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Psychological Adjustment to Infertility

An Overview of Conceptual Approaches

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The great majority of young adults assume that their life course will include bearing and raising children (Regan & Roland, 1985; Zuckerman, 1981). Presuming fertility, couples often use contraceptive methods to prevent pregnancy until conditions in their lives are conducive to the achievement of this central goal. When pregnancy is attempted, however, some couples find that their goal of becoming a parent is beyond their control. Try as they might, an avenue they have expected to provide fulfillment in life remains out of reach.

Infertility is a problem well suited for the study of adjustment to negative life experiences. In addition, adjustment to infertility is a topic worthy of study in its own right. Clinicians (Mahlstedt, 1985; Menning, 1980) as well as infertile couples cite the need for psychological services in this area. In their first contacts with an infertility clinic, 97% of couples endorsed a need for psychological services, and over 50% said that they would use such services during the infertility workup (Daniluk, 1988). In this chapter, we will describe the scope and magnitude of the problem of

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infertility, provide an overview of the approaches taken by behavioral and social scientists to understanding the psychological aspects of infertility, and introduce our approach to examining factors that help and hinder couples as they negotiate this process. This material sets the stage for understanding subsequent chapters.

INFERTILITY: SCOPE AND MAGNITUDE OF THE PROBLEM

Infertility is defined as the inability to conceive a pregnancy after one year of engaging in sexual intercourse without contraception (Mosher & Pratt, 1982; U.S. Congress, Office of Technology Assessment [OTA], 1988). Individuals with primary infertility are those who have never had a biological child, whereas those with secondary infertility have had at least one previous documented conception. Typically, infertility characterizes the couple who is attempting conception, for although one member may carry the medically diagnosed cause, both members of the couple experience the inability to realize their goal of having a child.

What is the likelihood that a couple will have a fertility problem at some point in their reproductive history? The most comprehensive data addressing this question come from national surveys conducted in 1965, 1976, 1982, and 1988 and compiled by researchers for the National Center for Health Statistics (Hirsch & Mosher, 1987; Mosher, 1985, 1988; Mosher & Pratt, 1982, 1990; OTA, 1988; Pratt, Mosher, Bachrach, & Horn, 1984). In these surveys, personal interviews were conducted with four nationally representative samples of women between the ages of 15 and 44. Excluding those who were surgically sterile, the overall incidence of infertility in married couples evidenced little change, ranging from 13.3% of couples in 1965 to 13.7% in 1988. Including the surgically sterile, 7.9% of married couples were infertile in 1988, and it was estimated that 2.4 million couples met the standard medical definition of infertility (Mosher & Pratt, 1990). Impaired fecundity, a broader concept which includes difficulty or danger carrying a baby to term as well as problems conceiving, affected approximately 4.9 million married and unmarried women (Mosher & Pratt, 1990). Of these women, approximately 45% had no biological children and 55% had one or more previous births.

Although the overall incidence of infertility is not increasing (Mosher & Pratt, 1990), the rate among women aged 20 to 24 rose significantly from 3.6% in 1965 to 10.6% in 1982, perhaps owing to the concomitant rise in sexually transmitted diseases in that age group (OTA, 1988). In addition, the number of couples with primary infertility doubled, increasing from 500,000 in 1965 to one million in 1988. One recent British study suggested

that as many as 20% to 35% of couples take more than one year to conceive at some stage in their reproductive history (Page, 1989). Thus, infertility is a problem that many couples confront, although many also become pregnant eventually, and one that may be of increasing concern for young adults.

Blacks have been found to be at greater risk for infertility and impaired fecundity than whites. For example, the risk of infertility was 1.5 times greater for black than white couples in 1982 (OTA, 1988). Mosher (1988) suggested that this may in part be due to the finding that black women were nearly twice as likely as white women to have been treated for pelvic inflammatory disease (PID), a risk factor for infertility. Other factors thought to contribute to this difference include (OTA, 1988): (1) The higher rate of sexually transmitted diseases among blacks than whites, a difference which reflects the difference in other relevant demographic characteristics, such as urban dwelling (OTA, 1988, p. 51); (2) the greater use among blacks of intrauterine devices (IUDs) for birth control, which may increase the likelihood of PID; (3) greater exposure among blacks to environmental factors, such as occupational hazards, which may affect reproduction; and (4) greater likelihood in blacks of infections or complications following abortion or childbirth, which may lead to scarring and other structural damage. In addition, poorer access to health care for black women (Manley, Lin-Fu, Miranda, Noonan, & Parker, 1985) may contribute to the higher infertility rate. Identification of factors that confer risk for infertility and of infertility rates for minority groups requires further investigation.

A rapid increase in the use of medical services for infertility has occurred during the last two decades. The estimated number of visits to private physicians for infertility-related consultation rose from approximately 600,000 in 1968 to 1.6 million in 1984 (OTA, 1988), with females much more likely to seek services than males. Reasons for this increased demand include: (1) The greater number of couples with primary infertility, who are twice as likely as those with secondary infertility to seek services; (2) the greater availability of services for infertility; (3) advances in diagnostic and treatment techniques; (4) the decreased number of infants available for adoption in some states; and (5) a more conducive social milieu, in which individuals have a growing awareness of the new reproductive technologies and increasingly expect to be able to control their reproductive histories (Aral & Cates, 1983; Hirsch & Mosher, 1987; OTA, 1988). Currently, one in every six couples is likely to use medical services for infertility at some point (Hull, Glazener, Kelly, Conway, Foster, Hinton, Coulson, Lambert, Watt, & Desai, 1985; OTA, 1988).

Those who seek infertility services may confront a protracted and

costly process. Americans spent approximately one billion dollars in 1987 on medical care for infertility (OTA, 1988). According to estimates from the Office of Technology Assessment (1988), a full diagnostic workup for infertility is likely to cost $2500 to $3000, and treatment costs range from $2000 to $8000, on the average. In the extreme, couples may spend over $22,000 on infertility-related intervention, only a portion of which is reimbursable by health insurance. When a couple with fertility problems seeks medical treatment, their chances of successfully achieving a viable pregnancy are approximately 50% (OTA, 1988). The probability of success varies as a function of the diagnosed cause of infertility, with treatment of ovulatory failure yielding higher conception rates than intervention for sperm dysfunction, for example (Hull *et al.*, 1985). Thus, infertile couples entering the medical system encounter numerous challenges, often including acquisition of a new medical vocabulary, participation in invasive and time-consuming diagnostic and treatment procedures, and assumption of financial burdens, all without the guarantee of success. Specific medical procedures which infertile individuals undergo are discussed in detail in the next chapter by Davajan and Israel.

APPROACHES TO THE PSYCHOLOGICAL ASPECTS OF INFERTILITY

Infertility as a Psychosomatic Illness

Interest in infertility by mental health professionals and social scientists originally centered on the search for etiological factors. As little as two decades ago, emotional factors were presumed causal in 30% to 50% of infertility cases (Mazor, 1984; OTA, 1988; Seibel & Taymor, 1982). This assumption was applied primarily to cases when no organic pathology was discovered. Furthermore, psychogenic causes for infertility frequently were assumed to reside in the female. Thus, researchers postulated such psychogenic mechanisms as conflict over the maternal role (Allison, 1979; Eisner, 1963), feminine sexual identity problems (Mai, Munday, & Rump, 1972), and female immaturity and neuroticism (Sandler, 1968). To illustrate, Sandler (1968) asserted:

> In many patients even superficial observation will show that it [infertility] is only one manifestation of a total disturbance of her personality . . . as Menninger said many years ago, "her illness represents a psychic conflict sailing under a gynaecological flag." (p. 51)
>
> Sterility can thus be a defence of the disturbed personality against the experience of pregnancy and motherhood . . . The story so often demonstrates the failure of

> these women to adapt to the demands of a mature interpersonal relationship, not only in the sexual sphere but in every aspect of life. (p. 58)

Psychodynamic hypotheses such as these generated research designed to demonstrate personality or emotional differences between fertile and infertile women (e.g., Eisner, 1963; Mai *et al.*, 1972), between women with unexplained versus organic infertility (e.g., Kipper, Zigler-Shani, Serr, & Insler, 1977; Piotrowski, 1962), and between infertile women who subsequently achieved pregnancy and those that did not (e.g., Garcia, Freeman, Rickels, Wu, Scholl, Galle, & Boxer, 1985). A much smaller number of studies focused on male samples (e.g., Abse, 1966). In general, reviewers of this literature on psychogenesis have concluded that the preponderance of studies reveals no consistent or striking evidence for psychological causes of infertility (Bents, 1985; Denber, 1978; Edelmann & Connolly, 1986; Noyes & Chapnick, 1964). In addition, the related hypothesis that adoption facilitates conception by relieving emotional stress has failed to receive support in several studies (Aaronson & Glienke, 1963; Edelmann & Connolly, 1986; Rock, Tietze, & McLaughlin, 1965; Seibel & Taymor, 1982; Tyler, Bonapart, & Grant, 1960). Seibel and Taymor (1982) concluded in their review that "statistical evidence is overwhelmingly against the relationship of adoption and subsequent conception" (p. 144). Thus, the hypothesis that psychopathology in infertile individuals prevents pregnancy has fallen into disfavor.

Concurrent with research that failed to support a psychogenic model for infertility, procedures for diagnosing biomedical causes of infertility improved. Currently, over 80% of infertility cases are found to have an organic cause (Mazor, 1984; OTA, 1988), and it is estimated that infertility may be attributable to stress or emotional factors in no more than 5% of cases (OTA, 1988). Finding an anatomical, physiological, or neuroendocrinological cause for infertility does not preclude the possibility that psychological factors also contribute. In particular, several researchers have discussed the mechanisms whereby stress may affect spermatogenesis and ovulation (Domar & Seibel, 1990; Edelmann & Golombok, 1989; Giblin, Poland, Moghissi, Ager, & Olson, 1988; Harrison, Callan, & Hennessey, 1987; Seibel & Taymor, 1982). Thus, stress is a possible interactive etiologic factor.

The postulation that stress may affect fertility differs from previous psychogenic models in that they targeted causative factors within the person, whereas newer formulations focusing on stress typically emphasize taxing environmental events. For example, Harrison, Callan, and Hennessey (1987) demonstrated that the stress of undergoing an *in vitro* fertilization cycle may impair the sperm quality of some men. Psychodynamic

models have been criticized for placing the blame on the couple for their infertility. A positive aspect of the newer models is that the infertile individual is not deemed at fault, because infertility is attributed not to the individual's psychopathology but rather to physiological reactions to environmental challenges. However, research to date has not tested sufficiently the precise role of stress in impairing fertility. In addition, researchers in this area must remain aware of the negative consequences for couples of implying that their infertility has a psychological cause. Finally, because of their focus on causes rather than consequences of infertility, psychogenic models in general carry few implications for understanding how couples adjust to infertility.

Infertility as a Crisis

As medical diagnostics for infertility improved and interest in the psychogenesis of infertility waned, it became increasingly apparent that the heightened emotional distress experienced by many infertile couples may be more a consequence of infertility than a cause. With the primary goal of aiding infertile couples in managing their experience, practitioners began to conceptualize infertility as a major life crisis (e.g., Berger, 1980; Bresnick, 1981; Cook, 1987; Kraft, Palombo, Mitchell, Dean, Meyers, & Schmidt, 1980; McGuire, 1975; Menning, 1977, 1980). Menning (1977) was the pioneer in applying crisis theory (Caplan, 1964; Lindemann & Lindemann, 1979; Moos & Schaefer, 1986) to infertility.

As a life crisis, infertility is conceptualized as a currently unsolvable problem that threatens important life goals, taxes personal resources, and arouses unresolved major problems from the past. According to Menning (1977), this crisis is developmental in that infertility may impede the acquisition of generativity, a concern with establishing and guiding the next generation, which Erikson (1950) postulated as a central developmental task of adulthood. The period of emotional disequilibrium that comprises the crisis creates a push toward resolution, toward regaining homeostasis.

According to Menning (1980), the crisis of infertility carries the potential for either maladjustment or positive growth. The crisis evokes a predictable pattern of feelings, including surprise, denial, anger, isolation, guilt, and grief. Effective resolution requires that these feelings be "recognized, worked through, and overcome" (Menning, 1980, p. 317). Thus, a grief process is required, wherein the infertile couple mourns their often numerous losses, including losses of the child the couple might have had, self-esteem, a sense of control, and belief in the fairness of life (Kraft *et al.*,

1980; Mahlstedt, 1985; Menning, 1980; for elaboration, see Dunkel-Schetter & Lobel, this volume). Through the experience and expression of emotions involved in the grief process, the couple is thought to move toward an acceptance of their infertile state, engage in the exploration of alternative plans, and begin to move forward with their lives.

The conceptualization of infertility as a major life crisis is valuable, in that it helped to stimulate the development of support groups for infertile couples, engender an awareness among professionals of infertile patients' concerns, and legitimize adjustment to infertility as a problem worthy of empirical attention. In addition, a crisis model carries implications for understanding psychological adjustment, in that the experience and expression of emotions in the grief process is hypothesized to be essential for successful adjustment. The research that has accompanied this conceptualization, however, has not differed very substantially from that examining hypotheses regarding the psychogenesis of infertility. With the exception of a theory-driven longitudinal study examining early adulthood infertility and the development of males' midlife generativity (Snarey, Son, Kuehne, Hauser, & Vaillant, 1987), few studies have gone beyond the demonstration of differences and similarities between infertile and fertile subjects in the emotions postulated to accompany infertility.

To our knowledge, no study has evaluated Menning's proposal that individuals go through predictable stages of emotion during their experience of infertility. In addition, the hypothesis that emotional expression is necessary to successful adjustment has not been evaluated. Inherent in both of these hypotheses is an assumption that infertile couples are similar as a group and that those who adjust successfully engage in similar behaviors. These "homogeneity myths" (Kiesler, 1966) promote the sort of group difference research that has been conducted thus far. Such study may enhance our ability to predict the emotions that infertile couples may experience. However, individual variability in the infertility experience is minimized, and factors that help or hinder couples as they manage the hurdles of infertility are given little attention.

Writers discussing the putative emotional stages in the infertility experience typically acknowledge the potential for individual variability. For example, Cook (1987) commented that "Differences in the way individuals perceive, react to, and resolve their infertility are not well understood" (p. 468). Unfortunately, crisis theory and discussions of the grief process provide little direction for furthering our knowledge of systematic variability in adjustment. Further, the published literature to date has gleaned little from other psychological theories to enhance our understanding of

adjustment to infertility (cf. Matthews & Matthews, 1986; McEwan, Costello, & Taylor, 1987). Application of the substantial body of theory and research regarding adjustment to negative life events to the study of adjustment to infertility is the next logical step in this area. Such application comprises a primary goal for this book.

Infertility as a Stressful Experience

Researchers and theorists have generated many formulations of stress. Stress has been conceptualized as a stimulus, with stressors including major life events or changes (e.g., illness, divorce) as well as daily hassles (e.g., getting stuck in traffic; Lazarus & Cohen, 1977). Stress also has been defined as a response. For example, Selye (1956) spoke of stress as a nonspecific response of the body to a demand. Lazarus and Folkman (1984) discussed these formulations and proposed a relational definition of stress, which involves a "relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). This definition is appropriate for our purposes, as it allows for individual variability in response. To illustrate, we would expect infertility to be perceived as stressful by those for whom parenthood is a central life goal, whereas those for whom parenthood is less important might not appraise infertility as particularly stressful and thus would be at less risk for maladjustment.

For those who desire children, infertility is likely to be characterized by just those dimensions that individuals are most likely to appraise as stressful (Lazarus & Folkman, 1984; Taylor, 1990): unpredictability, negativity, uncontrollability, and ambiguity. Those attempting conception are likely to be surprised when they have difficulty conceiving (Menning, 1980), to view their infertility as an unwanted and negative status (Miall, 1986), to believe that they have relatively little control over attaining the desired outcome (Campbell *et al.*, this volume; Stanton, this volume), and to be uncertain of the probability of attaining their goal eventually. Hence, infertility provides an excellent opportunity for application of theory on the stress process.

Several frameworks have been developed for understanding how individuals respond when facing a stressful encounter (e.g., Cronkite & Moos, 1984; Lazarus & Folkman, 1984; Moos & Billings, 1982; Pearlin, Menaghan, Lieberman, & Mullan, 1981). Taken together, these conceptualizations of stress have yielded a rich empirical literature on stress, coping, and adjustment. Researchers have posed several central questions. Perhaps the largest body of work has centered on investigating whether

the experience of stress leads to negative adaptive outcomes. For example, does exposure to many versus few stressful encounters in a particular period confer differential vulnerability to physical and mental illnesses? Such questions engender continuing active debate (Glass, 1989; Maddi, Bartone, & Puccetti, 1987; Schroeder & Costa, 1984).

These questions in turn have stimulated attempts to specify the conditions under which stressful encounters have detrimental or salutory outcomes. To understand the factors that determine adjustment to stress, researchers have tapped such established frameworks in psychology as attribution theory (e.g., Taylor, Lichtman, & Wood, 1984), social comparison theory (e.g., Wills, 1987), and theories regarding control (e.g., Averill, 1973), as well as constructing their own comprehensive theories of adjustment to stressful experiences (e.g., Antonovsky, 1987; Hobfoll, 1989; Lazarus & Folkman, 1984; Taylor, 1983). Using these frameworks, researchers have sought to determine the adaptive consequences of manifesting particular personality attributes (e.g., Kobasa & Puccetti, 1983; Martin, Kuiper, Olinger, & Dobbin, 1987), initiating specific coping strategies (e.g., Revenson & Felton, 1989), having social support (e.g., Cohen & Wills, 1985), or encountering little opportunity for control (e.g., Affleck, Tennen, Pfeiffer, & Fifield, 1987). These and other factors have been shown to affect an individual's psychological adjustment under conditions of stress. This literature on stress and adjustment provides a guide for understanding the ways in which personal and situational factors might help or hinder the adjustment of infertile couples.

In investigating factors that determine adjustment to stress, one must consider how to conceptualize adjustment. What are the indicators of successful versus unsuccessful adjustment to infertility? Lazarus and Folkman (1984) suggest that researchers of stressful encounters should consider adaptive outcomes within three domains: morale, social functioning, and somatic health. Thus, when one confronts a stressful encounter, adjustment might be gauged by virtue of one's abilities to maintain well-being and a positive sense of self, to continue performance of social roles and sustain satisfying interpersonal relationships, and to sustain optimal physical health. Another approach poses five adaptive tasks (Moos & Schaefer, 1986), three of which correspond to those of Lazarus and Folkman: (1) To establish the meaning and personal significance of the situation; (2) to confront reality and respond to the requirements of the situation; (3) to sustain relationships with family members, friends, or others who may be helpful (i.e., social functioning); (4) to maintain a reasonable emotional balance (i.e., morale); and (5) to preserve a satisfactory self-image and sense of competence (i.e., morale). Thus, success in meeting

both the intrapersonal and interpersonal demands of infertility may signal successful adjustment. Assessment of well-being and distress to signify adjustment has ample precedent in the literature on adjustment to various stressful experiences (e.g., Andersen, Anderson, & DeProsse, 1989; Folkman & Lazarus, 1988; Taylor *et al.*, 1984) and seems warranted in investigating adjustment to infertility. The infertile individual's abilities to maintain well-being and manage distress are primary indicators of adjustment in the research reported in this book.

An additional point regarding psychological adjustment deserves consideration. One might question specifically what constitutes a "reasonable emotional balance" in adjustment to infertility. Particularly in light of Menning's (1980) suggestion that psychological resolution of infertility requires the experience and expression of grief, self-reported depression might reflect such a "working through" and therefore indicate effective rather than ineffective adjustment. By contrast, we would suggest that as levels of distress approach clinical significance or persist over a long period, impairment in role functioning and in one's sense of worth may result. How are the intensity and duration of reported distress related to successful adjustment in the long run? This is a pressing issue for researchers studying infertility and stress processes in general. Particularly given the chronicity of many infertility cases, whether adjustment measured at one point in this process predicts long-term resolution is an important empirical question.

In sum, the literature on stress and coping holds promise for furthering our understanding of adjustment to infertility. First, it specifies the conditions under which infertility is likely to be perceived as stressful. Second, it points to factors that are likely to facilitate or impede adjustment in infertile couples. Finally, it serves as a guide for defining what constitutes successful psychological adjustment to infertility. This literature comprises the foundation underlying several chapters of this book.

PLAN OF THE BOOK

Along with this chapter, the other introductory chapters in this section are intended to provide a background on current knowledge regarding the medical diagnosis and treatment of infertility, as well as its psychological concomitants. The second section contains chapters in which the authors apply conceptual models and constructs in psychology to the study of infertility. Each of these chapters is organized around basic concepts which are known to be important in predicting adjustment to stressful events and which have clear applicability to infertility. Thus, a conceptually

driven analysis of this process is provided by chapters on the roles of casual explanations, coping processes, social relationships, examination of childbearing motives, and perceptions of control in adjustment to infertility. Through our focus on the application of established theory and related research to investigation of the infertility process, we hope to encourage a reciprocal interplay between theoretical and empirical advances in the general literature on stress and adjustment, on the one hand, and the growing body of knowledge regarding adjustment to infertility, on the other.

In the final section of the book, Reading provides an overview of the literature on psychological intervention with infertile individuals and suggestions for clinical treatment. We conclude with an overview of key conceptual and methodological issues in the study of psychological adjustment to infertility, as well as themes in clinical implications drawn from previous chapters. In addition, we discuss contributions of empirical and conceptual work on infertility to our knowledge of the stress process in general, and we suggest directions for future study. Our hope is that this book will serve both to encourage researchers to tackle the empirical and theoretical complexities of adjustment to infertility and ultimately to aid those who are facing its challenges.

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