in this sense are less adapted to meet environmental influences adequately than others. The result is malintegration in the sense of biological inefficiency. It has been found that personalities of this kind are specially prone to psychosomatic illness.

Majority of the researchers agree that the patient’s personality can be an important pre-disposing factor in the etiology of psychosomatic and psychiatric disorder as it influences the individual’s response to stimuli, stress, life changes, emotional reaction and degree of arousal to such stimuli e.g. symptom of morbid anxiety commonly develop in people having anxious personality—tense, timid, self doubting, worrying people who tend to expect the worst to happen. There is restlessness, impaired concentration, absentmindedness, forgetfulness in day to day affairs, jumpiness, irritability and depression of spirit. The patient’s tensions make him/her feel fatigued and he/she generally has difficulty in falling asleep and the anxiety may be unfocussed and free floating.

The importance of personality factors in the manifestation of different physco-somatic disorders was stressed by Dunbar (1943, 1954). But even though personality make-up seems to play
an important role, it is still not clear why all individuals with similar personality characteristics do not develop psychosomatic disorders nor can we account adequately for the wide range of personality make-up among the individual who may suffer from the same conditions. Usually one can best conclude that certain personality factors may be weakly but significantly correlated with the occurrence of a particular disease. For example, Jenkin (1979) identified 'Type A' personality in people who develop certain psychosomatics. A number of Indian researchers have also stressed the importance of personality factors in pre-disposing the individual to different psychosomatic disorders. Shamugam (1979), Sridar (1976), Thiruvengadam (1974), used Eysnck's Personality Inventory and Maudsley Personality Inventory and reported that psychosomatic patients were mere neurotic and extroverted. Type of personality of the individual also determines how he will cope with different kind of mental, physical, emotional, vocational, social and financial stresses. Thus, stress is an important key theme underlying these disorders. Stress may serve as a pre-disposing, precipitating or reinforcing factor. Often stress appears to speed up the onset rate and increase the severity of the psychosomatic disorder or interfere with the body's immunological defences and other homeostatic function.
TUBECTOMY AND PSYCHIATRIC DISORDERS:

Psycho-analysts were the earliest critics of family planning methods as they felt that these methods interfere with the normal sex drive. Freud in his earliest work on neurosis, cited coitus-interruption as a significant factor in the development of neurasthenia and anxiety neurosis (1893, 1894, 1898).

The most commonly reported psychological disturbances following tubectomy are - anxiety, depression, irritability, apprehension, hysterical fits, psycho-neurosis and psychosis, (Berstein, 1979; Bhagwanani, Mirchandani & Sikand, 1968; Down, 1968; Khurana & Vyas, 1975; Sawnhney, Nathwat & Sethi, 1970; Verma & Boparai, 1974; Wig, Gupta, Khatri & Verma, 1977). Regret and mental symptoms are more common after postpartum or post-abortion tubectomy than after interval tubectomy operation (Bordhal, 1984; Leader, Calan, George & Tylor, 1983; Murray, 1980; Wynter, Matadial).

Similarly, several studies had been conducted regarding the effect of tubal legation on menstrual pattern. Various researchers have reported change in menstrual periods, prolonged menstrual bleeding or spotting, oligomenorrhoea, pelvic pain, leucorrhoea, heavy bleeding etc., after the tubectomy operation. (Adam, 1964; Aditia & Aditia, 1966; Gun, 1971; Neil, Hammond, Noble & Rushton,
1975: Ringrose, 1974; Sikand, 1968). Some researchers have found that these menstrual disturbances following tubectomy are related to the kind of oral contraceptive used pre-operatively and its withdrawal rather than the sterilization process itself. (Bhiwandiwala, Mumford, Feldleen, 1982; Bledin, Cooper, Machenzie & Brice, 1984; Chamberlain & Roulkes, 1975; Cooper, Gath, Fieldsend & Rose, 1981; Leibermann, Balsey, Gorden, Wright, 1978; Neil et al. 1975). It has also been suggested that pre-operative menstrual disturbances and the degree of tissue destruction caused by the sterilization technique may contribute to the later menstrual pain in some women. (Bledin, Cooper, Machenzie, Brice, 1984; Down, 1966; Destefano, Huezo & Peterson, 1983).

To explain how sterilization could theoretically cause later problems, clinicians have hypothesized that damage to the fallopian tubes disturbs the blood supply to the ovaries, causing changes in production or diffusion of hormones which in turn causes these problems (Baggish, Lee, Miro, Dacko, Cohen 1979; Chamberlain et al, 1976; Huggin & Sandhelmer, 1984). Besides this, deterioration in sex life or decreased libido after sterilization has been reported in many studies. Sexual or marital problems such as loss of libido or reduced frequency of intercourse varied widely, ranging from less than 5% to 20% in various studies.
Women felt less feminine and less interested in sex because they were no longer able to conceive (Beker & Inayatullah 1981; Bledin et al. 1984; Cooper et al. 1982; WHO, 1984). On the other hand, improvement in marital and sexual relations because of relief from fear of pregnancy has also been reported (Aditia & Aditia, 1966; Rubinstan, Lebherg & Keink 1979).

Psychological symptoms like hypochondriasis, anxiety and depression were found in women after tubectomy operation. (Amal, 1983; Ganeshan, Vedagiri & Palniswami, 1986; Wig & Gupta 1975). Specially women who were sterilized before the age of 25 years developed various symptoms of anxiety. (Bledin et al., 1985; Down, 1966; Gupta, Jain, Prasad, Vidya Bhushan, 1970; Sawhney et al. 1970). Schizoid personality was found to be significant determinant for subsequent illness in tubectomised women (Sawhney et al. 1970). Similarly persons with neurotic tendencies were more prone to psychosomatic symptoms. Few women, who reported adverse effects on sexual relations after tubectomy operation presented symptoms of neurotic personality and poor emotional adjustment before sterilization (Bledin et al., 1985; Cooper, Gath, Field send & Rose, 1981, Cooper et al., 1984; Woodside,
1949). Significant increase in both extroversion and neuroticism score in women was seen after a period of three months of sterilization (Amal, 1983).

After-effects of sterilization are also influenced by certain socio-cultural and demographic variables, such as age, cultural background, education, economic status, work status and type of family background of the acceptors. Among various socio-cultural and economic factors, cultural background play a important role. Women with metropolitan or urban background are more independent, less orthodox, better educated as compared to women with rural background. Education inculcates better parenthood and brings greater trust in modern medicine. Education of the women and their participation in economic activity help them to improve their status and to participate in decision making, including issues like use of contraception, timing and number of birth, (Dubey, Bardhan & Garg, 1975; Dandekar & Dandekar, 1953; Mukerji, Ranade & Ramchandran, 1975; Singh, 1979). On the other hand prevalence of psycho-somatic symptoms is more in economically backward class after tubectomy operation (Gupta, 1970; Saxena, 1963). Besides economic responsibility was also a significant factor in the development of psychiatric illness after tubal legation. In general it would appear that any socio-cultural
condition that markedly increases the stressfulness of life tends to play havoc with the human organ system and leads to an increase in psychosomatic disorder as well as physical and mental symptoms after tubectomy operation. Further, it has also been observed that younger women are more emotionally upset after sterilization (Adam, 1964; Bernstein, 1974; Bongaarts & Potter, 1983; Down, 1966; Saxena, 1963.)

In short, we can say that people complain more about after effects of tubectomy operation because in a large number of cases it has not been their decision but the decision was taken under pressure or during the stress of labour. For most of them the operation was either a condition for obtaining abortion or was done immediately postpartum. Besides incentive in cash and kind also influence their decision for tubectomy operation. (Thukural 1987). However, the psychological, sexual, menstrual disturbances after tubectomy operation may create hinderance in popularising this operation. So it is suggested that women should not be forced to undergo this operation as it has been found that patients who voluntarily went in for the operation were more satisfied than the patient to whom the procedure was suggested for medical reason (Berne and Zuspan 1968). Patient’s feeling, her life situation,
her personal relationships and her reaction to the environment should be subjected to the same stringent scrutiny as her physical body and symptoms.

Nevertheless, tubal legation remain the most satisfactory solution for some women who want to finish child bearing early and who may not be able or willing to use other contraception method. It has been gaining popularity not only in third world countries but in industrialized countries as well.

The present study is, therefore, an attempt to observe, assess and evaluate the role of personality and socio-cultural variables in the manifestation of psychosomatic disorders among tubectomised women.

With the background we may now pass on to the next chapter dealing with the review of the pertinent literature.