

Evolution of psychology and counseling in infertility

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Five key paradigm shifts are described to illustrate the evolution of psychology and counseling in infertility. The first paradigm shift was in the 1930s when psychosomatic concepts were introduced in obstetrics and gynecology as causal factors to explain why some couples could not conceive despite the absence of organic pathology. In the second shift, the nurse advocacy movement of the 1970s stimulated the investigation of the psychosocial consequences of infertility and promoted counseling to help couples grieve childlessness when medical treatments often could not help them conceive. The third shift occurred with the advent of IVF, which created a demand for mental health professionals in fertility clinics. Mental health professionals assessed the ability of couples to withstand the demands of this new high technology treatment as well as their suitability as potential parents. The fourth shift, in the 1990s, saw reproductive medicine embrace the principles of evidence-based medicine, which introduced a much more rigorous approach to medical practice (effectiveness and safety) that extended to psychosocial interventions. The most recent paradigm shift, in the new millennium, occurred with the realization that compliance with protracted fertility treatment depended on the adoption of an integrated approach to fertility care. An integrated approach could reduce treatment burden arising from multiple sources (i.e., patient, clinic, and treatment). This review describes these paradigm shifts and reflects on future clinical and research directions for mental health professionals. (*Fertil Steril*® 2015;104:251–9. ©2015 by American Society for Reproductive Medicine.)

Key Words: Psychology, counseling, history, assisted reproductive techniques

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The evolution of psychology and counseling in infertility can be traced through five paradigm shifts in reproductive medicine that still impact the work of mental health professionals (MHPs) working at present in fertility clinics. [Table 1](#) presents a timeline for these shifts, which are then individually presented in the next five sections. In each section we present an account of the historic context motivating the shift, a précis of current research and practice influenced by it, and then conclude with future directions for this line of investigation.

PSYCHOSOMATIC CONCEPTS AND PSYCHOGENIC INFERTILITY

The psychology of infertility emerged from what Berg and Wilson (1) later named the psychogenic model of infertility, which proposed psychopathology as an etiologic factor in infertility. The psychogenic model was introduced in the 1930s to account for infertility that had no identifiable biomedical cause. At that time the diagnosis of "unexplained infertility" was given to more than 30% of presenting cases (2). Menninger (3) described unexplained infertility as "a psychic conflict

sailing under a gynecologic flag," with numerous forms of psychic conflict proposed (e.g., a conflicted sexual identity [same-sex sexual attraction] or a conflicted relationship between the self and mother [4]). Fischer (5) characterized women with unexplained infertility according to two personality styles perceived to be incompatible with motherhood: weak, emotionally immature, overprotected women or ambitious, masculine, aggressive, and domineering career women. Infertility in men (whether explained or not) was attributed to domineering mothers who expected conformity to rigid moral codes, overcontrolled their sons by threatening withdrawal of love, and created anxiety in their sons by their own sexual inhibitions (6). Such explanations were recycled during the sexual revolution to account for the so-called new impotence where men were thought to be infertile due to performance pressures from sexually liberated women who expected sexual encounters to be mutually rewarding

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TABLE 1

Five key paradigm shifts illustrate the evolution of psychology and counseling in infertility, and the historic context that motivated the shifts.

Section	Timeline	IV. Evidence-based medicine and the quality of psychological support	V. Integrated approach to fertility care
I. Psychosomatic concepts and psychogenic infertility	1940	High rate of unexplained infertility	
II. Nurse advocacy and the psychological sequelae model of infertility	1974	High failure rate of available treatments	
III. IVF and the integration of mental health professionals in fertility clinics	1978	IVF and the era of new reproductive technologies	
IV. Evidence-based medicine and the quality of psychological support	1999	Evidence-based medicine using the best research evidence as basis of all clinical decision-making	
V. Integrated approach to fertility care	2012	Treatment "dropout" and compliance	
		Development and evaluation of psychological interventions	Focus on burden of treatment and treatment engagement & disengagement
		Pretreatment psychological assessment, welfare of the child, third party reproduction, and monitoring of child outcomes	

Note: Dates of paradigm shifts are approximate only. Boivin. *Evolution of psychology and counseling. Fertil Steril* 2015.

(7). Over time the psychogenic model fell out of favor due to the increased ability of newer diagnostic technologies to account for unexplained infertility (e.g., 78% of patients with unexplained infertility showed pelvic pathology [8]). Psychoanalytic analyses of fertility problems occasionally still surface (e.g., Christie [9]), but it has generally been concluded that long-standing infertility is unlikely to be caused exclusively by psychological problems (10).

The demise of traditional psychosomatic theory has not put an end to research on psychological influences on fertility. As psychosomatic theories segued into multifactorial models of disease etiology (e.g., biopsychosocial model [11, 12]), researchers directed their attention to the vulnerability of all patients to psychological influences. According to these models disease states have diverse determinants and consequences (i.e., biological, environmental, social, psychological), with individuals more or less susceptible to each depending on their own personal history (e.g., genetic background, life events, learning). A main continuing line of research has been the study of stress and fertility. A plethora of studies has been published describing this psychobiological link according to characteristics (e.g., gender, treatment type, stressor), explanatory mechanisms (e.g., hormones, lifestyle, patient compliance, methodological confounders), time course (e.g., over single or multiple treatment cycles), and protective factors and interventions (e.g., education, information provision, counseling). This voluminous research shows that psychological factors are undoubtedly implicated in fertility problems. However, stress effects may not be directed to reproductive physiology or hormones but instead operate through patient behavior, for example, lifestyle habits known to affect fertility (e.g., smoking, alcohol consumption) or suboptimal help seeking behavior (13). The impact of psychological interventions on stress-fertility link is still hotly debated with some investigators proposing an effect and others not (14-16).

The legacy of the psychogenic model has been significant. It made possible entry of psychology into the exclusive obstetrics and gynecology club, which might not have happened if psychologists had only offered methods to make patients feel better. Psychosomatic questions are also the origin of much of the research contributing to our present multifactorial and broad understanding of the factors that influence conception and the capacity to reproduce. However, there are less positive legacies. Early case reports are the source of many persistent myths and unhelpful and ineffective advice given to couples trying to conceive (relax and you'll get pregnant, don't think about it and you'll get pregnant) that sometimes unnecessarily delay treatment (13). The near exclusive focus on women in psychiatric contexts caused disproportionate focus on women as a main cause of couple (unexplained) infertility, which still persists, and undoubtedly contributes to men being excluded from research and neglected during treatment. Finally, the strong emphasis on psychological factors as causes of infertility rather than consequences did not benefit couples struggling with the emotional, relational, social, or physical fallout of this medical condition.

Future clinical and research work linked to this tradition needs to focus on dyadic models if the true psychological determinants and consequences of (in)fertility are to be identified and managed. Multifactorial models need to be developed that take account of many levels at which determinants can operate together (e.g., cellular, hormonal, physiological, cognitive, behavioral). Models also need to acknowledge that people reproduce despite very harsh conditions of war, famine, poverty, and therefore prospective research should also focus on protective factors (e.g., coping, spirituality, resilience).

NURSE ADVOCACY AND THE PSYCHOLOGICAL SEQUELAE MODEL OF INFERTILITY

The shift from regarding psychological distress as a cause to a consequence of an infertility diagnosis is probably most associated with the advocacy work of the infertility nurse Barbara Eck Menning. Menning published the first infertility self-help book *Infertility: A Guide for the Childless Couple* (17) and founded the first patient advocacy group, *Resolve* (founded in 1974), that stimulated the worldwide growth of infertility support groups. Menning is also credited with the application of the Kubler-Ross descriptive framework (18) of reactions to death and dying to the infertility context, stating that infertility was accompanied by "...a nearly universal syndrome of feelings" that included shock/surprise, denial, isolation, anger, guilt, grief (p. 105, 19). This conceptualization redirected the focus of clinical and research endeavors.

First, it created a strong patient-led advocacy movement that continues to be strong. These national and international groups have a significant influence on clinics and industry, and an incredibly powerful online presence. Research is now turning its attention to the impact of such patient forums (20, 21) and the role that patient support groups can play in the well-being of patients, and especially, people with fertility problems who opt not to seek fertility treatment. Such work may enhance the provision of psychosocial support as a critical component of integrated infertility care.

Second, was primary research, now extensively reviewed (22–25), about the positive and negative impact of infertility and its treatment on the well-being of individuals and couples. This work has shown conclusively, for example, that infertile individuals present normative psychological functioning, infertility is emotionally distressing, women react more negatively to infertility than men, and that the infertility experience can strengthen the marital relationship. There is also extensive information on individual differences that modify the intensity of the infertility experience (e.g., coping styles, marital factors, social support, and infertility beliefs) (26). Furthermore, reactions to the different stages of fertility treatment are now well documented, for instance, that the 2-week waiting period is the most stressful period of treatment (27) and that treatment failure is followed by strong negative emotional reactions (mainly depression) that may last for 6 months (28).

A third influence was the significant effort put into developing interventions to support coping with the concerns and psychosocial effects caused by infertility and its treatment. Menning (29) mainly sought to help couples by applying the Kubler-Ross (18) descriptive framework. She would encourage patients to identify, "work through," and thereby resolve the syndrome of feelings (e.g., anger, guilt, grief) that was proposed to accompany a diagnosis of infertility. As new psychological conceptualizations of the infertility experience emerged, therapeutic approaches to support patients also diversified. Current psychological interventions in infertility can be traced to many other theoretical frameworks (e.g., cognitive-behavioral theory, family systems theory [30]) and to many different outcomes (i.e., behavior, emotions, relationships, and cognitions [31]). For example, some of the current techniques used include mindfulness (32), supportive telephone calls (33), and lifestyle behavior change (34). Furthermore, psychological interventions have now been optimized so that many members of the fertility staff can also deliver them. For example, staff can provide the positive reappraisal coping intervention to support patients during the 2-week waiting period (27). It comprises a leaflet explaining the rationale for the intervention and 10 statements that promote a form of coping (positive reappraisal) known to help in unpredictable and uncontrollable situations, such as waiting for potentially threatening medical test results, and that have shown benefits to well-being and outcomes in patients undergoing assisted reproductive techniques (ART) (27, 35–37).

Over time, patient support came to be differentiated into three complementary levels of psychosocial care: routine psychosocial care (e.g., provision of information, self-help support interventions), infertility counseling (e.g., crisis intervention, grieving support, implications counseling), and psychotherapy (e.g., support for patients with diagnosed mental health disorders). Routine psychosocial care should be the responsibility of all fertility staff to deliver during routine medical care, accessible to all patients, and given throughout the treatment pathway. In contrast, specialized psychosocial care should be delivered by qualified MHPs and targeted to those 20% or so of patients who are at risk of experiencing clinically significant emotional problems (38). The European Society of Human Reproduction and Embryology (ESHRE) guideline *Routine Psychological Care in Infertility and Medically Assisted Reproduction—A Guide for Fertility Staff* (31) examined evidence on these complementary approaches and concluded that providing routine psychosocial care can positively affect many relevant patient outcomes: reduce emotional distress and increase compliance with treatment (39), decrease concerns about medical procedures (40), change lifestyle behaviors (i.e., nutrition, exercise [34]), improve fertility knowledge (41), and improve well-being in specific groups (42, 43).

Overall, the sequelae model of infertility had a highly significant impact on the psychology of infertility by focusing attention to the possible negative effects of infertility and its treatment and by stimulating the development of psychological interventions for infertile patients. However, the grief and loss model Menning supported dominated

infertility counseling for too long. This approach did not sufficiently acknowledge individual differences in reactions to infertility and implied too much that all patients needed counseling. Furthermore, it placed too much emphasis on the emotional grief of childlessness at the detriment of providing practical and/or educational support for patients still trying to achieve parenthood by undergoing treatment (e.g., decision support, behavior change) or considering other forms of family building (e.g., adoption, fostering).

IVF AND THE INTEGRATION OF MHPs IN FERTILITY CLINICS

The introduction of ART, such as IVF, in 1978, instigated a need for MHPs in fertility clinics. Mental health professionals had the expertise to carry out the pretreatment psychological assessments that were thought necessary for the selection of the most suitable patients to undergo IVF. The role of the MHP was initially focused on pretreatment screening and was mainly fulfilled by social workers with experience in preadoption assessment and welfare of child issues (44). At the time, the pretreatment counseling was intended to preclude people with overt psychopathology from receiving IVF due to concerns on their ability to withstand treatment but also for the future welfare of the child (45). However, only approximately 2% of couples were denied treatment on this basis (46). Patients usually presented good mental health and fertility doctors were somewhat reluctant to act as gatekeepers of treatment as a means of achieving parenthood (47). This perspective remains. At present pretreatment assessment and counseling has shifted toward supporting individuals and couples to discuss the implications of different treatment choices and to identify behavioral, relational, emotional, and cognitive needs to be addressed in advance of treatment. In this work, MHPs are using screening tools (e.g., the Minnesota Multiphasic Personality Inventory) for the selection of ovum donors (48), SCREENIVF for people at risk of emotional maladjustment after treatment (49), or the Fertility Status Awareness Tool (FertiSTAT) for lifestyle risk factors that could compromise the success of treatment (50). Pretreatment counseling is therefore more preventative and tailored to ensure that the needs of individuals and couples are met in advance of treatment or pursuit of other pathways to parenthood.

As ART developed and was administered to different patient groups, MHPs were increasingly called on to focus on implications of using these techniques to achieve parenthood (or not), particularly third party reproduction. In 1989, Mahlstedt and Greenfeld (51), a psychologist and a social worker (respectively), were the first to argue that it was time for fertility specialists to acknowledge that conception and family building were different when donated gametes were used and that the field should stop pretending that once a couple gave birth they would never again think of how their children were conceived. Implications for numerous treatments are now described and routinely discussed with patients (e.g., embryo or oocyte donation, multifetal pregnancy reduction, embryo disposition) (52). The latest foci of research for implications counseling is on developing decision support tools to help patients deliberate

their choices. Examples would be an educational DVD to aid individuals and couples decide about the number of embryos to transfer (41) or a web page to help patients about to undergo oncology treatment to decide on fertility preservation (53).

The role of MHPs has also evolved in response to new approaches of psychosocial care and the necessity to deliver it at all phases of treatment (54, 55). Psychosocial support can now be delivered by e-health, m-health, and other self-help formats that MHPs are using to enhance the services they provide (21). The MHPs are using high quality evidence and validated assessment tools to assist in clinical decision-making about which support to provide at different time points (56). For example, tools to identify concerns about fertility treatment (e.g., Concerns with Assisted Reproduction Treatment scale, CART [57]), to assess fertility quality of life (e.g., Fertility Quality of Life tool, FertiQoL [58]) during or after treatment, or patient evaluations of care (e.g., Patient Centeredness Questionnaire—Infertility [59]). The MHPs are also now called on to provide consultancy in clinics and industry on many psychosocial issues (e.g., training fertility staff in communication and emphatic skills [60]).

The integration of MHPs across fertility clinics worldwide and the need for them to communicate and exchange best practice also stimulated the need for psychological special interests group separate from nursing special interest groups. Indeed 2015 marks the 30th anniversary of the Mental Health Professionals Group with its first meeting occurring at the 1985 annual meeting of the American Fertility Society (now American Society for Reproductive Medicine) in Chicago, Illinois. The pioneering *Infertility Counseling: A comprehensive handbook for clinicians* (61) also provided a coherent account of clinical approaches and infertility research for clinicians, and an important platform to disseminate best practice. Textbooks and clinical cases are now also available that fully cover reproductive health psychology (62) and forms of intervention (63) for use in academic and teaching environments. The role of the MHP in clinics continues to evolve.

The introduction of ART was critical to the integration of MHPs in fertility clinics, and this integration allowed MHPs and psychological researchers to influence how psychological matters were addressed in clinics and industry. Integration improved the care of people with fertility problems but inadvertently created hegemony about psychological care. Specifically the historic context in which integration occurred (pretreatment patient selection) promoted the view that only the mental health expert could address psychosocial issues. This perspective has focused attention on provision of highly specialized care to few highly distressed patients, ignoring other forms of support and the more typical, less distressed patient. Although this perspective is still present there is now a movement to get MHPs to adopt a broader view of the infertility populations they can help (54, 64).

EVIDENCE-BASED MEDICINE AND THE QUALITY OF PSYCHOLOGICAL SUPPORT

The advocacy movement of the 1970s resulted in the proliferation of many psychological interventions and strong endorsement for their use in fertility clinics. Yet by the new

millennium effectiveness studies of these interventions accounted for only about 10% of the total number of studies advocating their use (56, 65). The evidence-based medicine (EBM) movement of the 1990s made such incongruence unacceptable. Evidence-based medicine was promoted as a systematic approach to the collection, analysis, assessment, and use of the best research evidence as the basis for all clinical decision-making (66). Evidence-based medicine has progressively shifted therapeutic decision-making in reproductive medicine from intuition and clinical judgment toward the use of research findings and empirical evaluation. The EBM also affected the psychological work of MHPs.

The late 1990s and 2000s constituted a more reflective period for MHPs that questioned the need for and evaluation of psychological interventions (56). There was accumulating evidence showing that although infertility was distressing it did not have as devastating consequences as Menning (19) initially portrayed, and most people believed that they were able to face and adapt to this important life challenge without psychological counseling (38). This resilience was reflected in low uptake of counseling that highlighted that our model of psychological care in clinics (almost exclusively counseling) was not appropriate for most people undergoing treatment. There followed a fruitful period of development and effectiveness research for counseling and other psychological interventions that could be used more broadly (e.g., Emery et al. [67], Domar et al. [68], Haemmerli et al. [69], Tuil et al. [70], Cousineau et al. [71]). There were also several evidence meta-synthesis of psychological interventions (14, 15, 65). This body of effectiveness research showed that the most effective interventions were group interventions that focused on education and skills training (e.g., relaxation training, coping skills) with those emphasizing emotional expression and support and/or discussion about thoughts and feelings related to infertility comparatively less effective (65). There was also support for psychological interventions to be associated with increased pregnancy rates (PR) (e.g., Hämmerli et al. [14]), which has been supported by a more recent meta-analysis (16). These reviews highlighted big gaps in knowledge, and that the evaluation studies lacked specificity about: the group of patients expected to benefit, the treatment period/stage at which interventions should be applied, the psychological outcomes expected to improve, and the therapeutic mechanisms that explained beneficial effects. A further issue was how best to implement new psychological interventions.

The field has been tackling this lack of specificity. First, screening procedures are now being implemented to direct interventions to those that need and can benefit most from them. Examples of screening tools that can be used are the infertility-specific SCREENIVF (49) and general mental health screening tools (e.g., Beck Depression Inventory [72], Hospital Anxiety and Depression Scales [73]). Second, the needs of people not attending counseling are being better met through interventions designed to target specific treatment stages. Examples are a one-page preparatory information leaflet to inform men about the semen analysis (39) or an educational DVD to support decision-making regarding single or multiple embryo transfer (41). Third, more interventions have been

designed from psychological theories (e.g., stress and coping [27], goal regulation [74], acceptance and commitment therapy [75], or mindfulness [32]) and these better specify the causes and outcomes targeted when using those specific interventions. Finally, research is starting to recognize that attention has to be directed toward barriers to dissemination and implementation of interventions (or failure thereof) if the full potential of the available psychological interventions is to be achieved in clinics. To achieve this goal MHPs could capitalize on knowledge accumulated from other implementation health research (e.g., McHugh and Barlow [76]) in other disease contexts.

The other significant contribution of the EBM paradigm shift was to cause medical researchers to investigate the health and safety of ARTs. Some of this research has centered on the safety of fertility drugs or the health impacts of multiple pregnancies. Another important focus has been evaluation of the long-term psychosocial development of children. It was the Golombok team that published the first controlled European psychological study (77) on this topic, which laid to rest many of the misconceptions and assumptions made about the parenting skills of previously infertile parents and the effect of these skills on the well-being of their children, for example over-turning, that parents would have unrealistic expectations for their children or would be overly involved in parenting (78, 79) and this would affect attachment patterns (80). Subsequent longitudinal follow-up studies broadened the range of developmental stages and outcomes monitored (e.g., Owen and Golombok [81]), focused on alternative family structures including lesbian and solo mothers (e.g., Bos et al. [82]), and, in response to the demographic change in ART, investigated outcomes for families with older parents (e.g., Camberis et al. [83]). In general this body of research shows that families using ART are comparable to non-ART families.

Long-term monitoring research now focuses on those who were never successful with treatment. Results have shown that previously infertile childless individuals reported less favorable well-being than infertile individuals who achieved parenthood (84–87). However, the heterogeneity of sample sizes, follow-up periods, and control groups, coupled with a lack of control for possible confounding factors, made it impossible to reach definitive conclusions about the causes of differences in well-being for these couples. To illustrate, a recent cross-sectional study (88) using a theoretical approach demonstrated that in a representative population sample ($N = 7,148$) controlling for relevant demographic-, diagnostic-, and treatment-related factors that it is the ability to disengage from the parenthood goal that is critical to long-term well-being rather than the specific absence of a child. More research into the predictors of long-term adaptation to childlessness is continuing.

It is probably too early to fully evaluate the impact of the EBM paradigm shift on psychological practice in infertility. However, evidence that EBM principles are also embraced in psychology is shown by the recent publication (89) of evidence-based guidelines for psychosocial care in infertility, which will be promoted for implementation throughout European fertility clinics. Furthermore, several publications

(56, 90) offering a step-by-step approach on implementing evidence-based practice in infertility psychological care are now available to MHP.

INTEGRATED APPROACH TO FERTILITY CARE

A new perspective on the delivery of psychological care in fertility clinics has recently emerged and can be seen as the most recent paradigm shift for MHPs. It is a consequence of accumulated understanding of the many challenges patients experience during treatment and of the apparent limitations of existing psychological interventions to help patients fully address these challenges. This new perspective is also due to insights from research on premature treatment discontinuation (i.e., noncompliance), which shows that only about 55% of people ever seek fertility treatment (97), and of those that do 22% discontinue IVF treatment before completing a course of recommended treatment (91). Together this work has revealed a multitude of barriers to compliance that could be traced to the patient (e.g., relational problems, rejection of treatment), to the medical treatment itself (e.g., psychological and physical burden of treatment), and to the clinical environment (e.g., dissatisfaction with care, negative interactions with staff) (92). The Integrated Approach to Fertility Care (64) proposes that the three sources of treatment burden be targeted in an integrated way to influence psychological and treatment-related outcomes such as patient quality of life and compliance.

This paradigm shift has implications for the way psychological care is organized in clinics. First, it draws attention that good mental health during treatment is not just a matter for the attention of specialized MHPs but for fertility staff as well. Accordingly, it assumes that all fertility clinic staff with patient contact (e.g., embryologists, receptionists, nurses, doctors) needs to be involved in the provision of psychosocial care. To meet this need more investment will need to be made in developing appropriate types of care and training (e.g., emphatic skills [60], provision of preparatory information [93]). Similarly, industry is also expected to do their part and develop treatment protocols that can reduce the burden of treatment yet maximizing success and quality of life. Second, it places a higher emphasis on targeting clinic and organizational factors (e.g., treatment continuity, quality of information) to reduce the burden of treatment, consistent with the more patient-centered care approach in other areas of health. In recent years multiple studies (59, 94, 95) have addressed patient-centered care in infertility, examining patients' care preferences, and the impact of patient-centered care on treatment outcomes such as discontinuation (96). Future research needs to develop theoretically based interventions appropriate for staff and carry out evaluation studies that take an integrated approach before wide-scale implementation of these interventions can be done effectively.

The trend to focus on patient care experiences has also influenced how the treatment period is conceptualized. It is now acknowledged that some factors operate in advance of the actual treatment to influence whether treatment is even ever taken up. Only approximately half of infertile couples

seek fertility care and of those that do, 20% wait for more than 2 years before seeking treatment (99). It is known that several factors influence decision-making pretreatment (98, 99). For example, negative treatment attitudes (e.g., treatment is unnatural), level of fertility knowledge and awareness (50), and knowledge of how to seek help (100), among others. Mental health professionals have also been involved in educational efforts to help individuals make parenthood plans in advance of any knowledge about their fertility. For example, the myfertilitychoices.com website, developed by Judith Daniluk and Emily Koert, has been shown to increase fertility knowledge (101). In line with such efforts is research about the desire to preserve oocytes as part of a family planning strategy (102). Finally, and along the same principle, it has also been advocated that infertility specialists should extend the period of support after treatment, to ensure long-term adjustment to unsuccessful treatment. If the ability to let go of unmet parenthood goals is what most influences long-term adjustment, then more support needs to be offered to help patients in ending treatment and preparing for the consequences of doing so (86, 88, 103). One of the biggest challenges in achieving this goal will be finding ways to intervene to prevent after treatment maladjustment while patients are still attending clinic. Once patients have left the health care system it is more difficult for staff to implement and patients to access appropriate support interventions.

The Integrated Approach to Fertility Care (64) has the potential to enhance care in fertility clinics but this will need to be monitored and evaluated in future research. However, it should be recognized that to achieve integrated care mental health and medical professionals as well as industry will need to work collaboratively and effectively to create new forms of psychosocial support for patients. A recent example of this type of successful collaboration would be a Spanish project that improved the empathic skills of 13 medical fertility clinic staff through training from a psychologist (60). This project shows that it is possible and feasible for psychologists and physicians to work together to improve patient care.

In conclusion, five key paradigms shifts were described to illustrate the evolution of psychology and counseling in infertility. These shifts describe the work of MHPs as evolving from a psychogenic conceptualization that sees psychic conflicts in women as a main cause of couple infertility to an integrated approach that views patients, industry, and fertility clinics all involved in delivering psychosocial care before, during and after treatment. Mental health professionals have in the past 8 decades responded to paradigm shifts in ways that has created a rich and stimulating clinical and research tradition around the psychological aspects of infertility and reproductive health. Importantly, this work has improved significantly the care environment for patients.

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