Psychological and Cross-Cultural Aspects of Infertility and Human Sexuality

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Abstract

The influences of culture are present in different areas of human health, as is the case with reproductive behaviors. To have a child means to have made a responsible decision. If conception takes longer to happen, these patients require the help of doctors to stimulate the refractory body. In light of data suggesting that psychosexual symptoms may interfere with fertility, successful infertility treatment and the ability to tolerate ongoing treatment rely on paying attention to these symptoms. Infertility is not only a fault of nature, but it is also something that does not respect the established order, a fact that casts doubt on the truth of the femininity and masculinity representations prevailing in a culture. Infertility is always a disease of the couple, and it is the couple that must be treated. The same is true when it comes to addressing sexual dysfunction. The dominant values and cultural practices indelibly affect the sexuality of infertile couples. In order to be credible, humanization of the treatment protocols for infertile couples must take into account the problems of intimacy as well as the sexual health of these couples.

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Ancient people believed that the fertility of the soil and of all species was a single phenomenon determined by divine will. Eternal fertility represented hope. Infertility was symbolized by the image of death. Still, today, this belief is prevalent in people living in a strongly communitarian society, as is the case with the Gypsy people. Their communitarian ties are reflected in genetic cohesion [1].

Parenthood is one of the major transition periods in adult life for both men and women and even most homosexual couples. The conception of a child is known to depend on anatomical functional interaction and the immunology of the partners. However, anatomical, hormonal, functional, immunologic and iatrogenic defects can make fecundation and pregnancy impossible for a couple. Is infertility a disease? Since reproduction is one of the systems required for the normal functioning of the human body, any abnormality in the functioning of the reproductive system would constitute a disease.
For couples of reproductive age who have sexual intercourse without contraceptive methods, infertility is defined as the inability to establish a pregnancy within a specified period of time, usually 1 year. Given this definition, it is estimated that between 8 and 12% of couples experience some form of infertility during their reproductive lives [2]. Approximately 1 out of 6 married couples experience infertility. Data gathered by the World Health Organization by demographic and health surveys in developing countries yield an estimate that 186 million married women (excluding China) were infertile in the year 2002 [3].

It might be something that you are currently experiencing. If not, simply look at couples around you and certainly you will know or suspect someone who is silently suffering from fertility issues. Many do not admit it or seek help to resolve their fertility problems, even though we have made great medical and technological progress in helping couples conceive. Many still consider infertility a stigma. Culture, as an organized system of beliefs and values, determines all human behaviors including sexual behaviors. A great part of the stigma associated with infertility depends on cultural aspects. Social norms play an important role in determining behavior and have special relevance to issues of parenthood, fertility and sexuality. The fragile balance between what the individual needs and what society finds to be normal can have a profound impact on personality, coping, wellbeing and sexual behavior. Furthermore, the cultural differences can impact the sex drive in an infertility context [4].

There are few married people who choose to remain without children (our hospital experience points to only 5%). Even now, in a world with tremendous changes in family values, it is important for men and women to have the experience of parenthood. It is an important goal for most men and women and a necessary criterion for achieving personal satisfaction, social acceptance, religious affiliation and sexual identity. Fertility can be a basic human function, and to assume the condition of father or mother is a landmark in the development of a human being because, from early on, people undertake a life project that nearly always includes finding a loving partner and raising a family with him or her [4]. A few decades ago, it was a social embarrassment to be infertile. Today it has more and more become an individual option largely influenced by the contingencies of assisted reproductive techniques, by dominant social and cultural values and by some individuals’ fears. This underlines the importance of the beliefs that govern the life of individuals.

For many centuries, Southern Europe has integrated people of different cultures. Multiculturalism is a historical fact in countries like Portugal, Spain, Italy or France. In spite of the favorable conditions for integration of different cultures, it is noted that in Southern Europe, only a small number of African, Asian and Gypsy couples speak about the suffering they experience as infertile couples. They are ashamed to publicly admit to their problem. Even though they raise children, they are still considered childless because they do not produce biological offspring of their own.

Having a basic knowledge of infertility is an important challenge and makes demands on health professionals because the diagnosis of infertility is usually a
threatening surprise. During the last few years, the study of the emotional aspects of infertility has gone through changes. For instance, within the general concept of psychogenic infertility, with a few exceptions, anxiety started to be considered a result and not a cause of infertility. The technological progress in the treatment of infertility collides with what individuals feel when social pressure is very strong and cultural influence is relevant [5]. While many couples presenting for infertility treatment experience high levels of psychological distress associated with the diagnosis of infertility, the process of assisted reproduction itself is also associated with increased levels of anxiety, depression and stress [6].

The perception of a stigma related to infertility can have an impact on the level of physical, emotional, sexual and social wellbeing, but these factors have not received enough attention [7]. It is likely that couples presenting to health professionals with fertility problems also have concerns related to their sexuality. Issues that are related to sexual dysfunction, sexual behavior, interspousal relationship and communication are important for the reality of an infertile couple's life. As a matter of fact, everything that concerns the sexual health of infertile couples in general is not carefully evaluated by reproductive medicine. In some countries, stigmas of infertility and sexual dysfunction are shaped by local realities [4, 8].

Sexual dysfunction can be both a factor contributing to fertility problems and a by-product of the diagnosis of couple infertility itself. This chapter deals with some relevant topics that infertile couples often struggle with and stresses the importance of having a biological, psychological, social and cultural understanding of infertility. In addition, the paper suggests possible interventions that couple therapists can use in helping infertile couples, harmoniously integrating biology with cultural influences and individual expectations. Awareness of racial and ethnic disparities is critical to a complete understanding of health, and particularly sexual health, issues faced by couples of reproductive age.

**Diagnosis and Epidemiological Aspects**

The World Health Organization acknowledges infertility to be a disorder affecting men and women all over the world. Probably every year there are 2 million new cases of infertility, and approximately 8% of the couples have some problem related to infertility during their reproductive life [3, 9]. This creates significant pressure on the financial resources of health systems. The estimate of the international prevalence of infertility and the search for treatment showed that the frequency of and demand for medical services for the treatment of infertility were lower than those previously mentioned, and quite similar among developing and developed countries [9, 10].

The origin of infertility may reside in the female as well as in the male. On the whole, the origin of the infertility resides:
• exclusively in the female in around 30–40% of cases;
• exclusively in the male in around 10–30% of cases;
• in both partners in around 15–30% of cases [9].

After medical examinations, causes of infertility are confirmed in only 5–10% of the couples [9]. It may be some consolation that becoming pregnant is not so easy, even for the people who do not have fertility problems. It is not a well-known fact that human beings are among the least fertile creatures of the land. There is only a very short period in the menstrual cycle during which conception is possible, which means that the probability of conception is only 25% each month [9]. It has been estimated that 10% of normally fertile couples do not manage to conceive within the first year of trying, and around 5% after 2 years [9]. Between 2 and 10% of couples in the whole world are incapable of having a child, and a further 10–25% present with secondary infertility, which means that after a first successful pregnancy, they are incapable of having a second child [9, 10]. A number of factors influence self-reported rates of infertility, including access to care, the percentage of unmarried women in ethnic cohorts, and the increased use of infertility treatment, specifically assisted reproductive technology [10].

**Reasons for Having a Baby**

Advances in reproductive technologies – in particular in genetic screening and selection – have occasioned renewed interest in the moral and the psychological justifiability of the reasons that motivate the decision to have a child. Couples who decide to have a child have a significant moral reason for selecting the child who, given his or her genetic endowment, can be expected to enjoy the most wellbeing, and for defending it against various objections [9]. The wish to have children, to start a family and undertake a common project constitutes a very important existential moment for the couple. Inherent in this project is a strong social and cultural conditioning. There are several mechanisms that influence what is behind the aspiration to have a son and to assume the condition of a father.

In some cases, the wish to have a descendant can constitute the principal factor of continuity for a couple. The attachment to familiar values and to a certain idea of tradition turns fertility into the principal pillar of life as a couple. All other reasons that feed life as a couple are relegated to a secondary plan. In the idealized son, the adult tries to a considerable extent to sublimate his past, the suffering that he or she endured and the dreams that did not come true. Many of these couples equally believe that their biological clock is ticking. They carry out a mission imposed on them by nature [7]. While fulfilling their biological destiny they equally respect the cultural impositions of family tradition, social norms and religion. The importance of fertility among Muslim women and other ethnic and religious groups is exemplified by the social pressure on newly married women to become pregnant as soon as possible [4].
The challenges of parenthood can have a very personal mark. Some young couples are excited about the pregnancy and the prospect of having a baby of their own, even more because they do not want to be the only ones among their friends without children. These personal needs form another dimension of the aspiration to have a son. For many individuals, this can affect their experience of being complete. The birth of a son deeply transforms the parents, influencing their growth as persons. They try to overcome their personality defects and to introduce new options regarding their behavioral competencies. At bottom, they make an effort to be better adults. It is as if the son marked a transition from one state to another. If the parents do not make this experience, they do not believe to have reached the true state of adulthood. The pregnancy helps in personally confirming the existence of an adult self. ‘I want a baby who is all mine and will love me unconditionally,’ many patients say when consulting a doctor.

A further dimension that is not less relevant is the necessity of bringing into effect some expression of parenthood, which is traditionally presented as a time of joy and satisfaction, as an affectionate and socially compensatory function and as an individual and familial enrichment. There is no joy like the joy of welcoming a child into our life.

In clinical practice, we find couples that want to get pregnant to strengthen their marital relationship independently of the quality of their sexual achievement [11]. While procreating, they muster up some energy of intimacy and of union with the loved person, and the new child is supposed to increase the cohesion of the couple. Equally, there are couples that want a child to resolve their difficulties and conjugal conflicts. The relationship of a couple might be in its death throes, so they make the decision to become pregnant in the expectation that this life-changing, potentially traumatic experience will bring them back together. They imagine that their marital and even sexual problems come to be resolved by the appearance of a new element in the family. Pregnancy is seen as a last opportunity for a system that has already fallen apart over time; it is a sort of miraculous solution that is supposed to resolve everything. In the past, women in particular resorted to this strategy for saving their marriage. Recent clinical practice shows that in European countries, the emancipation of women has led to a progressive desertion of marriage as a space of individual sacrifice [9, 12, 13].

The market economy presupposes a particular model of human functioning. The dominant culture celebrates success, prosperity, wealth and abundance. Success must be achieved in all social environments. But not all individuals have the necessary skills to succeed, especially in terms of their profession. It is to be expected that these people dream, have wishes and want their children to go a step further in order to achieve what they themselves were unable to achieve, in other words, to realize ideals, lost opportunities and failed expectations. The parents hope that what the they were unable to obtain for themselves might come true in the life of their children, especially in terms of academic and professional achievements.
Independently of the reasons that make them want to have children, these couples have the perception that they are prevented from carrying out a biological, social and cultural function that keeps on being highly valued and considered necessary for a heterosexual stable relationship. In the social context of Western countries where a decrease in birth rates has been noted, children appear as precious social assets. Thus, one can understand that social control accentuates and amplifies the sense of emotional discomfort that affects or influences these couples [12].

The sociocultural context interferes with the regulation of emotions and strategies adopted to deal with expectations regarding human fertility. In Ghana, according to legend, a woman named Akua was ‘sterile’ until a diviner instructed her to make a woodcarving and care for this doll as if it were her child. The neighbors laughed about and teased the poor woman, but her faith was rewarded with the birth of a daughter; ‘ba’, or child, was the name of the doll. In Africa, after an Akua’ba doll has performed its task, it is delivered to the diviner, who collects all dolls that have been offered, as is the case in our society, when we send photographs of our children to the doctor who accompanied us to affirm his competence. Men use these dolls to help them find a wife. It is customary among the Mossi of Burkina Faso to give the first drops of a mother’s milk to the doll, which is repeated over time until you have a son. The Baule of Côte d’Ivoire ‘cure’ infertility as well by carving a doll to appease the jealous spirit spouse [14].

**Infertility, Culture and Healthcare**

There is a cultural imprint of the human fertility phenomenon. Since ancient times, traditions and popular culture have joined hands on issues related to fertility. Many ancient peoples like the Celts, Egyptians and Persians worshipped Juno, the goddess of fertility, and celebrated during the summer solstice, the longest day and shortest night of the year, which in the northern hemisphere occurs in June. Around an open fire, offerings were made to ensure a good harvest, to ward off evil spirits and to bring prosperity. Over time, the Catholic Church allied these traditions with their official calendar. In Brazil, to please St. Anthony, who is bestowed the title of matchmaker on his day, June 13, a mast is erected with his image at the top. Whoever wants to find a mate has to put his or her hand on it. This and other sympathetic acts are part of the festivity [1]. Even today, in Japan there is a public celebration of fertility: the Kanamara Matsuri (Festival of the Steel Phallus). Perhaps the joys of the spring season are nowhere expressed more lusciously than in Kawasaki Daishi, Kanagawa Prefecture, which celebrates its phallic festival annually. [15].

Myths and legends litter the popular imagination, and to make sense of collective life, they influence behavior and individual choices. In northern Portugal there is a peculiar legend about infertility, mixing the religious with pagan tradition. Asked for many favors, São Pedro de Rates is associated with sterility as well. Of an old fountain
with his name it is said that a woman could be cured of the disease by fulfilling the following ritual: she should sit on a piece of rock at the fountain [16].

In popular imagination, we found many aphorisms or predictions on fertility. Some communities believe that if a cow were to swallow the menstrual cloth, this would curse the girl with infertility. There is abundant literature demonstrating the social imposition of motherhood on the ‘normal woman’ as well as the personal and social consequences of reproductive problems [4, 8, 12, 17].

Over the centuries, with regard to infertility, culture legitimated normative practices. Social rules have emerged, often with a strong moral component, regulating the sexual behavior of infertile persons and their respective partners. In some African tribes, the emphasis on fertility was demonstrated by the strategies used by the couple: if the husband was impotent, the woman was encouraged to have sexual relationships with relatives and friends until she became pregnant; if the woman did not get pregnant, there was someone who had children in their name. In ancient Hebrew culture, the man was allowed to divorce if his wife was sterile and to swap her for another woman when the first one was older. In Mozambique, even today, infertile women of the Macua ethnic group suffer various consequences for their infertility, one of the most important being their exclusion from some traditional ceremonies and social activities. Most of them commit adultery with the hope of getting pregnant [18].

Healthcare is not a ‘one-size-fits-all’ profession. It is important to be sensitive to ways in which culture and different ways of living impact patients’ healthcare experiences. One of the most sensitive dimensions of clinical practice has to do with the reading framework we use to interpret reality, and misperceptions arising from the incorrect use of this framework. Misperceptions are sometimes hurtful, occasionally dangerous, and often get in the way of attaining what we really want in our lives. The misperceptions about African or other ethnic or cultural groups and infertility are a perfect case in point. For example, it is a common perception that black women are incredibly fertile. They could not possibly have problems with infertility. Factors causing high rates of infertility in parts of the developing world are varied, but tubal infertility due to sexually transmitted, postpartum, postabortive and iatrogenic infections is widely regarded as the primary form of preventable infertility in the world today. Fertility rates for ethnic minority groups in Western countries are similar or superior to those for the dominant groups [2]. But infertility is underaddressed and a complex problem. As a result, minority couples suffer in silence when they cannot conceive, believing – even more so than other ethnic groups – that they are all alone with their infertility [7].

Culture influences infertile couples through its morals and dominant values, but also by conditioning individual behaviors. Consequently, in Africa, in most Asian countries and almost always with ethnic minorities in Western countries, the desire for children and fertility is very high [2, 17]. Physicians, politicians and other stakeholders put forward proposals to help minimize the negative effects of infertility; they provided greater incentives for couples to have children earlier, such as tax benefits,
making it easier to buy a house, and they offered significant state cost shares of techniques and drugs for infertility treatment [3, 9, 10, 19]. Regardless of the willingness of health professionals, there are social constraints that hinder their approach to the problem of human infertility. It is known that access to healthcare also represents an indicator of human development. Research indicates that the problems of infertility are particularly severe in sub-Saharan Africa [2]. The level of primary infertility is measured by the percentage of women who still have children after a certain number of years of marriage (usually 7 years) or, in the case of women who reached the end of their childbearing years, the percentage of those that have no children. The levels of primary infertility are higher in West and Central Africa, including Cameroon, the Central African Republic, Chad, Niger and Nigeria. In some cases, the couple may have a first child and although there is strong social pressure to have more children, they cannot, given the lack of economic sustainability of the household. For example, levels of secondary infertility in women 20–44 years old are up 20% in Cameroon, the Central African Republic, Lesotho, Mauritania and Mozambique [3]. Of all the direct influences on fertility, the use of contraceptives is the single most important for policy makers and health program managers [2]. However, other proximate determinants are important influences on fertility levels and could affect their future development. Thus, the increase in age at first marriage has contributed to the recent decline in fertility observed in many countries, especially in Asia, the Middle East and North Africa [7].

In Europe, along with the widespread use of contraceptives, growing numbers of women entering the labor market, changes in marital and parenting experiences and situations of economic crisis have contributed to the postponement of reproductive responsibilities. Portugal presents a complex socioeconomic, and even peculiar, case when it comes to some of the factors that bring about consequences in terms of reproductive careers. The falling birth rate and increase in the age of women at the time of the first child have occurred later than in Central European countries, but at a faster pace and in an increasingly homogeneous way geographically and socially. That is, the statistics indicate that the declining birth rates and increasing age of women were found all over the country (although the north continues to have higher fertility rates than the national average and a higher percentage of births in the age group of 20- to 29-year-olds) and across social classes [2, 6, 20].

Even in Europe, the territorial factor plays a crucial role in human behavior and, more specifically, in health, though often disguised and apparently barely visible. A way of dressing or talking may be suggestive of a rural origin, and may constitute an obstacle, a factor that affects the accessibility to healthcare hospitals. The mere fact of living in a rural area or having a different skin color necessarily dictates limited accessibility to hospitals with regard to prenatal visits, giving birth, neonatal intensive care and also consultations for infertility.

Assisted reproductive technology is a form of expression formed by and forming culture. A paradox about these medical treatments is that they often only serve to
reinforce existing sociocultural practices, norms and values. For example, as hospitals are located in urban environments, they primarily benefit the people living there with regard to access to units of reproductive medicine.

The technologically radical is often the culturally conservative. Conceptive technology has contributed to the redefinition of patienthood, the multiplication of models of infertility, and the reinforcement of existing cultural norms. Mental health professionals are well positioned to conduct a kind of technology assessment that places culture and ethics at the center of inquiry. Mental health professionals can bridge the gap between the dominant culture in a health system and a patient’s subjective culture. In many ethnic or cultural minorities, if a child is not directly conceived in the normal biological manner, such a child does not resemble other members of the family. And this is a problem for couples and their community as it does not speak well of women who have children by means of a mechanical process, and it has implications for the future of such children [5, 17].

In some communities (e.g. Vietnamese), women are often considered responsible for infertility, and in Nigeria men may divorce their wives or engage in polygamy. Adoption is generally not socially acceptable in Nigeria and other African countries, and there are ethical, medical and legal restraints on infertility treatments. While assuming their biological destiny, they equally respect cultural impositions [17, 18]. Assisted reproductive technology may be in conflict with religious convictions. Religious obligation forbids people to have children by artificial means. Childbearing may be presented as the work of God, and it is not proper for couples to take on this responsibility. Thus, it may be a sin for human beings to compete with God in the business of creation.

**Psychiatric Morbidity in the Infertile Population**

The increasing participation in fertility treatments has raised awareness and inspired investigation into the psychological ramifications of infertility. Consideration has been given to the association between psychopathology and infertility. Researchers have also looked into the psychological impact of infertility per se and of the prolonged exposure to intrusive infertility treatments on mood and wellbeing. There is less information about effective psychiatric treatments for this population; however, there are some data to support the use of psychotherapeutic interventions [6, 21–23].

Ethnographic studies of the involuntarily childless suggest that it is the combination of childlessness and infertility that is distressing [8]. It seems evident that fertility treatments are a deeply distressing experience for many couples, especially for women as they may be stigmatized if they do not achieve the social goal of starting a family. Patients have complex psychological difficulties, with an impact on several aspects of their sexual, affective, social and working lives. The relationship between psychic
states and physiological functions is highly complex, and there is no simple and linear causal relation. According to clinical practice, it is not possible to say whether these mental health problems are the result of – or possibly a factor contributing to – the patients’ infertility. The effects of depression and anxiety on the nervous system could in turn affect their reproductive function. Three types of relationships between psychological factors and infertility have been hypothesized. These include the following: (1) psychological factors are risk factors for subsequent infertility; (2) the experience of the diagnosis and treatment of infertility causes subsequent psychological distress, and (3) a reciprocal relationship exists between psychological factors and infertility [13].

Psychological factors and stress-induced changes in heart rate and cortisol are predictive of a decreased probability of achieving a viable pregnancy [9]. For instance, proposed mechanisms by which depression could directly affect infertility involve the physiology of the depressed state such as elevated prolactin levels, disruption of the hypothalamic-pituitary-adrenal axis, and thyroid dysfunction. Changes in immune function associated with stress and depression may also adversely affect reproductive function. Since stress is the brain-body connection, this raises the possibility that a history of high levels of cumulative stress associated with recurrent depression or anxiety may be an important causative factor.

We know that depression, anxiety and certain other mental health conditions are more common among infertile couples than among those who are able to conceive on their own. Depressive disorders are more frequent than in the general population, whereas the prevalence rates for anxiety disorder are similar [24]. Depression and anxiety often coexist, they appear hand in hand, and physical symptoms are significantly more frequent among females and males with a psychiatric diagnosis than in subjects without a diagnosis [25]. In those cases, the gravity of depression increases with the extension of the state of infertility and the accumulation of experiences of therapeutic failure. The couples with mild or severe depression had gone through a significantly longer period of infertility. The findings imply that routine mental health screening could benefit patients treated for infertility.

Fortunately, in many circumstances, careful clinical evaluation allows to conclude that infertile couples do not fulfill the criteria for a formal diagnosis of a given psychiatric pathology. But there is an exception, which concerns the diagnosis of ‘adjustment disorder’, particularly among women. Adjustment disorder refers to symptoms of depression and anxiety in response to an identifiable cause – which, in these cases, is most likely a patient’s infertility. It is likely that these symptoms occur in response to the fertility problems.

The outcome of infertility treatment may also be influenced by psychological factors. Our hospital experience, following infertile couples, reveals that psychological factors affect the reproductive ability of both partners: stress and mood state are predictors of outcome in assisted reproduction. The mechanisms involved in emotional instability and mood disorders, such as changes in immune function,
thyroid dysfunction, elevated prolactin levels and abnormal regulation of luteinizing hormone, act as an interface of reproductive ability. But no direct relationship can reasonably be established between the duration of infertility and its treatment and psychological instability [21, 22, 24]. The risk factors for depression and anxiety in infertility may include: female sex; age over 30 years; lower level of education; lack of occupational activity; diagnosed male infertility, and duration of infertility of 3–6 years [26]. The ethnic element affects the risk for couples in infertility treatment and enlarges the disruptive character of the remaining risk factors.

Unfortunately, daily hospital experience shows that the majority of subjects with a light psychiatric disorder are undiagnosed and untreated for that disorder, which is also in accordance with what is found in the general population. If in many cases the couples do not verbalize their affective symptoms, they are reluctant to report them; in other situations, it is the health professionals who are not careful with questioning or identifying psychiatric problems.

**Gender Roles, Culture and Psychiatric Symptoms: Different Answers to Infertility**

Patterns of infertility related to stress factors differ depending on gender, fertility history, infertility diagnosis and the permanency of infertility. Infertility places a barrier between couples and their ability to fit into the gender roles prescribed by their culture. The way in which people deal with infertility is affected at least by the values, social norms and religion of the community in which they live. In the popular imagination of some cultures, infertile women, always anchored in a symbolic association of woman with nature, can be presented as ‘hollow’, a ‘tree without fruit’, a ‘dry tree’ and ‘barren land’, among others, which – together with the idea of infertile women as incomplete – demonstrates the permanence of the stigma of female infertility in social thought [2, 14, 17, 18]. Moreover, while male infertility can be represented as strongly linked to sexuality, casting doubt on the sexual power of a man, there is no reference to sexuality when the focus lies on female infertility, reaffirming the stereotype of the woman as an asexual parent, based on the sexual double standard (also present in sexual dysfunction clinics) that still permeates gender relations and argues that there are biologically determined differences.

Faced with the experience of infertility, both men and women feel a sense of loss of identity and have pronounced feelings of defectiveness and incompetence. Ethnic and gender-specific psychosocial support and follow-up for infertile people are needed. In addition to having higher rates of infertility, black women, like other ethnic or cultural groups, presenting for infertility care have had a longer duration of infertility than white women, suggesting differential access to care based on either economic or sociocultural barriers [27].

In a sample of 862 Swedish subjects, Volgsten et al. [21] found that a psychiatric diagnosis was made in 30.8% of the females and in 10.2% of the males in the study.
sample. A mood disorder was present in 26.2% of the females and 9.2% of the males. Major depression was the most common mood disorder, prevalent in 10.9% of the females and 5.1% of the males. An anxiety disorder was found in 14.8% of the females and 4.9% the males. Only 21% of the subjects with a psychiatric disorder according to the Diagnostic and Statistical Manual of Mental Disorders, 4th edition, were entitled to some form of treatment.

In general, in infertile couples, women show higher levels of psychological suffering than their male partners, report they have to deal with a greater stigma related to infertility than men, and also provide more information about their difficulties with infertility [4, 5, 11, 24]. After several years of treatment it can easily be verified that infertile women are more neurotic, dependent and anxious than fertile women, experiencing conflict over their femininity and fear associated with reproduction. In contrast to these reports, a double-blind study could not determine any difference in psychological makeup between women who were infertile because of somatic causes and women in whom no somatic cause could be found and who were considered infertile on an emotional etiologic basis [6, 22].

Accrued clinical experience demonstrates that women presenting for in vitro fertilization are nearly always more depressed, have lower self-esteem and are less confident than fertile women and, after a failed in vitro fertilization cycle, experience a further lowering of self-esteem and an increase in depression relative to pretreatment levels [21]. The probability for a woman to have moderate or severe depressive symptoms depends on the impact of the confirmation of the diagnosis, on failure of the first attempts at treatment, on her personality and on the existence of a personal psychiatric history [5, 13, 27, 28].

Psychological interventions aimed at reducing depressive symptoms need to be implemented, especially for women with a definitive diagnosis and for those with durations of infertility of 2–3 years. In the study by Domar et al. [22], infertile women had significantly higher depression scores and twice the prevalence of depression compared with controls (healthy women); women with a 2- to 3-year history of infertility had significantly higher depression scores than women with infertility durations of <1 year or >6 years, and women with an identified causative factor for their infertility had significantly higher depression scores than women with unexplained or undiagnosed infertility.

Childless women with infertility experience had increased adjusted risks of dysthymia and anxiety disorders compared with women who had not experienced infertility. Women with infertility experience but with a current child had an increased risk of panic disorder. Childless men with infertility experience had a significantly poorer quality of life than men without infertility [6].

Emotional factors may negatively affect fertility in the male. Men’s responses to infertility closely approximate the intensity of women’s responses when infertility is attributed to a male factor, though in men, depressive complaints are not always visible or clearly confirmed. When the male factor is present, these patients are more mentally distressed than men in couples with other causes of infertility.
The concept that emotional stress (through the hypothalamohypophyseal axis) might lead to oligospermia is based on the assumption that anxiety and psychic tension led to this organic change. The variability in assessments of depressive and anxiety symptoms is largely determined by differences in the time points of assessment (before, during and/or after infertility treatment), and methodological issues such as the use of different standardized psychometric self-report instruments and the use of different threshold scores [28, 29].

There are also differences between genders regarding the perception of the availability of social and marital support, another factor that – besides psychological instability – can contribute to the cessation of treatments. In a sample of Turkish infertile women, Guz et al. [23] found that within the infertile group, depression and anxiety were more frequent in the women who received negative reactions from their husband, their husbands’ families and social group.

**Infertility May Contribute to Sexual Dysfunction**

Psychosexual dysfunction and infertility were found to occur together in a large number of couples. The most common causes of this clinical problem seem to be ignorance and lack of sex education. For countries like Portugal that integrate populations of several cultures, there is still not a sufficient number of studies that, in a clear and concise form, allow fitting sexuality with ethnic and cultural sources.

Accrued clinical experience demonstrates that sexual problems may induce infertility by contributing to limited or absent sexual activity. Preexisting sexual dysfunction is an underreported cause of infertility. In fact, couples may seek infertility treatment rather than address the fact that they are not sexually active. It is during the consultation for infertility that they will first be confronted with their sexual dysfunction. Over the last decade, our hospital experience showed that sexual dysfunction has been reported in up to 20% of infertile males. Decreased sexual drive, erectile dysfunction, premature ejaculation and failure of intromission are all potentially correctable causes of reproductive failure. Decreasing libido and erectile dysfunction may reflect low serum testosterone levels with an organic cause. Performance anxiety is also often reported and often abates with reassurance [20, 29].

Women with sexual dysfunction are at high risk of infertility. Disorders of desire, arousal, orgasm or pain can be causal factors for infertility because sexual activity may be limited or avoided, especially around the time of ovulation. Vaginismus and dyspareunia are two sexual disorders that are frequently implicated as direct causes of infertility. Vaginismus, or hypercontractility of the pelvic floor muscles, can cause significant discomfort during sexual intercourse. Many women with this disorder avoid vaginal penetration. Dyspareunia has multiple etiologies. Some of them are associated with development of infertility, including endometriosis and uterine pathology.
These women tend to have intercourse less often and have a lower average score when it comes to rating their sex life satisfaction.

On the other hand, infertility may result in a decrease in quality of life and an increase in marital discord and sexual dysfunction. Infertility may interact with a couple's sexual expression by causing or exacerbating previous sexual problems (of a couple or individual) as a consequence of the diagnosis, investigation and treatment of infertility.

The confrontation with a diagnosis of infertility marks a difference in the way couples organize their intimacy, particularly their sexual life. Independently of the cause of the infertility, after the diagnosis nothing will be the same. Communication between partners is altered. The subject of infertility starts to take over daily conversations as it becomes the center of constant preoccupation. Affectionate exchanges lose their spontaneity. The libido decreases and suffers under the influence of the dominant mood. This instability has consequences not only for the individual in whom infertility was diagnosed, but also for his or her partner [28, 29].

Usually, in these cases, the sexual experience is not very gratifying. The frequency and quality of sexual practices are diminished; couples are less likely to experiment with different coital positions, and we know that an unvaried coital position may contribute to infertility. Clinical practice does not lend support to an association between lack of orgasm capacity and infertility; the majority of infertile couples obtain sexual satisfaction. A higher frequency of male sexual disturbances expressed as erectile dysfunction, ejaculatory disorders, loss of libido and a decrease in the frequency of intercourse was observed in such patients. In the case of new-onset sexual dysfunction associated with infertility, it is not always evident whether the diagnosis or the treatment has the greatest influence. Both can significantly affect the emotional wellbeing of a couple. Men may experience less intercourse satisfaction, perhaps because of the psychological pressure to try to conceive or because of the forced timing of intercourse around the woman's ovulatory cycle [9]. A more obvious effect of the emotional stress infertility places on the male is the occurrence of impotence. In a Polish study, clinically relevant erectile dysfunctions were diagnosed in 23.9% of infertile men and in 13.7% of the controls. Male infertility had the most significant negative effect on men's sexual functioning [20]. Specifically, clinical practice shows a correlation between the diagnosis of azoospermia and temporary impotence or premature ejaculation.

The diagnosis of a male factor in infertility of a duration of 3–6 years is connected with the highest relationship instability and the lowest sexual satisfaction both in female and male infertiles [30]. Women undergoing treatment for infertility may be less satisfied with their sex lives and may have a greater risk of sexual dysfunction than women with normal fertility. Infertile patients do not differ from fertile women in physical symptoms like vaginal dryness or pain during sex. Nor do they report more difficulty reaching orgasm. They only report more problems with desire and arousal [30].
The act of timed sexual intercourse during fertility treatment can bring about sexual dysfunction by eliminating the spontaneity of the act. The psychological pressure to conceive stemming from ‘sex on demand’ can lead to decreased satisfaction with intercourse and a subsequent potential for loss of a couple’s intimacy.

The importance of the sexual disorder to the individual (and to the couple, when applicable) needs to be determined. It is important to bear in mind that a sexual problem is a disorder only if the couple perceives it to be so, with impaired sexual desire as the most common presentation. Decreased sexual function is important only if it is a cause for concern to a couple. Also, sexual dysfunction in a partner is a recognized risk factor for the development of situational sexual dysfunction in both men and women. Therefore, partners in an infertile couple may develop sexual dysfunction following diagnosis or treatment.

It is incorrect to assume that there is a relationship of cause and effect between infertility and sexual dysfunction, or between infertility and marital dissatisfaction. Our experience is that infertile couples show a significantly better partner relationship than fertile couples, and that sexual dysfunction, if it appears, is the end product of multiple factors (personal, relational, pathological and iatrogenic). Sexual dysfunction is the weakest link in a fragile system. Sexual dysfunction which is not adequately addressed may lead to conflicts or potential breakups.

Clinically relevant sexual disorders in the infertile population most frequently affect couples with a lower educational level and with previously diagnosed sexual dysfunction. Given the cultural impregnation of sexual experience, it is not surprising that when a husband is sexually dysfunctional, couples prefer to label their situation as ‘infertility’ in order to avoid the stigma.

In this line of thought, Lee et al. [29], in a sample of couples from Taiwan, found that the female members of couples in which both partners were infertile expressed less marital and sexual satisfaction than their husbands. But no differences in marital and sexual satisfaction were found between wives and husbands with unexplained infertility.

In another study of 59 infertile couples who completed an infertility questionnaire, marital satisfaction questionnaire and sexual satisfaction questionnaire, Lee and Sun [31] studied gender differences in facing infertility problems. Results revealed that husbands expressed significantly less distress than wives. The self-esteem of the husbands was higher than that of the wives. Also, the husbands’ marital and sexual satisfaction was higher than that of the wives. These results indicate that although differences in cultural, ethnic and religious norms exist between Chinese and Western society, the Chinese couples’ pattern of response to infertility is similar to that of Western couples. The major difference is that the in-laws play an important role in Chinese society, especially in marital satisfaction.

Also Peterson et al. [28], in a sample of 306 women and 295 men referred for in vitro fertilization and intrauterine insemination, found that women reported greater anxiety and sexual infertility-related stress than men. However, men and
women showed a similar pattern in the way anxiety symptoms were related to sexual infertility-related stress, with subjective anxiety and autonomic anxiety having the strongest relationship. Anxiety symptoms accounted for a significant proportion of the variance in sexual infertility-related stress in both sexes and to a considerable degree predicted sexual stress in men. There is more similarity than difference in how men and women experience anxiety and sexual infertility-related stress; the strong link between anxiety and sexual stress in men was surprising because men tend to report less sexual stress and also less anxiety. Sexual stress among infertile men may be more closely tied to performance anxiety rather than to a more general deterioration in sexual satisfaction associated with infertility.

**An Integrated Model for Treating Sexual Dysfunction in Infertility Couples: The Role of the Mental Health Professional**

Social, sexual and relationship concerns related to infertility are more effective predictors of depression and marital dissatisfaction than expressed need for parenthood. In the Western world, the reformulation of familiar standards helps to understand the growing investment of individuals in wellbeing and marital satisfaction, relegating the social pressure regarding procreation to a secondary plan.

Clinical practice led us to try to understand the experience of infertility. It suggests that infertility, sexual health and mental health problems are related in many ways. The gradual unraveling of the complexities of neuroendocrinology has permitted an increased understanding of the role that stress might play in infertility. Catecholamines, prolactin, adrenal steroids, endorphins and serotonin all affect ovulation and, in turn, are all affected by stress. Such stress might result from infertility. Infertility is frequently perceived by a couple as an enormous emotional strain, and counseling may prove helpful as part of the initial infertility evaluation, an adjunctive measure during treatment, or a final measure to help patients cope with their infertility problem.

Nearly always, women described greater global stress than men and higher specific stress in terms of sexual concerns and the need for parenthood. They received more social support than their partners, who experienced the fulfillment of the male role as well as the social role of becoming a parent as the most central aspects of infertility.

In a situation of infertility, mental health professionals can act at several different levels: facilitating information gathering and its analysis; helping in the decision-making process; psychological evaluation; support, and therapy (treating sexual dysfunctions and/or couple conflicts). An important moment concerns the psychopathologic evaluation of the couple and its psychological and sexual interaction. All patients must have one or more clinical interviews with the couple therapist (general rule: a psychiatrist, a psychologist or a sexologist) in order to analyze the real desire for pregnancy and the kind of intimacy, and to facilitate a good relationship with
the medical team of the infertility clinic. The psychopathologic evaluation helps to detect clinical psychiatric situations that constitute formal impediments or contraindications for starting infertility treatments. In some cases, a mental health professional has to prepare a report to an ethics committee on the capacity of the person to undergo such treatment. It is suggested that healthcare providers, specifically those who have skills in the therapy of couples and in sexology, can more effectively address the needs of couples with infertility by taking sexual history as part of an initial infertility assessment, and by encouraging couples to temporarily view sexual functioning and the quest for pregnancy as separate issues. Most of those therapists have a particular awareness of sexuality and intimacy that rises above personal opinion or personal experience.

Not always do couples spontaneously agree to begin the psychotherapeutic process. When that happens, the infertility team must discuss the case and consider other alternatives, mainly psychopharmacologic treatments, particularly in cases of major depression. It is not surprising that some patients reject counseling or psychotherapy. Low rates of counseling have previously been reported by Boivin et al. [32] in a sample of 143 infertile patients (49 couples plus 45 additional women) who were in their mid-thirties and had been infertile for approximately 6 years. The authors found that only 11% of females and males received counseling while attending an infertility clinic and noted that patients relied primarily on their spouse and family when distressed, rather than on formal support resources such as psychosocial counseling. The principal reason preventing patients from using counseling varied as a function of the current distress level. Less distressed patients reported that the coping resources available to them were sufficient to cope with the strains of infertility, while the more distressed patients failed to initiate contact with a counselor because of practical concerns such as knowing who to contact and/or the cost of counseling [32].

Other factors such as personality traits and coping strategies are presumably more important predictors of psychiatric morbidity than fertility history. Doctor-patient relationships that target these domains appear likely to offer maximal therapeutic benefit. While treating the patient separately, we again reach the couple. At this stage, it may be useful to develop activities in sexual education. Some men believe that if they do not have problems having sex, then they must be fertile. It should be conveyed that there is no relationship between virility and fertility. In other cases, some men are told that if they masturbate excessively, this will make them sterile.

In the perspective of couples therapy, there is the prerequisite of meaning that this experience acquires in the life of a subject, and the first message that is important to transmit to these couples is that of tranquility and comfort. As they are preoccupied with their fertility, the first thing that they need to know is that they are not alone. Over time, many couples become increasingly isolated. They may stop sharing their experience with others in order to avoid raising hopes and expectations that will force them to face new rounds of questions. Although they maintain their everyday
routines, they cease doing anything that gives them pleasure and avoid social occasions (e.g. family parties). It is crucial that couples resist becoming isolated.

In many couples, the frequency of intercourse and sexual performance are not even exceptional. The sexual problems can appear less severe if they wait. They must not see this as a tremendous obstacle, some problem that has no solution. Sex therapy views sexual issues as being resolved by specifically addressing them, rather than by the assumption that when the individuals in a relationship work out the relationship issues, the sex will just ‘fall into place’. Though intercourse is necessary, coital involvement must not be assumed to be a compulsory obligation. Infertility treatments are not meant to coerce a person who wants less sex into wanting more.

Intimacy fulfills a crucial role in the reorganization of the sex life of these couples. Besides emotional intimacy, this also includes physical intimacy. Body caressing is an important tool for all clients seeking to overcome sexual dysfunction due to infertility. Massage should be a common language that couples speak to each other. Body caressing is an integral part in the approach to sexual dysfunction due to infertility. As a general rule, physical wellness allows partners to establish a clear communication, each of them feeling free to express what is pleasurable to their senses and gives them more sexual gratification. Verbal feedback from the partner helps to discover to what degree a touch is understood as gratifying. Couples often transfer other conflicts to their sexual life. Intimacy helps to increase the consistency of love and to induce the resolution of conflicts, as well as to forgive and to integrate the partner into a couple’s affective life.

Cognitive behavioral psychotherapy and support groups decrease stress and mood symptoms, as well as increase fertility rates. The cognitive behavioral approach help patients to overcome difficulties in the intimate sphere by active correction of their irrational representations, unrealistic belief and hopes concerning sexual life, paying the greatest attention to emotional needs and displays of sexual disharmony as well as to improvement of the interpersonal relationships of spouses. Although there have not been systematic studies in infertile couples examining the impact of the different types of psychotherapy, treatments that decrease psychiatric symptoms, stress and sexual dysfunctions in the general population will likely benefit this population.

When partners have different social, cultural, religious, racial or educational backgrounds, they often face additional challenges to a successful relationship. To treat sexual dysfunction due to infertility is an opportunity to change the patients involved and to deal with some cultural barriers as they happen to exist in many specific cultural groups. This aspect is all the more pertinent as it is known that psychological conflicts involving infertility reach the deepest layers of the psyche, invading a couples’ interpersonal domains and sexual space, and spreading to the sociocultural and working life and to the definition of family [3, 5].

In keeping with the pertinence of psychotherapeutic and psychosexual work, is central to know: does psychotherapy increase fertility rates? Clinical evidence showed that group and individual/couple psychotherapy may reduce depression and anxiety.
associated with infertility. The intervention led to decreased thoughts of helplessness, decreased marital distress and improved pleasure in sexual activities. Decreasing stress, changing maladaptive beliefs related to intercourse, and encouraging intercourse during the fertile period of the menstrual cycle can increase the chances of conception as well as decrease marital distress. However, psychotherapy and sexual counseling by themselves may not improve fertility rates. More and better-designed studies are needed in this area, and they should include specific attention to the sexual health of a couple and its cultural environment [19].

References


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