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# The Psychosocial Aspect of Infertility

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## Abstract

For both partners, infertility is a complex and situational crisis that is generically psychologically threatening, emotionally stressful, financially challenging, and physically painful most of the times due to diagnostic-curative operations undergone. Infertility triggers a range of physical, psychological, social, emotional, and financial effects. Although it is not a life-threatening problem, infertility is yet experienced as a stressful life event for couples or individuals due to the exalted value attributed to having a child by individuals themselves or society in general. Infertile couples are not facing a medical condition alone but coping with a number of emotional states as well. Emotions, thoughts, and beliefs of infertile couples frequently change as one consequence of infertility diagnosis. Exposed to a tremendous social pressure, infertile couples may resort to hiding the problem due to the extreme privacy of the matter. Infertility also affects marriage life adversely.

**Keywords:** infertility, psychological factors, infertile couple

## 1. Introduction

Although not classified as a life-threatening disease, infertility is a social problem affecting the individual, family, and society. Since infertility causes personal, familial, and social problems, it is a devastating therefore serious health problem [1, 2]. An abundance of studies have evidenced the physical, psychological, ethical, sociocultural, emotional, and financial effects of infertility. Infertile couples or individuals frequently demonstrate signs of stress, anxiety, depression, financial hardships, guilt feeling, fear, loss of social status, despondence, and social labeling [3–7]. Yet a good number of infertile couples or individuals choose to hide the problem and avoid sharing fertility problem with their families and relatives, which then leave them unsupported. In the course of time, avoidance may result in social isolation [2, 8]. As regards this matter, healthcare personnel could also fail in correctly evaluating psychological state of infertile individual or couples, or correctly diagnose psychiatric indicators and disorders. That failure could adversely affect couples' life quality and infertility treatment. In this part of study, we have systemically reviewed our latest knowledge on the psychological manifestation of infertility.

## 2. Infertility and reproduction

Reproduction and continuing the lineage are among the most innate and important instincts of all living beings. For both partners, infertility is a complex

and situational crisis that is usually psychologically threatening, emotionally stressful, financially challenging, and physically painful most of the times due to diagnostic-curative operations undergone. The condition impacts 10–15% of couples at their reproductive age [2–7]. The incidence of infertility and etiology differ in different societies. Approximately 8–10% of couples in developed countries and 15–20% of developing countries have infertility [4]. Fertility is a vital function of adult development. If this need is unmet, as seen among infertile couples, there is a negative impact on their future plans, self-image, self-respect, marriage life, and sexual life. It is also feasible to see loss of physical and sexual privacy among such couples [9, 10].

### **3. Psychological factors as one reason of infertility**

It was detected that causes of infertility are widely ranged for men and women. The causal factors of infertility are not limited with medical factors but extend to psychological factors too [11]. Emotional drivers of infertility for women can be listed as tubal spasm, anovulation, rapidly throwing seminal sperms, and vaginismus. Added to that, another infertility factor related to women is unintentionally avoiding sexual intercourse while ovulating. There are a number of psychological commonalities among infertile women. Although most women seem to dearly want to get pregnant and express their desire verbally, deep down they may hide negative views and fear toward pregnancy. These fears may originate from pregnancy, delivery, or motherhood. Among some of the potential underlying causes with psychogenic roots are also fear of having a bad body shape due to pregnancy, fear of losing her life or the baby during delivery, or fear of failing as a good mother. Studies revealed that if women were encouraged to express such emotions, a more affectionate and unrestricted bond could be developed among partners, which then could lead to pregnancy [12–14]. Among men, impotence in erection and ejaculation are root causes of psychological infertility. Besides, as is the case for women, men can also avoid coitus unintentionally. Male impotence may exist from birth or develop in life later. In a vast majority of men, it is also possible to experience temporary impotence in any stage of life. A great part of impotence breakout could be related to psychological causes. Most of the times, past psychological traumas, nutritional disorders, childhood diseases, and overaffectionate and protectionist mothers are among the initiative factors of psychological impotence [12, 15, 16].

### **4. The relationship between stress and infertility**

Infertility is mainly categorized as an unsolvable life crisis that threatens being a parent, which is one of the salient life objectives, putting pressure on personal resources and having a potential to resuscitate unsolved conflicts of the past years. For infertile couples, stress sources may originate from personal, societal, and marital life. It was reported that single or collective presence of these factors increased the stress level during treatment process more [17–19]. For the couples defining their infertility experience as “the most distressing life event,” overcoming their current condition can only be possible by coping the stress and adapt into the current situation. Individuals diagnosed with infertility are forced to counteract a condition not solvable with the available coping strategies. In stress management, personal capacity, past experiences, and support from immediate social circle are very critical [20]. Failure to reproduce fuels both familial and environmental pressures among couples while also igniting stress and tension at home. If failure to

reproduce were perceived as if it were a crime and if it forced the individual to feel like a loser in community, infertile couples would then choose to be isolated from their close circle. As spouses become more discreet toward one another, their marriage life may also be adversely altered. Another explanation for infertility-related stress among couples is the financial cost of treatment process. Since it is a long, exhausting, and also costly stage of which treatment process is uncertain, partners are likely to undergo an emotionally difficult and tense experience. Extended length of infertility and treatment is another factor related to psychiatric problems. Sociofinancially advanced couples prove to be more apt in accepting infertility and develop favorable coping methods against infertility-induced psychological problems, but the opposite holds true among sociofinancially backward couples [16, 21–23]. On the other hand, it was acknowledged that rather than financial hardships, the influencers of quitting the treatment protocol are physical and emotional burden, huge stress, and disappointment. The same study also highlighted that feeling stressful prior to IVF operation is an acceptable case. Yet stress during the actual treatment process led to adverse consequences [24]. In one study conducted across 151 female cases to investigate the effect of stress on IVF treatment, three vital findings were obtained [25]. These findings were, respectively, listed as follows. (1) Stress level in the beginning of treatment is significantly correlated with biological parameters such as collected number of oocysts, total number of fertilized oocysts, pregnancy ratios, live birth ratios, and birth weight. (2) Stress level during IVF procedure is significantly correlated with collected number of oocysts and total number of fertilized oocysts. (3) When infertile couples having least amount of stress in the beginning are compared with the ones having most amount of stress, it is detected that frequency of dead birth is 93% lower. Stress-lowering interventions during infertility treatment are correlated with increased ratios of pregnancy. Among women with adequate level of active-effective defense mechanism and emotional self-expression, there is higher success of infertility treatment compared to women not having these traits [25]. It is reported that unpredictability, negativity, uncontrollability, and ambiguity dimensions of infertility may be perceived as stressors for individuals. The application of stress and coping theories to infertility; in which situations infertility is perceived as more stressful, what are the factors that facilitate and complicate adaptation of individual and couples diagnosed with infertility would assist in better understanding which therapeutic interventions are more beneficial for reducing stress.

## **5. Psychological effects of infertility on couples**

When a married couple fails to reproduce despite desiring to have a baby, they feel like not fulfilling the role of “being family.” Failure to accomplish reproduction function leads the couples to feel like a loser and idler. By negatively affecting social life, mood, marriage life, sexual life, future plans, self-respect, body image, and life quality of couples, infertility then turns into a complex life crisis [2, 7, 27]. For the couples, the common emotions for not having a baby are frustration and missing mother-father roles valued in society. For a woman, childlessness is associated with infertility (functional disorder), loss of control (my body rebelling against my will), psychological void (unfulfilled maternal instinct), feeling outcast from female community, feeling worthless, loneliness (lack of emotional support of the child), absence of social security (nobody to look after them in old age), unmet social role (mother, pregnant woman, postpartum period, mother-in-law), and lower self-esteem [2, 27]. For a man, childlessness is associated with failure to impregnate a

woman (weak functioning of manhood), psychological void (unfulfilled paternal instinct), loneliness (in old age), failure to continue the lineage, unmet social role (father, father-in-law), and diminished social security [2, 27].

## **6. Reactions of couples against infertility**

Despite the existence of personal differences regarding the reactions of individuals against infertility, studies also indicated a number of commonalities [2]. The ubiquitous emotion experienced by infertility-diagnosed individuals is misery. Personal reactions against infertility are confusion, denial, anger, negotiation (if I get pregnant then...), despondence, withdrawal, social isolation, lamenting, guilt feeling, unworthiness, frustration, and acceptance. The first stage is to feel shock, confusion, and disbelief. When the couple is diagnosed with infertility, first they feel shocked due to this sad fact and choose not to believe. Shock stage is followed by denial stage. Most of the times, couples are busy with not having an unplanned pregnancy so they are totally unprepared against the infertility scenario. Hence, outbreak of infertility problem is particularly devastating for those with high expectations and extreme confidence in overcoming any challenges in life. In order to avoid facing this bitter reality, denial is a popular tactic. Frustration experienced with the menstruation period every month is ignored by the couple, and infertility is attributed to fewness of sexual intercourses and believing that it is quite normal to get pregnant in the early months. Another stage awaiting the couples is fury and anxiety. An infertile partner is anxious with the fear of being left by the spouse; women feel themselves worthless and useless while men feel like having lost their manhood and might-power attributes of fatherhood. Reasons explaining the extremity of such emotions for women are fear of receiving many tests and protocols in her own body, anxiousness to lose the love of spouse, feeling worthless and useless, and a loss of self-confidence due to feeling depreciated manhood or womanhood. The longer waiting period and the more complexities in diagnosis and treatment can result in a heightened level of disappointment and anxiety trap. The next stage awaiting the couples is anger stage. Individuals feel resentful toward themselves, their partners, families, and social circle. Infertile couples feel to be treated unfairly and ask the question "Why us?" This question leads the couple to put the blame on past abortions or secret sexual intercourses that call for punishment. This accusation brings with itself self-directed anger or anger and hostility toward the partner. After all, infertility can be perceived as a problem threatening the continuity of one's lineage. The problem could even end up in solutions such as divorce, remarriage, or even suicide. Another stage awaiting infertile couples is the stage of loss of control. The complex and interventional nature of administered treatments and detailed questioning of couple's sexual life is perceived as a violation of their private life. Unpredictability of treatment success fuels a feeling of ambiguity toward the future. Couples think their private life is violated since administered treatments and directed questions expose their most-intimate life to outsiders. At this stage, women intentionally avoid seeing their pregnant friends and push themselves into loneliness. Another stage to be experienced by a couple diagnosed with infertility is the stage of guilt feeling. Infertile partner blames himself/herself due to the conviction that cultural motherhood-fatherhood role is denied from their partner because of their failure. Such feelings of blame and anger trap the infertile partner into despair. Partners feel themselves guilty since they blame themselves for denying their partner from the right of motherhood-fatherhood. As family and culture pressure are jointed with these emotions, they feel like being punished. They lose their interest to everyday life, they have lower motivation and enthusiasm

and everything loses their former value, and they are likely to develop depression at this stage. For an infertile couple, each month with no pregnancy is perceived as if losing the child in the womb because of menstruation. Feeling of child loss brings mourning and depression. Although there is no tangible loss like in death or divorce, paradoxically, couples mourn for a baby who never existed in the first place. It is because the issue is not the loss of baby only; it means saying goodbye to dreams of ideal family and happy future. As time goes by, they develop apathy to life and feel beaten. In a different saying, mourning process results in depression [26, 27].

Healthy couples gradually enter into the stage of acceptance. Denials recede and facts supersede. By seeking alternative treatment options, they reconnect with each other and their friends and follow a more amiable approach in their reactions. Then these couples accept the infeasibility of having a child through biological ways. At this junction, couples need to make difficult choices like continuing a childless marriage, getting a divorce and remarrying someone else, or adopting a child [2, 7, 8, 28]. Stages of infertility are very much like the mourning process for someone nearing death. Yet, in infertility, there is not a fatal life-threatening issue; life quality and an agreeable marriage are at stake. Besides, although in a fatal disease, individuals come closer, the opposite holds true for infertility and couples distance themselves from one another as partners and from their social circle [28–31]. The reactions given to infertility may be different from among societies. Similarly, men and women exhibit different reactions against infertility. Women express their emotions more frequently and need wider social support, whereas men share their problems less frequently. As a defense mechanism, women negatively react to infertility, while men would choose to forget and deny. This disparity prevents partners to understand each other. Then, they start not to talk about their problems and women feel like shouldering this problem on their own. When the partners fail to provide emotional support to each one, family bond is destined to weaken [8, 32, 33]. In a relevant study, it was identified that among 31% of women and 16% of men, dominant emotions were despondence, pessimism, despair; 23% of women and 16% of men felt lonesome [34]. A different study focusing on the loneliness levels of infertile women revealed that 85.4% were primer infertile, 54% were woman-borne infertile, 78.7% received no psychological support [35]. In the same study, women's loneliness scores were found to be significantly related with the variables such as being employed, education level, length of infertility, number of marriage, need for psychological support, social security status, and social support [35]. Certain studies indicated that infertility affected couples' emotional state, social, sexual life, and marriage bond, and compared to men, these effects were more intensively experienced among women [36, 37].

## **7. Correlation between infertility and mental disorders**

A number of studies have investigated the correlation between infertility and mental indicators and disorders. A vast majority of studies show that a significant correlation existed between infertility and mental indicators. It was identified that among infertile patients, the hardest psychological challenge was anxiety, and for those couples having had a failed treatment, depression was the greatest psychological burden. In an interview conducted with 112 infertile women, it was reported that psychiatric disorder was vivid across 40% of cases. The most pervasive diagnoses were reportedly anxiety disorder (23%), major depressive disorder (17%), and dysthymic disorder (9.8%) in the infertile group in Japan [36]. These findings point out that in comparison to society at large, frequency of psychiatric disorder was higher among cases with a diagnosed infertility issue. In studies encompassing

different communities, it was detected that correlation existed particularly between generalized anxiety disorder and infertility [29, 38–40]. For example, generalized anxiety disorder was associated with infertility in the 11,000-person study conducted in the American community [37]. In Japanese society, which has various cultural characteristics, the results also supported the generalized anxiety disorder [14]. Similarly, in many studies from different society, the highest prevalence of anxiety and depression as a psychiatric illness were detected in patients with infertile [35, 38–40]. Infertility is also compared with chronic physical diseases. In one study that contrasted infertility-diagnosed cases with patients diagnosed with HIV-positive, cancer, cardiac disease, or similar life-threatening chronic diseases, anxiety effect was reported to be higher among the infertile group [41]. By the same token, it was identified that compared to healthy, pregnant women, infertile women maintained higher depression rates [40, 42]. Undoubtedly, the reason for more frequent depressive indicators among women is that interventional diagnosis and infertility treatment procedures are administered on women's body. In a relevant study, it was seen that compared to control group, mood disorder was reported to be 3.4 times and generalized anxiety disorder 2.7 times more widespread in infertile patient group [40]. Among infertile patients, other common psychiatric problems are sexual function disorder, somatization disorder, dysthymia, panic disorder, obsessive compulsive disorder, and social anxiety disorder. Eating disorders such as anorexia nervosa, bulimia nervosa, and obesity were reported to be linked with infertility. In addition, alcohol and drug addiction were also reportedly widespread among infertile cases. Some studies revealed that among infertile women, there was elevated level of anger and stronger aggression, while other studies showed that anger could be turned to the self or to outside. It was highlighted that among patients undergoing infertility treatment, hormonal imbalance in hypothalamus hypophyseal ovarian axle or administered hormonal medications could also lead to mood disorders [2, 8, 38–42]. In a study that examined mental state and personality profile of infertile patients, one mental disorder at some intensity could be detected among 83.8% of women; 52% of the cases were reported to have mild or severe personality disorder [43]. In the same study, it was also revealed that in infertile patient group, depression and anxiety level were higher and mental composure was less stable which was related with personality traits. With respect to gender, there are certain variations in mental indicators and disorders. Among infertile women, depression is reported to be more widespread; among men, on the other hand, there are a higher number of psychosomatic indicators due to suppressed anxiety [44, 45]. It was reported that among infertile men with an elevated alexithymia trait, there was higher level of experienced stress and worsened life quality [46]. Infertile women were reported to score significantly higher in the categories of psychiatric traces, hostility, cognitive dysfunction, diminished self-respect, anxiety, and depression. Among infertile men, a significant rise was observed in lower self-confidence but heightened anxiety level and somatization symptoms. Compared to women, men got higher scores in satisfaction from marriage and sexual life [47–50]. The reasons for observing more psychopathology among women can be related to assuming more responsibility and feeling of guilt, exposure to higher social pressure, and stigma [51, 52]. In one study, it was reported that 49% of infertile individuals were exposed to stigma [53]. Motherhood being a social role attributed to all women makes woman to fear infertility as a threat for marriage, which then leads to anxiety [8]. During the infertility experience, a woman having a mature personality, total self-confidence, a fulfilling bond with her spouse, and positive attitude to adoption choice can go through fewer psychological problems; on the other hand, inadequate psychological support, unsuccessful treatment interventions, low socioeconomic status, being of a foreign nationality,

absence of partner support were reported to be related with heightened depression risk [46, 47]. In a noticeably significant number of studies, a critical finding showed that negative reaction of one's spouse and parents-in-law were related with higher anxiety-depression scores and lower self-esteem [20].

Mental indicators were extensively analyzed as other causes of infertility. Unexplained infertility was reported to be correlated with high anxiety level and suppressed anger; on the other hand, innate infertility was more linked with depression [54–56]. In male-related infertility cases, compared to other causes, stress level is higher in effect. In one study, it was reported that in male-caused infertility, couples avoided expressing negative emotions and it was positively linked with increased pregnancy ratios [57]. There is a correlation between mental indicators and findings and infertility itself. Findings revealed that anxiety level is a determinant for the result of infertility treatment and decision to continue the protocol [58–62]. Anxiety is also effective on patient's reaction against the possibility of losing baby after a successful treatment and pregnancy-borne complications. Also, anxiety, depression, and deteriorated marriage life are linked with unsuccessful infertility treatment. Infertility-rooted psychological problems could lead to discontinuing the treatment. It was reported that among couples not taking a second chance after a failed IVF treatment, the most decisive cause was psychological burden and incorrect prognosis [63]. Extended infertility term and unsuccessful but expensive treatment attempts were reportedly correlated with heightened depression-anxiety level. A different study indicated that rather than the length of treatment, the length of infertility was more closely associated with depression. In other studies, it was detected that compared to an average-length infertility protocol, depression levels were lower in short- and long-term infertility. Some of the reasons behind this difference are at the onset of treatment procedure, couples believe to have a baby in just a few months but as infertility period extends longer, couples may develop specific coping mechanisms and accept the situation [48–50].

## **8. Psychological approaches toward infertility**

Psychological counseling for infertility relates to raising the awareness of individual and/or couple by spreading information and skills during diagnosis, treatment, and post-treatment stages of infertility procedure; counseling is offered by a professional specialized in the field of psychology. Patients are assisted in their decisions on treatment and can thus develop coping strategies against the devastating emotions surfaced emerging because of infertility [64]. Studies in relevant literature underlined that until the 1980s, infertility was categorized as a psychosomatic case that reflected a woman's ambivalence emotions to motherhood or unsolved conflicts with their own mothers. Hence, treatment was generically administered by psychoanalytic-oriented psychiatrists [65]. Menning [66] argued that mood changes were not the cause but rather the result of infertility. Therefore, he founded Resolve the National Infertility Association (RESOLVE) to provide emotional support for infertile individuals residing in the United States of America (USA) and climb public awareness by offering courses on infertility [66]. An increasing number of literature studies started to acknowledge psychological effects of infertility and highlighted the importance of supportive counseling interventions for those undergoing infertility treatment [66].

Psychological counselors for infertility can offer services by consulting to theoretical approaches such as psychodynamic, individual-centered, cognitive-behaviorist, or solution-focused interventions. Although the methods being



employed are different from one another, all of the psychological counselors on infertility adopt a common objective in taking care of emotional well-being of the couple and when need be they strive to boost their psychological integrity and resources [67]. Responsibilities of a psychological counselor for infertility are given in **Table 1** [68–70].

As a reflection of the latest multidisciplinary medical approaches, there has been a consensus among medical community that psychological counseling should be a complementary step for the biological treatment protocol of infertile couples [71]. In psychological counseling protocol for infertility, there is a wide range of intervention types catered for the different levels of help needed among different couples. In psychological counseling for infertility, there is a myriad of counseling options such as informative and decision-making, supportive counseling, and therapeutic counseling. Informative and decision-making is the first stage of infertility counseling. This stage involves comprehensive explanations on the causes of infertility, suggested treatment options, potential expectations from the treatment, and the way treatment process could affect their everyday life [72]. At the onset of psychological counseling protocol for infertility, it is suggested to openly communicate about ideas, expectations, doubts, and worries of the clients on psychological counseling so that objectives of each session could be specified. Indeed, for many couples, this session is generally the very first meeting that they have ever had with a psychiatrist for a lifetime [70]. That is why the couple may be resistant to share their private matter with a third person and feel like being labeled. It is thus suggested that in the first session, mutual duties and responsibilities, notice on privacy, and providing a safe and supportive setting to help the patients discover and manifest their emotions toward infertility are some of the items to focus on [65]. To maintain a satisfactory session, some of the essentials are active listening, empathetic approach, adopting a respectful language toward the viewpoint of each client, identifying the meaning or importance of the problem for the client, and to make the targets achievable within the control of client. In these sessions, it is aimed to help the patients understand that most of their infertility reactions are normal and predictable, to discuss about the process toward obtaining desired solutions, to conceptualize or reinterpret the problems with solution offering methods [2].

Among the main objectives of infertility psychological counseling are providing some coping strategies to the individual and couples diagnosed with infertility,

1	Helping the couple uncover their ambivalent emotions toward being infertile
2	Helping the couple unravel their ambivalent emotions toward the projected assistive treatment methods to have a baby
3	Helping the couple cope with the complicated emotions surfacing after failed interventions
4	After nullifying the emotional limitations of the couple, helping them make a decision from a variety of options including the choice of ending the treatment
5	Helping the couple establish a more effective communication as partners on anything related to infertility
6	Helping the couple cope with ambiguity and uncontrollability phenomenon
7	Helping the couple have a clear idea on any related aspects of assisted reproductive techniques
8	Helping the couple cope with the new experience caused by pregnancy or trauma after losing the baby despite the treatment (recurrent abortus, dead birth, etc.)
9	If need be, referring mentally disordered cases to psychiatric treatment

**Table 1.**  
*Responsibilities of a psychological counselor for infertility.*

emotional readiness to the treatment process, discovering the options, assisting in making a choice, and determining the effects of infertility on the individual and his/her immediate surroundings. Having recently renowned as a domain calling for professional expertise and skills, psychological counseling for infertility gives a chance to infertile individuals to seek the ways for enhancing, exploring, and clarifying their life quality and satisfaction. It also gives them a means to express infertility-related emotions such as deep misery, guilt feeling, anxiety, and explore the problem's traces on their self-perception and body image. Making sense of the emotional and physical changes undergone during treatment process is critically important in the future plans of individuals coping with infertility and to overcome the hardships they are exposed. It is thus suggested that psychological counseling for infertility that can offer the individuals a safe reserve for self-expression is quite a salient service catered for infertile individual and couples [73–77]. Psychological interventions play an important role in the treatment of infertility, in particular, for infertile patients who are not receiving medical treatment [78].

## 9. Conclusion

To conclude, it can be stated that infertility is a life crisis that brings with itself a number of psychological problems. Taking preventive measures upon calculating psychological problems that could affect treatment success is a critical issue to observe in providing healthcare services. During the infertility treatment process, to have some awareness on the psychological problems experienced by individuals not only helps in the adaptation of infertile individuals to infertility diagnosis and treatment procedure, but it could also lower the intensity of reactions against infertility. It is thus strongly suggested that analysis of infertile couples or individuals within the context of psychological indicators and findings should be integral to an entire infertility treatment protocol.

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