

INFERTILITY TREATMENTS AND THE CONCEPTUAL DILEMMA OF INFERTILITY: IS THERE A RIGHT TO REPRODUCE?*

1.0 INTRODUCTION

Some of the new medical techniques for treating infertility and/or involuntary childlessness are currently in use in Nigeria. It is not altogether certain whether the rate of infertility or involuntary childlessness¹ is increasing or not. It appears however that the level of public awareness and discussion of issues surrounding infertility are increasing. As a direct response to this increase in awareness and discussion, or perhaps its cause, many specialist infertility treatment centres are springing up all over the country in addition to the obstetrics and gynecology departments of Teaching hospitals in the country.²

Infertility or involuntary childlessness is itself in need of conceptual clarification. The question is whether it is a social depiction of a medical problem or conversely, a medical terminology for a socially constructed state/condition. Emphasis shifts on the word 'medical' and 'social', importantly because different consequences may flow from whichever of these terms infertility or involuntary childlessness is conceived to be.

This paper examines the prevalence and causes of infertility and involuntary childlessness generally and with particular reference to Nigeria. It equally examines the techniques for treating infertility and alleviating involuntary childlessness in the country. The central focus however is a consideration of the conceptual dilemma of infertility or childlessness. The relevant question to be addressed is whether infertility can be conceptualized as a medical or social problem. This naturally flows into the question whether constitutional right to reproduce or to be assisted to reproduce at state expense can be invoked or claimed especially under enforceable national and international law in Nigeria. The paper will then conclude and make recommendations in consonance with the discussions.

2.0 DEFINITION, CAUSES AND PREVALENCE OF INFERTILITY

2.1 Definition

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1 There is a fine line of distinction between infertility, per se, and (involuntary) childlessness which distinction is nevertheless important and shall be discussed later on in this paper.

2 Specialist Infertility Centres in Nigeria include, Nisa-Premier, Abuja; Advanced Fertility Clinic, Lagos; The Bridge Clinic, Lagos; Providence Hospital, Lagos; Nordica Fertility Centre, Lagos; Medical ART Centre, Lagos; Women's Health and Action Research Centre in Benin City; and the O & G Clinics/departments of University Teaching Hospitals scattered all over the country; see also R.A.Ajayi et al, "Live Birth After I.C.S.I. in the Management of Oligospermia and Azoospermia in Nigeria" (April 2003) African Journal of Reproductive Health, Vol. 7 No 1, pp121-124, available at: <http://www.bioline.utsc.utoronto. G/archive/0001706/01/rh030> (accessed on 05/12/2006).

IVF and many other ART are high technology procedures requiring a high level of expertise and involving the use of specialized medical equipment that may not be widely available within Nigeria, Nigerian specialists in the area usually collaborate with foreign partners in this regard. For example, The Nordica Fertility Centre in Lagos is associated with Nordica International, Denmark, while The Bridge Clinic also in Lagos is affiliated to King's College London, see <http://nordicalagos.com/infertility.php> (accessed on 05/12/2006) and http://www.fertilityworld.org/content/doc_810/en/version1 (accessed on 05/12/06), respectively.

In general terms, fertility is the human ability to impregnate a female and/or conceive a baby through heterosexual intercourse. The majority of adult males and females engaging in regular unprotected intercourse will achieve pregnancy after a while if they are fertile. Infertility on the other hand is not as clearly defined. Infertility is a disorder of the reproductive system that affects the body's ability to perform basic function of impregnation and/or conceiving children. The point at which an individual or a couple can be said to be infertile is not precise. In other words, there is no common definition of infertility. However, Professor Dickens has provided an often quoted summary of some of the alternative definitions of infertility thus:

*Infertility includes infecundity, meaning inability to conceive or impregnate, and pregnancy wastage, meaning failure to carry a pregnancy to term through spontaneous abortion and stillbirth; Infertility includes primary infertility, where a couple has never achieved conception, and secondary infertility, where at least one conception has occurred but the couple is currently unable to achieve pregnancy.*³

G. Douglas went further to emphasize this, stating that:

*To constitute a problem, such inability to produce a child must have continued for a certain length of time. It has been estimated that 63 per cent of normally fertile women having unprotected sexual intercourse with a fertile partner will conceive within six months, and 80 per cent will conceive by the end of one year. A failure to conceive within a year may therefore indicate a potential problem and we shall take infertility to mean this.*⁴

Infertility is thus reckoned also by reference to the length of time for which the inability to produce a child has continued. The World Health Organization defined infertility as a failure to conceive following 24 months of normally frequent unprotected sexual intercourse.⁵ Demographers, on the other hand, may take five years as the significant period.⁶ This variety of definitions shows that infertility is not objectively determined. However, the baseline of 12 months is the usual period by which couples in the developed world are regarded and admitted by clinics as infertile, for example the Royal Commission on New Reproductive Technologies and similar Commissions in Canada adopts the 12 months baseline.⁷ The 12 months reckoning is also prevalent in

3 B. Dickens, "Reproduction Law and Medical Consent" (1985) 35 U.T.L.J. 255 at 281; see also G.Douglas, *Law, Fertility and Reproduction*, (London: Sweet and Maxwell, 1991), pp104-05, and R. Mykitiuk & A. Wallrap, "Regulating Reproductive Technologies in Canada", in J. Downie et al, ed., *Canadian Health Law and Policy*, 2nd ed. (Canada: Butterworths, 2002), p. 372.

4 Douglas, G., op cit, p. 104-105.

5 See Bernard M. Dickens, "Ethical issues arising from the use of assisted reproductive technologies" in Effy Vayena, Patrick J.Rowe and P. D. Griffin, ed., *Current Practices and Controversies in Assisted Reproduction: Report of a World Health Organization meeting on 'Medical , Ethical and Social Aspects of Assisted Reproduction'* (Geneva: W.H.O., 2002), p.344. [Hereafter, 'W.H.O. Report on ART']

6 G.Douglas, *Law, Fertility and Reproduction*, (London: Sweet and Maxwell, 1991), p. 105.

7 See Bernard Dickens, op cit, (note 5), p. 344; see also R. Mykitiuk & A. Wallrap, op cit, p. 372.

Nigeria⁸ but it is not unusual for gynecologists in Nigeria to discourage couples from seeking infertility services until they have failed to conceive for 24 months.⁹

The significance of the baseline lies in the fact that couples or individuals may be prematurely labeled as infertile when they are still within the period when conception could still naturally have taken place and thereby suffer unnecessary anxieties and become vulnerable to exploitation.¹⁰

2.2 Prevalence

Estimates about the prevalence of infertility worldwide vary. An estimated 580 million people (approximately 5-8% of couples) experience infertility at some point in their reproductive lives. Of these, nearly 372 million persons (about 186 million couples) reside in low- and middle-income countries with the exclusion of China.¹¹ Africa thus shares the largest burden of infertility with an average of between 10-32% of couples experiencing infertility.¹² Generally it might be difficult, if not impossible, to be completely sure how prevalent infertility is. This is because some couples make a deliberate decision not to have or raise children or to delay childbirth until a particular event or circumstance exists.¹³

Infertility seems to be on the increase in Nigeria. The prevalence of infertility in Nigeria has been studied in demographic surveys, epidemiological surveys and through clinical observations. According to Okonofua,¹⁴ the Nigeria DHS survey for the period 1994-2000 reported a prevalence rate of primary infertility of 22.7% in 15-49-year old women and 7.1% in 25-49-year-olds.¹⁵ A better picture of the prevalence of infertility in Nigeria could be obtained from actual clinical practice. It was observed that infertility is a major burden on Clinical service delivery in the country, being more than 50% of gynecological caseloads and constituting over 80% of laparoscopic investigations.¹⁶ This statistic was backed up by the management of the Nordica Clinic, an assisted reproduction service centre in Lagos, Nigeria, stating that 40-50% of all consultations in gynaecological clinics in the country are done for infertility and that infertility affects 20-

8 See <http://nordicalagos.com/infertility.php> (visited: 05/12/2006); see also S.O. Ogunniyi, "Epidemiology and Aetiology of Infertility" (May, 1999) IFEMED, Obafemi Awolowo University, Vol. 8, No. 1, p.1. [Hereafter, IFEMED]

9 See http://www.fhi.org/en/RH/pubs/Network/V23_2/nt2321; see also F.E.Okonofua et al, "The Social meaning of infertility in Southwestern Nigeria" (1997) Health Transition Review 7 at 206, available at: <http://htc.anu.edu.au/pdfs/Okono1.pdf> (visited: 05/12/2006).

10 The concern, as pointed out by Professor Dickens, op cit, (note 5), p. 344-5 is that some infertility service providers are being 'aggressively entrepreneurial and self-serving in admitting applicants of normal fertility or slight subfertility'.

11 See F.E. Okonofua, *Female and Male Infertility in Nigeria*, (Stockholm, Sweden: Karolinka University Press, 2005), p. 9.

12 Ibid; see also A.I. Isawumi, "Management of Infertility: A Broad Overview" IFEMED, p. 11.

13 See Douglas J. Cusine, *New Reproductive Techniques: A Legal Perspective*, (England: Gower Publishing Company Limited, 1988), p. 5; the author stated however that it is frequently estimated that between 10 and 15 percent of all marriages are infertile. The statistical difficulty of getting an accurate estimate of the number of couples who are infertile was also noted in an Ontario Commission Report on Assisted Reproduction. Among infertility practitioners consulted in the course of generating its Report, the Commission found a consensus that approximately 15-20% of couples are affected by infertility, see Ontario Law Reform Commission, *Report on Human Artificial Reproduction and Related Matters*, Vols I & II (Ontario: Ministry of the Attorney General, 1985), p. 10. [Hereafter, OLRC Report on H.A.R.]

14 Op cit.

15 Ibid.

16 Ibid, p. 13.

25% of married couples in the country.¹⁷ It has reached such an alarming level that so much hype is made about it in the Nigerian media. The fact however is that the issue of infertility and decreasing birth rate is widespread.¹⁸ In the developing world, the average woman is reported now to have 3.9 babies over a lifetime compared with 5.9 in the 1970s.¹⁹ According to Abdallah Daar and Zara Merali, the prevalence of infertility in developing countries is difficult to assess given the inconsistencies in defining infertility. In sub-Saharan Africa however, the authors stated that up to one third of couples are infertile.²⁰ This is supported by the finding of a Nigerian gynaecologist, Osato Giwa-Osagie who estimated that 10%-25% of adult couples in African countries are subfertile and of these subfertile couples, female factors account for about 55%, male factors for about 30%-40% of causes, while 5%-15% of causes are unexplained.²¹

Male and female factors are implicated in the infertility problems. Reports from various parts of Nigeria vary with respect to the distribution of prevalence of infertility among males and females. Some reports showed an equal contribution, others showed a disproportionate contribution.²² However, infertility, within and outside matrimony, is usually attributed to and blamed on women and they bear the brunt of it in Nigeria in several ways.²³ Responsibility for a childless marriage is imputed to the wife and mainly to her alone. Infertility is seen in Nigeria as barrenness and only women are thought to be barren, notwithstanding empirical medical evidence to the contrary. One of the consequences is that attention and research have been focused on female infertility to the neglect, and detriment, of male infertility.²⁴

2.3 Causes and Predisposing Factors

Decreased fertility or increased infertility has been attributed to various factors. As stated by Okonofua, the four main categories of causes of infertility recognized in clinical practice are:

(i) Male Infertility (ii) Female infertility (iii) Infertility in both male and female partners and, (iv) When both partners are individually fertile, yet they are infertile as a couple.²⁵ According to Jean McHale, et al.,

One factor is changing patterns of sexual behaviour which carry an increased incidence of sexually transmitted diseases, especially pelvic inflammatory diseases. Decreasing fertility levels are also linked to contraceptive methods....Changes in the role of women which have entailed postponement of childbearing have also played a role....infertility problems may be connected with a range of work

17 See supra; see also http://www.fertilityworld.org/content/doc_810/en/version1 (accessed on 05/12/2006) stating that the rate or prevalence of infertility in Nigeria is high.

18 Another estimate is that between 60 -168 million people are infertile globally, this is about 8-12% of all couples worldwide, see http://www.fhi.org/en/Pubs/Network/V23_2/nt2321 9visited on 05/12/2006); see also Emily McDonald Evens, "A Global Perspective on Infertility: An under Recognized Public Health Issue"(Spring 2004) Carolina Papers: International Health, No. 18 available at: <http://www.ucis/unc.edu/resources/pubs/health/Evens> (accessed on 06/12/2006).

19 See The Economist, January 29th- February 4th, 2005, p.6.

20 See Abdallah S. Daar and Zara Merali, "Infertility and Social Suffering: the case of ART in developing countries" in W.H.O. Report on ART, p. 16.

21 See "ART in developing countries with particular reference to sub-Saharan Africa" in W.H.O. Report on ART, p. 22.

22 F.E. Okonofua, supra, op cit, p. 14; see also S.O. Ogunniyi, op cit, p. 2-3 and K.D. Thomas, "Recent Studies in Male Infertility in Ile-Ife" IFEMED, op cit, p. 36-37.

23 See K.D. Thomas, ibid; see also, "Infertility in Developing Countries" (November 1997) Outlook, Program for Appropriate Technology in Health (PATH), Vol. 15, No. 3, p. 1.

24 F.E. Okonofua, op cit, p. 14.

25 Ibid; see also, OLRC Report on H.A.R., p. 11.

*place hazards and environmental oestrogens. Allied with a decrease in the number of healthy babies available for adoption.*²⁶

The observation that infertility is caused by sexually transmissible diseases is buttressed by Osato Giwa-Osagie when he wrote that:

*The most common cause of infertility in Africa is infection of which the two sexually transmitted infections (STIs), gonorrhoea and Chlamydia are the main culprits in both males and females...After STIs, infections during and after childbirth represent the next major cause of female infertility in Africa.*²⁷

Furthermore, in the male, causes of infertility include blockage of the sperm duct, low sperm density/count or motility and complete failure of the testes to produce sperm cells.²⁸ Within the context of Nigeria and sub-Saharan Africa in particular, the commonest cause of female infertility is the tubal factor; that is, diseases affecting the fallopian tubes. Apart from occlusion of the fallopian tubes, a woman may not ovulate at all; the genital (reproductive) passages may be obstructed, preventing sperm from getting through to the uterus or fallopian tubes or there may be hostile cervical mucus or antibodies produced by the body of the woman making it impossible for the sperm to be active or potent; and the uterus and its lining (the endometrium) may be abnormal, absent or otherwise unsuitable for implantation and development of fertilized egg.²⁹

Apart from preventable sexually transmissible infections or diseases such as gonorrhoea and Chlamydia; other factors which cause or aggravate a condition of infertility are lifestyle related factors such as obesity, weight gain or loss, eating disorders and malnutrition, and excessive exercise; abuse of illicit drugs, nicotine, alcohol or caffeine; medical procedures with unintended effects, for example, abortion or post abortion infections, sterilization and contraception mishaps; as well as advancing maternal age which diminishes egg quality and ovulatory functions.³⁰

Though medical factors dominate causative factors of infertility, societal factors equally predispose persons, especially women, to infertility. Many women are marrying later in their lives and couples are waiting longer before producing children. The difficulty of achieving pregnancy and risks attached to it increases with age, with female fertility declining significantly between the ages of 30 and 35.³¹ Similarly, many couples seek professional assistance to alleviate infertility problems only after several years of failed attempts whereas the efficacy of successful treatment of female infertility is affected adversely as the period of infertility prior to treatments is prolonged.³²

26 See Jean McHale, Marie Fox and John Murphy, *Health Care Law: Text, Cases and Materials* (London: Sweet and Maxwell, 1997), p. 627.

27 See Osato F. Giwa-Osagie, "ART in developing countries with particular reference to sub-Saharan Africa" in W.H.O. Report on A.R.T., op cit, p. 22.

28 See OLRG Report on H.A.R., p. 12. In most places and especially in Nigeria, if the male can sustain an erection and produce semen, he will generally have no doubt about his virility. He may be unwilling to accept that he is infertile, or that the quality of his sperm, if any, is not good enough to father children; see Douglas J. Cusine, op cit, p. 6-7.

29 Ibid; see also Michael H. Shapiro, et al, *Cases, Materials and Problems on Bioethics and Law*, (St. Paul, Minnesota: West Publishing Co, 1981), p. 503-5; S.O.Ogunniyi, op cit, p. 2-3.

30 See, <http://nordicalagos.com/infertility.php> (visited 05/12/2006); http://www.fhi.org/en/RH/Pubs/Network/V23_2/nt2321 (accessed 05/12/2006); <http://www.ucis.unc.edu/resources/pubs/health/Evens> (accessed 06/12/2006); see also R. Mykitiuk & A. Wallrap, op cit, p. 373.

31 See OLRG Report on H.A.R., p.13; see also R. Mykitiuk, et al, ibid.

32 Ibid.

Sets of socio-cultural practices also cause or contribute to high incidence of infertility in Nigeria and generally in the African sub region.³³ These include 'Genital scarification or mutilation, and vaginal incisions' which offer portals of entry for genital infections which can, and do, damage the fallopian tubes. Child marriages and underage pregnancies, which often lead to complications of labour and the puerperium, as well as labour and delivery in unhygienic circumstances, cause secondary infertility.³⁴ In addition to unsafe abortions in adolescents and young adults as major causes of secondary infertility in Africa, it was further observed that:

*The rotation of mating dates between wives in a polygamous marriage easily leads to intercourse at non-fertile times as well as infrequent individual female exposure to sexual intercourse which may be a cause of infertility.*³⁵

Though it is recognized that causes of infertility may not be discovered in many couples, it seems apparent that the most prevalent causes are medical conditions in males and females, as well as due to ineffective health care service deliveries or post operation complications. Some of these causes are preventable.

3.0 INFERTILITY ALLEVIATION: IS ADOPTION AN OPTION?

When patients present with fertility problems, specialists would first conduct thorough medical investigation which may include detailed sexual and medical history, blood tests, ultrasound scans, semen analysis, pelvic examination and if necessary, more invasive testing or examination of the woman's fallopian tubes and uterus or the man's sperm passage.³⁶ Infertility investigations may be invasive but their importance for the purposes of accurate diagnosis and discovery of appropriate remedial measures cannot be overemphasized. Remedial measures may 'range along a continuum from simply counseling a couple in relation to the frequency and timing of intercourse to the more esoteric artificial conception technologies'³⁷ Conventional infertility therapy, apart from counseling, may include hormonal treatment and corrective surgeries, which may eventually lead to conception for the couple.³⁸

Where infertile couples do not respond to conventional therapy, alternatives may be for them to remain childless, to seek adoption or to take advantage of the non-conventional assisted reproductive technology.³⁹

The idea of remaining childless is indeed no option for infertile couples in Nigeria, and presumably anywhere else, owing to the social and cultural importance of having children. In countries where child adoption is a viable option, many infertile couples turn to it. However, the child adoption system in Nigeria is virtually non-existent

33 Two separate research findings in Nigeria, conducted between 1980-1989 at the University of Nigeria Teaching Hospital in Enugu and from 1967-1996 at The University College Hospital, Ibadan, indicate that various traditional practices such as female genital cutting and insertion of caustic vaginal pessaries lead to vaginal stenosis which makes conception difficult for women, see http://www.fhi.org/en/RH/Pubs/Network/V23_2/nt2321 (accessed on: 05/12/2006).

34 See Osato F. Giwa-Osagie, "Social and ethical aspects of assisted conception in Anglophone sub-Saharan Africa" in W.H.O. Report on ART, p. 51; see also "Female Circumcision could lead to infertility", Nigerian Tribune (National Newspaper), Thursday 4th, August 2005, p. 23.

35 Osato Giwa-Osagie, *ibid.*

36 See Diane M. Yoakam, "Treating Infertility" at: <http://www.healthatoz.com/healthatoz/AtoZ/repr/infr/infertility.jsp> (accessed on 14th July, 2005); see also F.O.Dare, "Investigations in Infertility" and J.I. Brian-Adinma, "Investigations of Infertility" both in IFEMED, at pp. 4-7 & 8-10, respectively.

37 See OLRC Report on H.A.R., p. 14.

38 *Ibid.*, at 15.

39 *Ibid*; see also Douglas J. Cusine, *op cit*, p. 8.

notwithstanding statutory provisions in that regard. Very few individuals or couples resort to adoption in Nigeria and it does not constitute, at present, an alternative or a promising complement to infertility treatments in the country. There are many reasons for this.

First, many are not aware of this option at all and where they are, many do not know how to proceed if they wish to adopt a child. Second, many prefer to have a child that is genetically or biologically theirs. They will rather keep on trying to conceive than seek to adopt, even where they are aware of the option. Third, is the unlikelihood of finding a child of choice to adopt. Couples usually may prefer to adopt a child of the same or as near ethnic origin as they are. A child that will share their characteristics as much as possible such that people are not likely to know that the child was adopted. Although this is not farfetched, it further encumbers the attempt to find a child of choice to adopt. Adoption from a very close family member or relation, for example, is not always as easy task.

Again, infertility is socially stigmatized in Nigeria; adoption is unlikely to remove that stigma. Couples who successfully adopt children are not by such step free from the stigma of childlessness as long as it is known that their children were adopted. Apart from the stigma, and especially within the extended family network, some other harsh and highly disturbing social disadvantages are attached to childlessness and they are not removed by the fact of adoption. The adopted children may not be accepted or assimilated into the extended family system invariably because they are outside of the ancestral bloodline, they are considered as strangers.⁴⁰

These factors make adoption not to be as attractive a method of alleviating childlessness in Nigeria as it could be elsewhere, especially in the developed world. However, even in the developed world, adoption is no longer a real alternative to infertility treatment or alleviation procedures for many couples. This is a consequence of many factors which include increasing social acceptability of single mothers, greater willingness on the part of unwed mothers to rear their own children, accessibility of birth control knowledge and technology, a liberalized abortion system-all these mean fewer healthy infants are available for adoption.⁴¹

Adoption is also a less attractive alternative than assisted reproductive technology because many couples regard its process as an unduly intrusive interference with their lives, as the approval process subjects them to thorough and detailed scrutiny by social workers and inevitably compromises their personal privacy.⁴²

Therefore, although theoretically adoption affords a solution to involuntary childlessness, the stigma around it and the other factors restricting its practical availability make it less of an option to infertile couples to ease the burdens of their infertility. Recourse is therefore made to the last resort, seeking conception by assisted reproductive technology.

4.0 METHODS OR PROCEDURES OF INFERTILITY TREATMENT

The following is a brief summary of currently available methods of assisted reproductive technologies some of which are being taken advantage of in Nigeria.⁴³

4.1 Artificial/Assisted Insemination:

This has been a standard procedure for more than five decades now. Assisted Insemination involves the collection of sperm outside the body and its introduction into

40 Similar 'discrimination' may be experienced in ART procedures involving gamete donations; this will be discussed later in this paper.

41 See OLRC Report on H.A.R., p. 15-16.

42 Ibid.

43 See J.E. Esangbado, "Recent Advances in Assisted Reproductive Technology" IFEMED, op cit, p. 24-30.

the uterus for the purpose of inducing conception. Such introduction will be timed to coincide with the period when the woman to be artificially inseminated has ovulated. It can be used to overcome male infertility problems, for instance weak sperm, low sperm count or total failure of the testes to produce sperm, by concentrating sperm before insemination or by sperm donation.

The sperm for assisted insemination may be procured, in the case of unmarried couples, from the partner of the woman who is to be inseminated (Assisted Insemination by Partner: AIP) or, in the case of married couples, from the husband (Assisted Insemination by Husband: AIH) or from usually an anonymous donor (Assisted Insemination by Donor: AID or Donor Insemination: DI)

Assisted insemination is a more or less simple procedure which may be performed without the help of medical practitioners except where the male partner has a low sperm count or low sperm motility. It is about the most widely accepted of the assisted methods of reproduction.⁴⁴

4.2 *In Vitro* Fertilization (IVF)

Some types of infertility that are not otherwise amenable to treatment by conventional means and by artificial insemination may be treated by *in vitro* fertilization (IVF). Where female infertility is caused by obstruction of the fallopian tubes, which prevents the passage of the egg from the ovary to the uterus or by the absence of the fallopian tubes, IVF would effectively surmount the barrier. This procedure involves three stages. First the woman is given medications that stimulate multiple egg/ova development. Then, mature eggs are retrieved surgically and fertilized in a laboratory dish with the partner's or donor's sperm. Thus fertilization occurs outside the body of the woman. The zygote or resulting embryos are then cultured in the laboratory for about three days and then transferred to the woman's uterus. Multiple embryos are usually transferred to increase the probability of success, and if all goes well, at least one of the embryos will implant in the uterine lining, and pregnancy will progress normally resulting, possibly, in a live birth.⁴⁵

IVF is a highly technical and 'risky' medical intervention, unlike artificial insemination, 'it cannot be performed with instruments that one finds in a kitchen'.⁴⁶ It is not only technical and being improved upon steadily, it is expensive, depending on the number of cycles of treatment a woman undergoes before successful pregnancy is attained.⁴⁷ Thus, IVF is mostly available to the affluent especially where the cost of the procedure is not covered by medical insurance or otherwise borne by the state. It is increasingly becoming popular in Nigeria.

4.3 Gamete Intra-Fallopian Transfer (GIFT)

With this procedure, fertilization occurs inside the body. As in the case of IVF, the woman is given medications that stimulate multiple egg development. Immediately after her mature eggs are removed, they are mixed with her partner's or donor sperm, and a catheter is used to transfer this mixture into the woman's fallopian tubes. Fertilization may then take place in the fallopian tubes, the resulting embryos will move down to the

44 See Jean McHale, et al, op cit, p. 631-633.

45 See Diane M. Yoakam, op cit. While the practice of implanting multiple embryos remains in some cases, modern emphasis is moving to single embryo transfer as the technique of IVF improves and especially to reduce risks and harms of multiple pregnancies.

46 Barry R. Furrow, et al, Health Care Law and Ethics, 3rd ed, (St. Paul, Minnesota: West Group, 1997), p.104.

47 Ibid.

uterus, if all goes well, the resulting embryos will implant in the uterine lining, and pregnancy will progress normally, resulting in a live birth.⁴⁸

4.4 Zygote Intra-Fallopian Transfer (ZIFT)

This technique is a combination of IVF and GIFT. As with IVF, fertilization occurs outside the body. However, the resulting embryos are cultured for only two days (instead of three), and they are transferred to the woman's fallopian tubes via a catheter.⁴⁹

4.5 Intra-Cytoplasmic Sperm Injection (ICSI)

This procedure is a variation of IVF. With IVF, sperm and eggs are mixed in a laboratory dish and allowed to interact without medical intervention. With ICSI however, the probability of fertilization is increased by using micromanipulation equipment to inject a single sperm into a single egg. This reduces the possibility of multiple pregnancies, except where the procedure is repeated for that purpose. The procedure is recommended for men who have low sperm counts.⁵⁰

4.6 Donation of Gamete and Embryo

In relation to assisted insemination and IVF and its variants, the issue of sperm, egg and/or embryo donation becomes relevant. Eggs, sperm and embryos can be frozen through a process known as *cryopreservation* and these can often be thawed later and be available for use by anybody who desires them, particularly women or men with significantly diminished egg or sperm quality respectively.⁵¹

4.7 Surrogacy

This is an arrangement whereby a woman who for whatever reasons cannot conceive or carry pregnancy to term commissions another woman to carry the pregnancy on her behalf. This other woman is usually called the surrogate mother. Surrogate pregnancy may be established in a number of ways. The surrogate mother or woman may be fertilized with the commissioning man's sperm either as a result of sexual intercourse with the man, through assisted insemination or in vitro fertilization. Thus, she not only carries the baby but has a genetic link to it. Another way is where the commissioning couple provides both sperm and ovum so that the resulting child is genetically entirely theirs, although carried by another woman.⁵² A third possibility is where the commissioning couple secure donor sperm and egg (or an embryo) which is subsequently fertilized and implanted in the surrogate mother. This arrangement is otherwise termed 'womb leasing'.⁵³ Surrogacy alleviates childlessness where a woman could not have a child because she suffers from severe pelvic disease, has no uterus, experiences repeated miscarriages, where pregnancy is medically undesirable or where

48 See Diane M. Yoakam, op cit; see also Barry. R. Furrow, et al, op cit, p. 105.

49 Ibid.

50 Ibid.

51 Ibid., See also Jean McHale, et al, op cit, p. 682-685. It should be noted however that until recent advances in technology some cryopreserved gametes, especially eggs, do not survive the thawing process, thus they may not be successfully used to create embryos especially where the technology is not available.

52 See Jean McHale, et al, ibid., at 634-635

53 Ibid.

a woman who is otherwise fertile decided not to go through the burden or risks of pregnancy.

4.8 Some Other Methods

In addition to the methods discussed above, there are other procedures currently being researched and even practiced in some countries. These include:

- Reproductive cloning, which, in contrast to therapeutic cloning, is not being seriously pursued or allowed in some countries.
- Embryo Transfer or embryo lavage.
- Embryo splitting, where the original embryo created through IVF is divided into two or more while it is still at the totipotent stage.
- Use of eggs Derived from Aborted Fetuses.

and some other procedures currently undergoing research or experimentation.⁵⁴

Apart from procedures mentioned under item 8 above, all the other methods are available and currently being used in Nigeria.⁵⁵ Embryo freezing is available in two centres in Nigeria while oocyte donation is available in four centres. One centre in Lagos has practiced surrogate motherhood and many centres are involved in nearly all the other procedures earlier discussed.⁵⁶

5.0 INFERTILITY AS A SOCIAL OR MEDICAL PROBLEM

5.1 The Social Problem Argument

Infertility has been perceived as a social problem, a condition that deviates from the social norm. The social norm involves the model of a nuclear family, consisting of married heterosexual parents and their biologically related children.⁵⁷ Under this model, infertility deviates from the 'ideal family', thus generating strong social pressure to satisfy the norm for couples to procreate. The basic assumption is that the need and desire to have children is a normal part of the lives of ordinary people. Indeed for women, the pressure is greater because they have 'historically been defined and identified through their roles as mothers'.⁵⁸

Inability to reproduce has conventionally or generally been labeled 'infertility'. However, a subtle distinction has been made between infertility per se and a state of involuntary childlessness which distinction has bearing on their perception as medical or social conditions. Remedial measures for infertility may be simple counseling in relation to the frequency and timing of intercourse. Infertility may also be subject to conventional therapy which may include hormonal treatment, use of fertility drugs or corrective surgeries. These measures may bring an individual's or couple's infertility to an end, in other words, their condition of infertility is amenable to medical/surgical treatment. Thus, the affected individual or couple becomes fertile or is returned to a fertile state post-treatment, cured without the need for a third party involvement in their reproductive attempts.

In many cases, infertile couples fail to respond to conventional therapy or medical attempts to address their infertility. Such people take advantage of the non-conventional

54 See generally, Government Proposals to Amend the Human Assisted Reproductive Technology Bill: Questions and Answers at <http://www.justice.govt.nz/pubs/other/pamphlets/2003/hart/questions.html> (Accessed on 14th July 2005).

55 See Osato F. Giwa-Osagie, ART in developing countries with particular reference to Sub-Saharan Africa, in W.H.O. Report on ART, p. 23

56 Ibid., at 24-25

57 See R. Mykitiuk et al, op cit, p. 373.

58 Ibid.

modern techniques of assisted reproduction as highlighted above. Even when they have successfully undergone such non-conventional techniques, their primary condition of infertility remains. It could therefore be said that the modern techniques of assisted reproduction to which such people resort are directed, not at treating infertility per se, but at alleviating their condition of involuntary childlessness. In other words, at addressing a condition which they are unwilling to accept mainly because advanced technological procedures are available that could help them and they could afford it.

Subtle as it is, the distinction between those who may be regarded as infertile and amenable to medical treatment and those who are infertile but not amenable to conventional therapy is important in two respects. First, the former easily may claim an entitlement to access medical treatment that potentially could cure their infertility whereas the former may not as easily lay such claim. The other implication is that the former may also lay claim to state assistance to enable them access the required treatment under state's obligation to cater to the health, welfare and well being of its citizens. If this obligation is accepted, the state may be unwilling to extend such advantage to the later category because their condition cannot be 'treated', or cured in spite of medical efforts. This distinction is applicable and of relevance in those countries where the state is obliged to fund medical procedures sought by citizens as long as the procedure is regarded as 'medical treatment'. The argument therefore is that ART or modern techniques at 'treating' infertility falls outside medical treatment because the condition meant to be addressed by the techniques would remain in spite of treatment and also because people resort to them out of social pressure to have children. Not surprisingly, such argument has attracted controversies by those who assert or maintain that the distinction is not tenable and is altogether unjustifiable and unreasonable.

Some critics of modern assisted reproductive techniques also point to the use being made of the techniques to satisfy desires that go beyond simply having children to argue against it. They argue that many individuals who are not in need of medically assisted reproduction are turning to it to satisfy their desire for designer or perfect babies, in other words, babies with certain physical and or biological characteristics such as height, skin and eye colour, intelligence, etc. The level of development in the science and art of assisted reproduction have reached a stage where the techniques can be manipulated to realize such desires. For instance, Pre implantation Genetic Diagnosis (PGD) as well as other means of genetic engineering affords couples opportunities to select certain characteristics for their offspring prior to implantation. The original purpose for the development and application of PGD is to enable prospective parent (s) avoid the birth of a baby which might carry or inherit undesirable genetic trait from them. While this is accepted as legitimate and ethically justifiable, the use of the same procedure for sex selection and other selections which reduce children to the status of made-to-order merchandise has attracted moral, ethical and indeed legal objections. This modern day reality reinforces the perception that infertility is more of a social condition than a medical problem. As observed by a writer:

*Increasingly, what is being asserted is not simply a right to reproduce, but a right to produce a perfect baby.*⁵⁹

The writer noted further that:

The reproductive technologies ... which permit more control over the reproductive process than was ever previously possible, have paved

*the way for potential parents to select the characteristics they believe it is desirable for their child to possess*⁶⁰

Apart from this, ART is also being sought by individuals for personal choices that bear no relation to the issue of medical need. Examples are women who, as the theory goes, prefer not to interrupt their careers with a pregnancy; those who wish to procreate without the involvement of a male partner or those who wish to have a child without becoming pregnant.⁶¹ The perception of childlessness as a voluntary choice, in these cases for example, challenges the assumption that ART is treatment for medical condition of infertility.

5.2 The Medical Problem Argument

If infertility is a medical problem, does it mean that it can be treated as an illness or a disease?

Some causes of infertility, as stated earlier in this paper, may be traced to a curable or correctable biological or medical problem. Nevertheless infertility cannot be strictly construed as a disease, at least not in the same way as some common serious diseases like diabetes, cancer, stroke, hypertension, typhoid, hepatitis, leukemia, HIV/Aids and so on are construed. To this extent infertility may not be called a disease. Indeed, governments worldwide, Nigeria inclusive, have demonstrated a reluctance to acknowledge that infertility is a disability or a medical case. Efforts at infertility treatments are therefore viewed as 'elective procedures', or purely as a social problem that could be left entirely to individuals to solve.⁶² In the words of Mahmoud Fathalla:

*Infertility is not a disease. In fact, in many cases of infertility no evidence of any disease may be found per se, infertility does not threaten life or endanger physical health.*⁶³

This is buttressed by Professor Bernard Dickens when he states that; *Impairment of fertility may be due to a pathological cause, but it is ethically contentious to describe people seeking access to ART generally as unhealthy or diseased people, or, indeed, apart from their impaired reproductive capacity, as disable. Infertility is not a disease, and alone it does not impair medical health.*⁶⁴

It is perhaps because of this that certain commentators also argues that the problem of infertility is really concerned with socially constructed desires and choices which medical science should not necessarily meet.⁶⁵ Even if it is construed as a disease, many cases of infertility are due to disorder of the reproductive organs or system that cannot be medically or surgically treated. Moreover, it may be argued, as Prof. Dickens did above, that infertility per se does not have an adverse effect on the medical health or physical fitness of those affected. Hence, the debate surrounding the conceptualization of infertility as a medical or social problem becomes convoluted.

60 Ibid., at 627-628.

61 See OLRC Report on H.A.R., p. 9-10; see also R. Mykitiuk, et al, op cit, p. 374.

62 See Sandra Dill, "Consumer Perspectives in ART" in W.H.O. Report on ART, p. 255.

63 See Mahmoud F. Fathalla, "Current Challenges in Assisted Reproduction" in W.H.O. Report on ART, p. 5.

64 See Bernard M. Dickens, "Ethical issues arising from the use of assisted reproductive technologies" in W.H.O. Report on ART, p.335.

65 See Jean McHale et al, op cit, p. 628-629. It should be noted however that socially constructed desires may as appropriate be causes that the state is obliged to meet.

The position that infertility is not a disease or a condition that impairs health is however valid only within the context of strict construction of diseases or illnesses. The World Health Organization has enunciated and propagated a holistic definition of health, which includes physical, mental, and social well being and not merely the absence of disease or infirmity. At the 1994 International Conference on Population and Development in Cairo, Egypt, a Programme of Action was adopted under which approximately 180 countries committed themselves to realizing the concept of 'Reproductive Health'. Paragraph 7 (2) of the Programme reads:

*Reproductive Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have...the capability to reproduce and the freedom to decide if, when and how often to do so.*⁶⁶

The paragraph states further that:

*Implicit in this last condition are the right of men and women to be informed and to have...the right of access to appropriate health care that will...provide couples with the best chance of having a healthy infant.*⁶⁷

This should be seen as a statement of aspiration and policy for all civilized countries, the actualization of which the government would be responsible to pursue as a matter of citizens' rights. The conclusion here is that infertility cannot simply be perceived as a social problem; even where the underlying cause cannot be cured or removed by treatment, the government is obliged to provide reasonable access to meeting the needs of the infertile. Hence, infertility should properly be seen as a public health issue, having a combination of medical and social traits and thus deserving of state attention as other issues in this area do.

5.3 Is there a 'right' to reproduce?

A proper conceptualization of infertility is also important with respect to a possible invocation of a right to reproduce or pro-create.

The point that infertility and/or childlessness and the means of alleviating them deserve state attention is important considering the fact that the continued failure of the government to give some measure of attention to infertility and the infertility treatments may be seen as an abdication of its constitutional obligations. Similarly, an attempt by the state to regulate or control access to infertility treatments may be met by constitutional claims. These may be in the nature of claims that reproduction is a right for which the state has a positive obligation to provide or at least, if it is seen as a negative right, one that the government should not interfere with.⁶⁸

Whether rights are positive or negative, governments are obliged to juxtapose and balance the expression of these rights by and among the citizens (especially since individual expression may conflict or compete) and also to offer appropriate pedestals or conducive environment for the mutual enjoyment of the rights for the overall benefit of the society. Different instrument and documents exist to guide the government in doing

66 See UN International Conference on Population and Development (Cairo, 1994), Programme of Action, 7.2 (U.N. Doc.A/CONF. 171/13/Rev.1).

67 Ibid.

68 See Bernard M. Dickens, "Ethical issues arising from the use of assisted reproductive technologies", in W.H.O. Report on ART, p. 335.

this. They may include Constitutions, provisions of Treaties and Conventions and so on. From existing legal instruments within and outside Nigeria, particularly Human Right instruments, it does not appear as if a positive right to reproduce or to reproduce at state expense is recognized. International instruments enunciate the idea that, 'everyone has the right to respect for his private and family life'⁶⁹, 'men and women of marriageable age have the right to marry and found a family'⁷⁰ and recognize the 'right of everyone to enjoy the benefits of scientific progress and its applications'⁷¹. It appears however that these provisions on the right to marry, found a family and have access to the benefits of scientific advances cannot be interpreted as rights to assisted reproduction at the state expense; neither do constitutional provisions in Nigeria, strictly speaking, support such an interpretation.

The 1999 Constitution of the Federal Republic of Nigeria contains relevant provisions that may be examined in this respect.

S. 37 of the Constitution provides: "The privacy of citizens, their homes, correspondence, telephone conversations and telegraphic communications is hereby guaranteed and protected". The marginal note to this section reads 'Right to private and family life'; it does not appear however that the section guarantees any meaningful right of anyone to establish a family, let alone to receive state assistance to establish a family. It perhaps might be read to mean that individuals have rights against unjustifiable state intrusion into their reproductive choices including to seek access to infertility treatments. This reading is further strengthened when section 37 is read in conjunction with the provision of section 34 of the Constitution that:

'Every individual is entitled to respect for the dignity of his person, and accordingly-

(a) no person shall be subjected to torture or to inhuman or degrading treatment;'

In view of the severity of social and cultural disadvantages which infertile individuals suffer, failure to provide the infertile with reasonable access to infertility treatment may amount to disrespect for the security and dignity of their person; it may also support the claim that they are thereby being subjected torture, inhuman or degrading treatment contrary to the provisions of the Constitution. The right to found a family is meaningless if a person is involuntarily shut out by infertility and thereby compelled to suffer direct and indirect indignities as consequences of that situation. It stands to question however whether this provision will be given such a wide interpretation especially in the context of infertility not caused by a direct state action or omission.

With respect to the general right to health in Nigeria and state duty to ensure access to basic medical services required by the citizens, especially relating to family health, various sections under chapter II of the 1999 Constitution of Nigeria has relevant provisions.

Section 14(2) (b) provides:

'The security and welfare of the people shall be the primary purpose of government...'

Section 16(2) (d) also provides that the state shall direct its policy towards ensuring:

69 Article 16, U. N. Universal Declaration of Human Rights, 1948.

70 Article 23 of the International Covenant on Civil and Political Rights of the U.N.

71 Article 15 (1) (b), International Covenant on Economic, Social and Cultural Rights of the U.N.; this arguably embraces the right to enjoy the benefit of scientific advances in assisted reproductive technologies.

'That suitable and adequate ...old age care..., sick benefits and welfare of the disabled are provided for all citizens'

Perhaps more specifically, section 17(3) of the Constitution provides that:

'The state shall direct its policy towards ensuring that –

- (d) there are adequate medical and health facilities for all persons;*
 - (g) provisions is made for public assistance in deserving cases or other conditions of need; and*
 - (h) the evolution and promotion of family life is encouraged.'*
- (Underlining, mine)

These provisions offer an assurance that it is the duty and responsibility of the government to provide for the welfare of the people; ensure the provision of suitable and adequate sick benefits; ensure adequate medical and health facilities for all; provide state (public) assistance in deserving cases as well as ensuring the *evolution* and *promotion* of family life.⁷² Unfortunately however, section 6 (6) (c) of the 1999 Constitution of Nigeria limits the potential efficacy or usefulness of those provisions falling within Chapter II. It provides that provisions of chapter II –Fundamental Objectives and Directive Principles of State Policies-of the Constitution are non justiciable. That is, they are not judicially enforceable against the government; they are mere ideals, aspirations of state that could be complied with among competing state interests 'as and when practicable'. Apart from the issue of justiciability, the exercise of some of the recognized human rights provisions is limited under the Constitution. Section 45 (1) provides:

'Nothing in sections 37, 38, 39, 40 and 41 of this Constitution shall invalidate any law that is reasonably justifiable in a democratic society-

- (a) in the interest of defence, public safety, public order, public morality or public health; or
- (b) for the purpose of protecting the rights and freedom of other persons'.⁷³

Having said this, the emerging trend suggests that reproductive rights are best conceptualized as a health care issue which combines the discourses of public health and human rights. The trend has emerged into a legally recognized and enforceable right in most developed countries, especially Canada, but not in most developing countries, particularly Nigeria.

Nigerian law, therefore, does not positively recognize a right to reproduce or to assisted reproduction. What is demonstrated so far, with the level of awareness and presence of assisted reproductive technology centres in Nigeria, is that financially

72 Whether infertility or childlessness will be seen as a 'deserving case' or 'condition of need' enough to warrant or justify demand for a state assistance in its alleviation especially under constitutional provisions to this effect (section 17 (3) (g) 1999 Constitution) is an arguable issue.

73 It is important to note however that section 45 does not limit the operation of the 'Non-discrimination' provision of the Constitution in section 42. Consequently, a citizen who alleges that particular policy, action or omission of the state adversely and discriminatorily affects him/her in the exercise of his/her reproductive rights may have a cause of action against the state. It will be interesting to see how this might be handled by a Nigerian Court. In the Canadian case of *Cameron v. Nova Scotia (Attorney General)* (1999), 177 D.L.R. (4th) 513, the majority of the Court of Appeal of Nova Scotia recognized that the exclusion of ICSI and IVF from the public health insurance plan amounted to discrimination on the basis of disability or analogous ground. They found however, that the exclusion from the public health insurance coverage was saved under s.1 of the Canadian Charter of Rights and Freedoms. Section 1 of the Charter is similar to section 45 of the Nigerian Constitution, however, discrimination on the recognized grounds in section 42 are not permitted under section 45 of the Nigerian constitution..

capable infertile individuals are taking advantage of the facilities for assisted reproduction as of right and the government is not doing anything to disturb or restrain them. It would appear then that ART has the status of negative rights in the country.

If this is the case, it means infertility is still no more than a social problem that an individual should be left to grapple with by himself or herself. On the other hand, if it is seen as a medical problem, irrespective of the recognition accorded to health as a fundamental human right in Nigeria, the state is obliged to cater to and safeguard the health and well being of its citizens and residents. Hence, it would be the responsibility of the government to address infertility with the seriousness it deserves.

6.0 CONCLUSION

In view of the medical factors implicated in infertility, its other predisposing factors, as well as its socio-legal consequences, government must recognize infertility, not as a disease per se, but as a public health issue/problem requiring governmental attention. It is altogether misconceived, misleading and unhelpful to label or debate infertility or involuntary childlessness as a social or medical problem. Rather, it should be seen, as stated earlier, as a public health issue. Infertility, properly situated as a public health issue, ceases to be simply an individual problem which they must solve at their expenses and discretion. Strategies used to contain more serious diseases must be adapted at containing infertility, especially through preventive measures.⁷⁴ In focusing on prevention, attention must be given to factors that predispose to infertility, for example, harmful traditional practices, spread and prevalence of STDs, unsafe abortions, unhygienic deliveries (and all issues pertaining to maternal and child health generally).⁷⁵ Non-conducive employment and career conditions that forces women in particular to postpone childbirth or that operates as disincentive to maternity, as well as to other socio-cultural causes,⁷⁶ must also be given attention.

In addition to prevention as an appropriate and much cheaper policy response to infertility, Nigeria could also turn to the adoption system. Nigeria has many cases of abandoned babies, the level of abortion and unwanted pregnancies are still high and there are orphanages teeming with healthy normal children crying for adoption. Child adoption system in Nigeria must therefore be overhauled to improve effectiveness and provide a viable complement to ART especially for individuals who cannot afford the high

74 According to Okonofua, 'the prevention and treatment of infertility is an important unmet need in sexual and reproductive health programming in Africa', *ibid.*, at 10. In the same way, in its Final Report, the Royal Commission on New Reproductive Technologies in Canada recommended to the government of Canada that priority be given to prevention of infertility rather than focusing solely on its treatment, see *Proceed With care: Final Report of the Royal Commission on New Reproductive Technologies* (Ottawa: Minister of Supply and Services Canada, 1993), p. 177. This sentiment was echoed in the Canadian Government's 1996 White Paper which proposed to address the condition of infertility by stressing 'infertility prevention, social solutions and, lastly, infertility interventions that are appropriate, safe, and effective.'; see Health Canada, *New Reproductive Technologies: Setting Boundaries, Enhancing Health* (Ottawa: Supply and Services Canada, 1996), p. 19, cited in R. Mykitiuk, *op cit*, p. at 375.

75 See E.O.Otolorin, "Prevention of Infertility in Africa", *IFEMED*, *op cit*, p. 31-35; see also, S.O. Ogunniyi, *Efforts at Making Pregnancy and Childbirth Safer*, Inaugural Lecture Series 195, (Ile-Ife, Nigeria: Obafemi Awolowo University Press, July, 2006).

76 F.E. Okonofua, *supra*, note 20 at 18, cited reports which indicated that lack of programs to address the prevention of infertility leads women and men in Africa to have wrong perceptions of the causes, risk factors and methods of treatment of infertility. The consequence is that many people interpret infertility in cultural terms rather than biomedical explanations. This stresses the importance of integrating infertility programs into sexual and reproductive health care policy implementation in Nigeria.

cost of medically assisted conception.⁷⁷ Government must also take adequate steps to educate people with respect to this option while maintaining the usual safeguards in the adoption process. Sufficient public enlightenment campaigns must be undertaken not only to create awareness as to the availability and processes of adoption in different states of Nigeria but to clear many prejudices and misconceptions about adoption as well as to minimize social stigma attached to adoption in the country.

Lastly, in view of Nigeria's commitment to meeting the Millennium Development Goals (MDGs) so as to raise the international profile of the country, infertility and/or involuntary childlessness should be seen as an integral part of the health component of the MDGs requiring definite institutional, policy and budgetary attention.

77 IVF, which is perhaps the commonest infertility treatment procedure in Nigeria, is a costly procedure, thus, it is effectively priced out of the reach of many Nigerians. Nigeria recently started the National Health Insurance Scheme (N.H.I.S.), there is no indication that the government, through the Scheme, or big private employers will fund IVF treatment cost to any appreciable extent, if at all. It is important therefore to emphasize prevention and adoption. Both are less costly than IVF and do not ordinarily raise many of the adverse social reactions and legal conflicts raised by IVF. Another reason why focus on preventive scheme and adoption is important is that personnel and institutional structures, social and legal, to implement them are already existing. Apart from steps required to make them more effective, there will be no need to incur heavy expenses that might be necessary to set up a meaningful IVF /ART Regulatory framework. However, because prevention cannot be total while adoption is a complement, not an alternative, to IVF, establishing proper framework for infertility treatments in the country is still mandatory.