



Review

Emotional Support for Infertility Patients: Integrating Mental Health Professionals in the Fertility Care Team

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Abstract: Patients seeking fertility treatment are at risk of experiencing psychological distress, with both women and men reporting higher levels of depression and anxiety during infertility treatment than patients in the general population. Multiple professional societies, fertility care providers, and patients have advocated for integrating mental health providers in the treatment of infertile patients in order to provide comprehensive patient-centered care. Research with other patient populations shows that embedding mental health professionals into clinics provides the greatest benefit to patients. Despite acknowledging the importance of mental health in infertility care, professional societies, such as ASRM and ESHRE, have not universally standardized recommendations or methods for imbedding mental health providers in the fertility team. This review article aims to serve as a resource for providers and patients to appraise the available literature on the importance of embedding mental health providers into the fertility treatment team and discusses feasible methods to develop this comprehensive care team.

Keywords: infertility; fertility treatment; integrated behavioral health; depression; anxiety



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1. Background

Prior to the 1980s, infertility was often thought of as being caused by a woman's psychological distress ("psychogenic infertility") [1]. Women were thus blamed for their experience of infertility and referred to psychotherapy to cure their distress and thereby cure their infertility. A landmark article published in 1980 helped to shift this paradigm away from victim blaming and toward a greater understanding of psychological distress as a consequence, rather than biological cause, of infertility [1]. Progression such as this also allowed for greater clarity and acknowledgment of the critical role of mental health professionals (MHPs) in mitigating the emotional distress common among fertility patients [2].

Although psychological distress (e.g., depression and anxiety) has been hypothesized to biologically impair fertility via several proposed pathophysiologic mechanisms, both randomized control studies (RCTs) and non-RCT studies on the subject have been shown to be unreliable due to high risk of bias and/or due to the failure to control for other variables which could cause infertility (e.g., male factors), rises in stress hormone levels (e.g., exercise, perimenopausal changes), distress (e.g., knowledge of a poor prognosis), or both infertility and distress (e.g., PCOS or endometriosis) [2,3]. Similarly, problematic unreliable research exists with regards to relaxation (e.g., psychotherapy, acupuncture) and pregnancy chances [3,4]. Although no rigorous research shows that psychological distress (or stress hormones) is a biological cause of infertility, nor that parasympathetic inhibition prevents reproduction, infertility (and failed treatment cycles) has routinely been found to cause psychological distress.

A wealth of published research confirms the high levels of psychological distress seen in female and male fertility patients [2]. This distress has been found to begin before fertility treatment starts and often worsens during the course of treatment and particularly following unsuccessful treatment cycles [5–8]. For example, women seeking fertility treatment have been found to be twice as likely to have depressive symptoms as control subjects, and men, similarly, albeit with lower rates of endorsement, have been shown to endorse depression and anxiety when undergoing treatment [9–11]. Additionally, the levels of depression and anxiety seen in female infertility patients have been shown to be similar to levels of distress in newly diagnosed cancer patients [12]. Psychological factors are also some of the most frequently cited reasons for patients dropping out of fertility treatment, often in the earliest stages of treatment, which can negatively affect chances of conception [8,13].

Limited by the inclusion of non-RCT studies and other factors, three meta-studies on individuals, couples, and group psychotherapy have routinely found that mental health treatment is associated with decreased feelings of anxiety and a reduction in depressive symptoms in patients undergoing fertility treatment [14–16]. Additionally, reductions in psychological distress through mental health treatment may reduce engagement in lifestyle factors (e.g., nicotine/alcohol use, decreased rates of intercourse, etc.), which may interfere with pregnancy chances [14,17,18]. Fertility care, which includes both mental and physical health treatment components, can therefore enhance the provision of patient-centered comprehensive care and may reduce the burden of care for fertility patients [14]. Despite this, mental health and infertility are often not addressed concurrently, with mental health being underprioritized [19].

Symptoms of depression and anxiety are of course not limited to fertility patient populations. Recent estimates suggest that approximately 42% of Americans have recently experienced symptoms of a depressive or anxiety disorder [20]. As a result of the high levels of psychological distress evident in the general population, MHPs and medical providers in fields outside of reproductive medicine have developed models to integrate behavior health into clinical teams to improve patient access to these needed services [21,22].

Multiple studies outside of reproductive medicine have demonstrated how embedding mental health providers (MHPs) within the care team may result in improved patient satisfaction, psychological distress, and adherence to medical treatment [22–25]. Additionally, research with infertility patients has shown that patient-perceived barriers to mental health care (e.g., the need to travel long distances for mental health care, insurance coverage for care) may limit patients' use of formal mental health support [10,11]. Embedding MHPs into fertility clinics may therefore result in similar patient benefits and reduce barriers in access to care by enabling the scheduling of both a medical and mental health visit on the same day in the clinic as well as the clinic's ability to provide patients with access to financial counselors who can screen for mental health treatment coverage. We review here the scientific literature evaluating mental health and fertility, emphasizing methods by which practices may incorporate MHPs in patient care.

2. Mood Disorders among Patients Undergoing Fertility Treatment

Research on mood disorders among infertility patients has revealed that approximately 20–50% of female infertility patients endorse mild to moderate symptoms of depression, 2% report severe symptoms of depression, and 15–56% report clinically significant anxiety, with symptoms often becoming more severe after failed treatment cycles [26–29]. Women who are not yet infertile who participate in gamete cryopreservation for medical or planned egg/embryo banking also show high levels of depression and anxiety [12,30]. Overall, a significant percentage of male patients have also been found to be at risk of psychological distress, with as many as 50% of men reporting infertility-related distress, with other studies also showing high rates of distress, albeit lower than the distress levels seen in female patients [9,11,30]. With the uncertainty, financial burden, medical constraints, and stringent timeline that can come with fertility treatment, it is no surprise that one study

found that 15% of men and 49% of women identified infertility as the most stressful time of their lives and another more recent study found infertility to be more distressing than the COVID-19 pandemic [9,31].

It is interesting that, although the prevalence of anxiety and depression is apparent in both males and females undergoing fertility treatment, the cited causes of distress may vastly differ between male and female patients [11]. Women may more frequently experience anxiety and worry about negative pregnancy test results or miscarriage, while their male partners have been shown to worry about potential health risks and emotional well-being of their female partners [11]. Additionally, women and men have been found to cope differently with infertility and infertility treatment [30].

Some risk factors for depression and anxiety in infertile women may be similar to the general population, including low socioeconomic status, smoking, drug and alcohol use, being single and/or unemployed, and having a history of depression [32,33]. Further insight regarding risk of depression was noted in a prospective study by Volgsten et al., which demonstrated an increased risk of depression among women with a negative pregnancy test after IVF treatment, and among male counterparts with a diagnosis of unexplained infertility, as assessed by the Primary Care Evaluation of Mental Disorders (PRIME-MD) [26]. These results also suggest that coping with adverse outcomes and the element of uncertainty in fertility care may be prime targets for MHPs. Indeed, research on coping with infertility shows that coping strategies may play a vital role in psychological distress levels associated with the uncertainty of infertility [12,34]. Finally, it has been hypothesized that exposure to exogenous gonadotropins in IVF may cause depressive and/or anxious symptoms. However, several prospective studies of IVF patients have not found a causal relationship between gonadotropins and psychological distress [13,35,36].

3. Mental Health Support for Patients Facing Infertility

One of the earliest formally identified roles of MHPs in fertility care was to determine which patients were emotionally prepared to cope with IVF and/or third-party treatments, as well as the psychological evaluation of third-party reproductive collaborators (e.g., sperm/egg donors) [37]. Following the seminal publication on infertility and distress by Menning in 1980 and the establishment of the Mental Health Professional Group of the American Society for Reproductive Medicine in 1985, a broader recognition of the need for emotional support for patients in the U.S. appears to have increased [2]. Patient advocacy, the emergence of IVF as an accessible option for patients, and increasing research on the relationship between distress and infertility furthered the increased attention to the mental health needs of fertility patients [36,37].

The American Society for Reproductive Medicine (ASRM) has also published multiple recommendations regarding fertility care which have evolved over time to include the incorporation of the need for mental health supports for patients [38–41]. For example, a now retired 2009 ASRM Ethics Committee publication on fertility treatment in the context of very low or futile prognosis includes a statement about the need for "consultation with a mental health professional", whereas an earlier publication on the same topic in 2004 does not include mention of MHPs. Current guidance from ASRM also strongly recommends that MHPs be accessible for psychosocial education, awareness, and assistance in decision making for patients seeking third-party reproductive services and/or fertility preservation (for patients facing infertility as a result of cancer therapy, or other gonadotoxic therapies) [39,41]. Most recently, the 2021 ASRM Committee Opinion on minimum standards for practices offering assisted reproductive technologies states that such practices should include "a consultant/mental health professional with expertise in reproductive issues" [40]. It is notable again that earlier publications of this document in 1990 and 1998 contain no mention of MHP involvement in care. Similarly, the European Society of Human Reproduction and Embryology (ESHRE) has established guidelines for psychosocial support for infertility patients; however, imbedding MHPs in care is not included in the 125 recommendations for fertility clinic staff [42].

Greater awareness of the mental health needs of patients and the role of mental health professionals in patient-centered fertility care has resulted in calls to screen patients seeking fertility care for psychological distress. The benefits of such screening include the identification of patients with the greatest need for additional psychological support, earlier connection with an MHP, increased patient insight into emotional well-being and needs, staff awareness of patient needs, and the provision of patient-centered care [28–30]. It is important to note that it is not uncommon for fertility patients to underreport their levels of psychological distress or current mental health treatment. Thus, although a screening tool is generally recommended, it may not capture all patients in need of formal psychological support [12]. There is no evidence to suggest that mental health screening within fertility clinics is widely accepted practice.

Although the routine screening of the emotional well-being of all patients seeking fertility care appears to be limited, a subset of fertility patients appears to receive formal psychological support potentially as a result of clinic referrals for care. For example, a recent prospective longitudinal study by Pasch et al. evaluated a total of 352 women and 274 men across five fertility practices in the United States [19]. In this study, they identified that 21% of women and 11.3% of men had received mental health services while undergoing fertility treatment, and only about a quarter of the patient population reported that their fertility clinic made MHP information available to them [19]. An alarming finding of this landmark study was that patients with severe or prolonged emotional distress symptoms were no more likely to receive information or support to access mental health services than those who did not identify as emotionally distressed. This evidence, in addition to the high rates of depression and anxiety in infertility patients, highlight the need for development of initiatives for infertility patients to access mental health services.

4. Evidence for Embedding MHPs in Medical Care Teams and Models of Mental Health Care in Medical Clinics

Underutilization and difficulty accessing mental health services in the United States is not unique to fertility patients, as less than half (43.3%) of the 47.6 million adults with mental illness accessed mental health services in 2018 [23]. Stigma, cost, time, and inability to navigate establishing mental health care are some of the reasons why patients may not seek or receive needed mental health care. Integrative medicine models have combatted these issues by embedding MHPs in primary healthcare clinics, which has overwhelmingly been shown to increase the use of mental health services, decrease psychological distress, improve patient satisfaction, increase adherence to medical treatment, and reduce disparities in access to mental health care [22,43,44]. For example, one study of 475 patients with scores on the Patient Health Questionnaire-9 (PHQ-9) of \geq 10 (scores indicative of Major Depressive Disorder) found that the integration of MHPs into multiple primary clinics in Colorado resulted in a significant reduction in depressive scores by \geq five points for \geq 50% of study respondents [44]. Additionally, original PHQ-9 scores were reduced by half after the integration of MHPs [44]. Another study of 4226 participants with diabetes similarly found reductions in PHQ-9 scores as well as hemoglobin A1c (HbA1c) levels, suggesting that the integration of MHPs may improve patient treatment adherence [45].

The greater uptake of patients receiving psychological treatment as a result of embedding MHPs in a medical care team appears to be driven by patient trust in their medical provider's recommendation to seek care with a MHP who is well known to the provider, reduced stigma surrounding behavioral healthcare as a result of integrated care, having a "warm handoff" to an MHP from a medical provider, greater awareness of insurance coverage for "in-house" MHPs, and reduced wait time in searching for and obtaining support from an external MHP who may or may not be taking new patients or be in-network with their insurance provider [22,23]. It is for these reasons that The Substance Abuse and Mental Health Services Administration (SAMHSA) of the U.S. Department of Health and Human Services has made its mission to reduce the toll of mental health conditions in America, in part through the integration of MHPs into medical clinics [46].

In addition to patient benefits, the integration of MHPs in medical clinics has also been associated with reduced medical team burden due to team members' perception of greater support, reduced patient-patient related stress, increased confidence in the ability to manage patients mental health needs, direct and easy access to mental health experts for mental health related questions and recommendations, and improved understanding of patients' needs all of which result in improved delivery of patient centered care and patient satisfaction [23]. Easy access to embedded MHPs also enables immediate activation of support during in-clinic patient crises (e.g., panic attacks, suicidal ideation, scans revealing pregnancy losses) and MHPs can provide didactic education and training to staff and trainees [47]. As a result of the many benefits of embedded MHPs, there may also be a reduction in premature treatment termination and staff workload, which may also result in more positive online treatment reviews and likelihood to refer scores [14].

To implement the incorporation MHPs in the care team, acceptance and adoption of system-wide change is often necessary [23]. An adaptation framework by Prom et al., suggests the inclusion of these management-based strategies: recruitment of practice stakeholders, providers and staff champions; early engagement of administrators, providers, and staff with a focus on buy-in, clearly communicated values, mission, and goals; and long-term engagement of providers and staff that is centered on feedback and reducing perceived barriers and challenges [23]. SAMHSA also provides numerous resources related to the integration of behavior health services into medical settings [48].

Additionally, numerous models exist for incorporating MHPs into clinics which can reduce patient burden of care, increase the probability of uptake of services, and result in both patient and provider benefits. The optimal practice would be for the MHP to be embedded in the medical clinic (e.g., a fertility clinic), with MHP care being covered by the same insurance panels as medical providers. Not all clinics may have the necessary financial or physical space resources to embed an MHP into the care team. A secondary yet feasible option in this situation would be for MHPs to either have dedicated physical space in the clinic for patient care or have space in the larger medical system, and/or have their salaries covered in full or in part by the medical system (e.g., Department of Psychiatry) or through independent billing of patients [47]. Given the recent increase in the provision of tele-mental health due to the COVID-19 pandemic, clinics with limited physical space for MHPs may consider embedding MHPs into their practices but offer only tele-mental health treatment. MHPs, on the other hand, must be treated as part of the clinic team (e.g., included in promotional materials, websites, regular team meetings, etc.) in order to maximize patient trust in the referral and realize the other proven benefits of embedded mental health care.

Although not yet fully studied, it is plausibly hypothesized that embedding MHPs into fertility clinics will result in the same or similar benefits to those seen when embedding MHPs in primary care as well as obstetrics and gynecology care. Indeed, a 2020 study of 7456 female fertility patients found that patients reported greater positive treatment experiences when fertility clinics offered onsite mental health counseling [49]. Several existing models of embedding MHPs into fertility care include the creation of "on campus" (but not inside the clinic) fertility mental health clinics, MHPs who are co-located within both a fertility clinic and a larger hospital system, and MHPs who are directly embedded in the fertility clinic ("integrated care").

An example of embedded MHPs in a fertility clinic can be seen in the Northwestern Medicine Center for Fertility and Reproductive Medicine program at Northwestern University [50]. Beginning in 1995, the Northwestern care model has included an embedded MHP. There are currently three clinical psychologists with on-site offices located in each fertility clinic location. The psychologists are faculty members of Northwestern University, provide clinical care solely within the fertility clinic, are in-network for most all major insurance plans, and bill for their services. Every patient in the clinic is strongly recommended to complete a fifty-minute psychoeducational appointment (with their partner if they are partnered) if they are pursuing IVF, gamete cryopreservation (medical or planned cryop-

reservation), third-party fertility care, or posthumous-assisted reproduction, or if they have experienced recurrent pregnancy loss. Additionally, medical staff routinely refer patients for psychological support immediately following pregnancy loss (including curbside consults at the time of pregnancy scan), other emotionally distressing reproductive (e.g., poor fertilization results, embryo disposition decisions, etc.), or other life experiences (e.g., sexual assault, interpersonal violence, suicidal ideation). Medical staff also consult with the psychologists when working with difficult patients, coping with other work-related stress, and sharing difficult news. Psychologists in this practice are academic clinicians who treat patients, teach trainees, and conduct and publish research on reproductive topics. The program has consistently been well received by patients, providers, and staff members.

5. Conclusions

It is accepted that infertility causes psychological distress and that patients may benefit from mental health support to reduce burdens caused by distress. Still, patients may struggle to connect with needed mental health supports. Research outside of reproductive medicine shows that integrating MHPs into clinics provides the greatest benefit to patients and medical teams. Therefore, it is hypothesized that the most effective way to identify patients at risk of psychological distress and in need of psychological support and maximize benefits to fertility clinics is to embed these specialists on the fertility care team (see Table 1). Nationwide recognition of the importance of the inclusion of mental health support for fertility patients has also been appreciated by the Society for Assisted Reproductive Technology (SART), which now indicates whether or not that clinic provides mental health services on each fertility clinic page [51]. Patients may be empowered to use this information to guide fertility care selection. Additionally, numerous social media forums provide opportunities for patients to communicate with each other about clinic care experiences, including opportunities relating to clinic mental health support. Thus, patient advocacy and empowerment may lead to change in improved access to mental health support in fertility clinics and the absence of such change may ultimately affect the bottom line of clinics.

Table 1. Benefits to implementing mental health professionals on the fertility care team for patients and fertility providers.

Benefits for Patients	Benefits for Providers
More likely to receive psychological treatment, when indicated	Improved understanding of patient's needs
Reduced stigma of pursuing psychotherapy	Easier to navigate in-network referrals
Decreased wait time for referral	Reduced time burden, allows for focused fertility care appointments
Improved treatment outcomes	Faster time to referral appointment
Continuity of care or "warm hand off" between providers on the same team	Patients more likely to complete treatment

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