2.1 Meaning of Infertility :-

Infertility means inability, incapability or incapacity to produce a child. It may be either on the side of the male or female or both.

It also means impotency which in India is lawfully recognised as a valid ground for getting marriage annulled by a decree of nullity\(^1\); if the marriage has not been consumated owing to the impotence of the respondent. A marriage is said to be consumated only by sexual intercourse. "A person whose mental or physical condition makes consumation of the marriage a practical impossible is impotent".\(^2\)

However, the infertility in which we are concerned is different than the impotency. It is the infertility which refers to the spouses who are capable of performing sexual intercourse but are incapable to produce a child. Therefore, the meaning of infertility in this context can be defined as the lack of genetic productivity in a spouse or spouses to create generation of their own children even after performing successful sexual intercourse repeatedly for a long time of their cohabitation with each other. In short, it means genetic inability in a spouse or spouses.

An expert opinion says, "Infertility is defined as 1 year of unprotected \textit{coitus} without conception".\(^3\)
"Both the terms infertility and sterility mean inability to conceive after one year of sexual life without contraception when the couple get worried for a baby".4

2.2 Types of Infertility:

Generally the infertility is of two types: Primary and Secondary or Acquired. But under special circumstances there is still another type of infertility known as unexplained Infertility.

(a) Primary Infertility:

When even after repeated sexual intercourse the female spouse has never conceived at all, it is called primary infertility. As per expert opinion, "Infertility may be primary where conception has never occurred".5 "Primary Infertility" is the term used for a couple who have never achieved a pregnancy.6

(b) Secondary or acquired infertility:

In this case the spouses are initially fertile and capable of producing a child but subsequently with decreased rate of fertility, they are unable to achieve pregnancy which means they have acquired infertility which can be improved with medical treatment.

In fact, in case of Secondary or Acquired infertility the position of spouses is that they have atleast once got the pregnancy but subsequently failed to have conception.

An expert opinion says, "Secondary Infertility" is the term used for a couple who have previously succeeded in achieving at least one pregnancy, even if this
ended spontaneous abortion".\(^7\)

"Infertility may be *Secondary (acquired)* where conception has failed to occur after a period of fertility".\(^8\)

(c) *Unexplained infertility* :-

Where there is everything normal with the spouses, they are medically found fit but still the conception does not take place and reasons for nonconception are not known even after careful diagnosis, it is called unexplained infertility.

As per an expert opinion, "There is also *Unexplained Infertility*, when there is no obvious abnormality found to explain infertility even after availing all currently available diagnostic facilities".\(^9\)

2.3 *Causes and Factors of Infertility both female and male* :-

"The incidence of infertility is 10\% in hospital statistics. In general population it is 2.5\% in India".\(^10\)

"At least 10\% of all married couples have an infertility problem".\(^11\)

(a) *Common Causes or Factors of Infertility in Females and Males* :-

The following are the common causes or factors in both the females as well as the males, which affect their genetic capability and make the fertile person an infertile one:-

- Poor general health and nutrition;
■ Emotional, psychological and depression;
■ Unfavourable socio-economic conditions;
■ Postponement of marriage;
■ Mental disorder, nervous breakdown;
■ Smoking;
■ Changing roles and aspirations for women;
■ Increasing use of contraception;
■ Deferment of conception, as well as increase in Abortion;
■ Increase in sexually transmitted diseases;
■ Age factor;

These factors can summarily be discussed as follows :-

It is a well known fact that good general health and nutrition keep body and mind fit and avoid visits to doctors. But general health is also associated with fertility. Though bad health is not an absolute barrier to conception, it directly affect the ovulation or spermatogenesis. Malnutrition and poor economic circumstances may reduce the general level of fertility. When their weight falls down to 35 Kg or less, the women fail to ovulate.12 Anxiety and tension are common in modern life and seem to be responsible for infertility in some individuals although no specific effect on the reproductive system can be demonstrated.13

Emotional and psychological behaviour coupled with unfavourable socio-economic conditions also contribute to ill-health, ultimately affecting the infertility. When a person acts emotionally and psychologically, the organic function cannot function normally and in some cases leads to depression which affects the fertility.
Postponement of marriage reduces the period of fertility in women. In U.S.A., "In 1960, 28% of women 20-24 were single; in 1985, 58.5%. In 1960, 10% of women 25-29 were single; in 1985, 26%. But only 16% of the decline in the total fertility rate is accounted for by the increase in the average age at first marriage; 83% of the decline in total fertility rate is accounted for by changes in marital fertility rates".1 4

Mental disorder and nervous breakdown obviously count for reducing fertility and increasing infertility.

Smoking has much contribution for adversely affecting genetic capability in both men and women. "Besides the well known impact of smoking on pregnancy, there is a growing story that fecundity is reduced in men and women who smoke".1 5

Increasing use of contraception and deferment of conception as well as increase in abortion are also the factors which reduces the period of fertility thereby reducing the capability of getting pregnancy in women with increase in their age. "Certainly the aging of the reproductive system plays a role, but spontaneous abortion is a major factor. The majority of early abortions after age 35 are due to autosomal trisomies, the incidence of which increases with maternal age. Indeed, spontaneous abortion related just to age is the most outstanding risk for an older woman who becomes pregnant, increasing from about 10% until age 30, to 18% in the late 30's, and 34% in the early 40's".1 6

Increase in sexually transmitted diseases, undoubtedly adversely affects the fertility leading to total infertility. This is one of the additional factors which affect the infertility at all ages, "as woman enter their 30's, there is a greater likelihood
of being affected by a number of diseases, for example *endometriosis*, that can interfere with fertility. Cumulative exposures to occupational or environmental hazards also could lessen fertility as a woman ages. Additional factors that have contributed to an increase in infertility at all ages are the spread of sexually transmitted diseases with their damaging effect on the *fallopian* tube, and *pelvic inflammation* secondary to IUD use.\textsuperscript{17}

"In at least 10 different populations, the decline of fertility among married couples with advancing age has been repeatedly documented. \textit{It is safe to say that about one-third of women who defer pregnancy until the mid to late 30s will have an infertility problem}.\textsuperscript{18}

Most important factor affecting the fertility and leading to absolute infertility is the age factor, which is more in women than men. "In the female conception can occur at any time after the \textit{menarche} and before the \textit{menopause}. Conception is rare in the first few cycles, which are commonly \textit{anovular}, and in the last few cycles before the menopause for the same reason. Fertility in women is at its height in the late teens and early 20s and declines slowly thereafter.\textsuperscript{19}

"An excellent modern study in England indicated the following causes and frequencies of infertility in couples (these percentages may not be completely applicable to infertility in other countries):\textsuperscript{20}:

- Unexplained \hspace{1cm} 28% of infertile couples
- Sperm problem \hspace{1cm} 21%
- \textit{Ovulatory} failure \hspace{1cm} 18%
- Tubal damage \hspace{1cm} 14%
■ Endometriosis 6%
■ Coital problems 5%
■ Cervical mucus 3%
■ Other male problems 2%.

"Pregnancies averaged 9.8 per mother. There were 22 pregnancies in the 45-49 age group, and 117 pregnancies during ages 40-44. The fertility of the Hutterites has become a living legend in its own demographic time. The total fertility rate of the Hutterites is used as an example of how high fertility can be when a population is healthy, stable, and not using contraception. Using their data, it can be concluded that a population which marries relatively late, has some lactational amenorrhea, and some age-related and parity-related decline in coitus, can produce 11 live births per married woman. If marriage were early, there were no lactational amenorrhea, and no sterilization or decline in coitus, the total fertility rate would be about 15 live births per woman."22

"The oldest pregnancy in modern times (according to The Guiness Book of World Records) occurred in a woman from Portland, Oregon, who delivered when she was 57 years and 120 days old. In older times, a Scottish woman was reported to have delivered 6 children after the age of 47, the last at age 62!"23

"Recent American data support evidence for a decline of fecundity with advancing age".24 "In data from 1976, 34-46% of women age 35 and older were unable to become pregnant. Unfortunately, there are demographic data to support the contention that one contributing factor to this decline is a decrease with aging in the frequency of sexual intercourse".25
"The French studied the pregnancy rate in a donor insemination program, including only women with azoospermic husbands. The decrease in conception rate per cycle was not great, but it was significant after 30 years of age, and then it accelerated after age 35. Below the age of 31 the pregnancy rate was 74%; this decreased to 62% at ages 31 to 35 and to 54% when the women were older than 35. An American study with artificial insemination with donors also documented a decreasing conception rate with increasing maternal age."

According to one expert opinion, mostly the combine male and female factors of infertility problems are due to :-

"1. Inadequate sperm production,
2. Failure of ovulation,
3. Abnormalities in female genital tract."

(b) Female Infertility :-

The main causes of female infertility are as follows :-

- Ovulatory failure;
- Tubal blockage;

When the female fails to ovulate, there cannot be any conception because it is only the ovulation that helps the germination of eggs in women which when fertilized with sperm give shape to the pregnancy. Similarly when the fallopian tubes are blocked in women, she cannot conceive at all, because this is the only passage which works as a courier to transport the sperm to contact eggs for fertilization. Obviously when the sperm do not have any contact with the eggs there is no question of fertilization, without which conception and pregnancy can never be achieved.
"Total failure to ovulate causes infertility as long as it persists, but infrequent ovulation is more common and results in relative infertility. Ovulation results from the pulsatile release of follicle stimulating hormone (FSH) and luteinizing hormones (LH) from the anterior pituitary gland under the influence of releasing hormone secreted by the hypothalamus. FSH brings about maturation of the selected Graafian follicle, while a mid-cycle surge of LH causes the release of the ovum from the follicle, which then becomes the corpus luteum. Any disturbance of this chain of events may cause failure of ovulation".29

"Salpingitis caused by infection after abortion or delivery, by gonorrhoea, chlamydia or tuberculosis, or by pelvic peritonitis from acute appendicitis, may damage the tubal epithelium and in severe cases brings about tubal blockage. This most commonly occurs at the outer end where the fimbriae adhere together, or in the very narrow interstitial part of the tube. When the tubes are not completely blocked, fertilization of the ovum may still take place in the tube, but because of the damage to the ciliated epithelium it may not be carried down the tube to the uterus, and an ectopic pregnancy results".30

"Failure to ovulate is the major problem in approximately 40% of women with infertility, another 30-50% have tubal pathology, and 10% or less have a cervical barrier to fertility".31

Other factors in female infertility are :-
- "Coital problems;
- Cervical muscus;
- Endometriosis;"32
- "Hypothyroidism;
(c) Male Infertility :-

The male infertility is mainly because of the defects in the sperm if the male is not otherwise impotent. Though age factor does not affect the fertility of the males yet the sperm counts reduces with old age which reduces the degree of fertility in male and increases infertility.

"In the male spermatogenesis commences actively at puberty and continues throughout life, but ageing reduces fertility to a variable extent".34

The main cause of male infertility is deficiencies in the semen. Normally more than 60% of the sperm should have a normal shape for healthy conception. If the sperm count is less than 60% chances of infertility in male are more. In short, we can say if the sperm count is low infertility is high.

Earlier, only women were considered to be infertile and held responsible for not conceiving but recent studies have revealed that men also contribute towards infertility to the extend of 40%, which is clear from the expert opinion as quoted below :-

"The perception of the degree of male involvement in infertility has undergone
a number of revisions during the past 50 years. Initially, infertility was considered primarily a female problem. This notion gave way to the realization that 40% of infertility is wholly or in part due to a male factor. More recently, there have been attempts to redefine, in a downward direction, the lower limit of "normal" for a sperm count. Thus, many men who in the past would have been categorized as subfertile now are considered normal, and the focus has turned to their female partners. 

The infertility; whether of male or female spouse is the root cause blocking the entire course of pregnancy to beget NBB. This blockage renders the married couple issueless. This factor of rendering a couple issueless has invariable emotional impact which has consequential effects, both individual as well as social, germinating lust for TTB. Therefore, it is essential to analyse the individual as well as social impact of emotions arising out of infertility which is being dealt hereinafter.
NOTES AND REFERENCES (CHAPTER - 2, PART - 1)

1. The Hindu Marriage Act, 1955, s. 12(1)(a); also see The Dissolution of Muslim Marriage Act, 1939, s. 2(v).


5. Ibid.


7. Ibid.

8. Prof. C. S. Dawn, n. 4.


10. Ibid.

11. STANLEY G. CLAYTON & Ors, n. 6.

12. Ibid.
13. Ibid., p. 263.
15. Ibid., p. 519.
16. Ibid., p. 516.
17. Ibid., pp. 515-516.
18. Ibid., p. 515.
19. STANLEY G. CLAYTON & Ors, n. 6.
21. Ibid.
22. Ibid., p. 515.
23. Ibid.
24. Ibid.
25. Ibid.
26. Ibid.
27. Ibid.
28. Prof. C. S. Dawn, n. 4, p. 215
29. STANLEY G. CLAYTON & Ors, n. 6, p. 263.

30. Ibid.


32. Ibid., p. 518.

33. STANLEY G. CLAYTON & Ors, n. 6, pp. 263-264.

34. Ibid., p. 262.


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