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Research Article

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Infertile Women's Experience of Stressful Dilemmas during Assisted Reproductive Technology Treatment

Li Deng#, Ya Lia#, Fang Wang, Jitao Zeng, Yuyan Li, Wei He, Jiarui Yao* and Shan Meng

Reproductive Medical Center, The First Affiliated Hospital (Southwest Hospital) of Army Medical University, China

#These authors contributed equally to this manuscript

***Corresponding Author**
Jiarui Yao, Reproductive Medical Center, The First Affiliated Hospital (Southwest Hospital) of Army Medical University, China.

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Abstract

Objective: *The purpose of this study was to explore the stress experiences of infertile women undergoing assisted reproductive technology (ART) treatment.*

Methods: *Fifteen infertile women undergoing assisted reproduction treatment participated in candid face-to-face interviews at a tertiary care hospital in Chongqing, China. Semi-structured interviews were conducted to explore their stress experiences throughout the entire ART treatment process. The interview data were analyzed individually using NVivo software with a phenomenological research approach.*

Results: *Three core themes were identified regarding the stress experiences of infertile women during ART treatment. Theme 1: Subjective stress dilemmas; Theme 2: Objective stress dilemmas; Theme 3: Dilemmas in stress coping styles.*

Conclusion: *The stress experiences of infertile women during ART treatment are uniquely complex and are strongly influenced by their specific cultural values and sociocultural contexts. Understanding this complexity can help healthcare professionals identify the negative psychological states of infertile women, thereby providing targeted social support and psychological care effectively.*

Keywords: Infertility, Assisted Reproduction, Stress Dilemma, Qualitative Research

1. Introduction

With advances in medical technology, assisted reproductive technology (ART) has enabled many infertile families to achieve pregnancy, establishing itself as a mainstream therapeutic option. With the adjustment and optimization of China's fertility policies, the two-child policy has been fully liberalized, and the three-child policy was officially implemented in 2021 [1]. From the perspective of traditional Chinese culture, having children has always been a core issue in family life. In traditional Chinese culture, there is the traditional concept that "having no offspring is the gravest of the three unfilial acts". a concept rooted in the ancient social and cultural backgrounds and family values [2]. In the social system of that era, the continuation of the family line was regarded as of vital importance. Despite profound changes in family structures and values in modern Chinese society, procreation remains a central element of family life [3]. Against this cultural backdrop, women with infertility face multiple sources of pressure from their families. The strong desire and expectation for offspring from family elders, as well as the subtle changes and new conflicts that may emerge in marital relationships due to fertility issues, are major sources of psychological stress for these women [4]. These culture-derived stressors can exert a profound impact on the psychological state and treatment experience of women undergoing ART.

In the international research field, studies on the psychological impact of assisted reproductive technology on infertile women have yielded relatively rich results. Numerous international scholars have conducted in-depth explorations of the psychological status of infertile women during ART treatment from an interdisciplinary perspective integrating psychology, sociology and other disciplines. In terms of psychological research, studies have been conducted to quantify the impact of assisted reproduction treatment on infertile women's psychology through scientific psychological assessment tools and rigorous research methods, and found that infertile women are highly susceptible to mood disorders, such as anxiety and depression, during the process of assisted reproduction treatment [5]. In sociological research, scholars have also noted the significant impact of social support systems on the psychological state of infertile women during ART treatment, and found that adequate social support can effectively alleviate their psychological stress and help them better cope with the challenges of treatment [6,7]. However, despite notable progress in theoretical construction and empirical research in international studies, it is important to note that significant differences exist between China and other countries in terms of cultural backgrounds, social attitudes, and healthcare systems. For example, in Western societies, cultural attitudes are more tolerant of individual reproductive choices, and societal perceptions of infertility differ significantly from those in China [8]. These differences mean that the findings of international studies cannot be directly applied to Chinese infertile women, and thus need to be re-examined and reinterpreted in the context of China's local cultural and social realities.

In summary, conducting in-depth research on the stress dilemmas of Chinese infertile women undergoing ART treatment is of great practical and academic significance. At the practical level, an in-depth analysis of the psychological stress of infertile women during ART treatment can provide a scientific basis for improving ART-related medical services and a reference for clinicians to develop targeted psychological support strategies in clinical practice. This can further optimize the treatment experience of infertile women and improve the overall success rate of ART. From an academic perspective, this research can enrich localized research findings in China's ART field, establish a research system with Chinese characteristics, provide unique perspectives and case studies for cross-cultural research, facilitate global communication and integration in this research field, and promote the further development and in-depth exploration of related research. Based on the above, this study adopted a qualitative research approach, adhered to a rigorous academic attitude, and explored in depth the stress dilemmas experienced by Chinese infertile women during ART treatment. The aim was to comprehensively and realistically portray the psychological status of this special group, thereby laying a solid theoretical foundation for subsequent research and practical applications.

2. Method

2.1. Participants

Purposive sampling was used to recruit infertile women receiving ART treatment at the reproductive medicine center of a tertiary hospital in Chongqing, China, for face-to-face interviews. The sample size was determined based on the principle of data saturation.

- **Inclusion Criteria**

(1) age 18-45 years old;
(2) Women diagnosed with infertility who had initiated ART treatment;
(3) Able to cooperate independently with the interview process and with normal reading, comprehension, thinking and judgment abilities.

- **Exclusion Criteria**

(1) A history of mental illness or severe cognitive impairment;
(2) Severe impairment of vital organ function.

The sample size was determined by conducting an additional 1–2 interviews after reaching data saturation, with no new thematic information emerging. A total of 15 participants were ultimately enrolled. The demographic characteristics of the study participants are summarized in Table 2. This study was approved by the Institutional Review Board (IRB) of the hospital (approval number: BIIT2025270KX). All participants provided written informed consent and voluntarily participated in this study.

2.2. Develop the Interview Guide

A preliminary interview guide was developed based on the research objectives through a comprehensive literature review and group discussions among the research team. Prior to the formal interviews, two pilot interviews were conducted with infertile women who met the inclusion criteria. Based on the pilot interview findings, the formal interview guide was revised and finalized, with the specific content presented in Table 1.

Serial Number	Problem
1	What is the main reason you chose to have children?
2	What prompted you to start considering assisted reproductive technology?
3	How supportive has your spouse been throughout the IVF process? Are your family and friends aware of the situation? How has their attitude affected you?
4	Do you feel pressured by societal expectations? Have you chosen to conceal your treatment? What are the reasons?
5	How has physical discomfort during treatment affected your daily life and emotional well-being?
6	What situations most frequently trigger intense emotional fluctuations? How do you handle them?

7	Has the treatment altered your perception of your self-identity?

Table 1: Interview Guide

2.3. Procedure

Semi-structured face-to-face interviews were used for data collection in this study, and all interviews were conducted by the same researcher to ensure consistency in the research process. Interviews were conducted in a private, quiet room (e.g., an unused conference room) at the hospital. Before each interview, the researcher explained the study's purpose and methodology to the participants, obtained their verbal consent, and then activated the recording device after the participants signed the written informed consent form in person. During each interview, the researcher not only paid close attention to the participants' responses, but also closely observed and documented their facial expressions, body language, emotional states and other non-verbal behaviors. The researcher adhered to the principle of value neutrality and avoided subjective judgments. Meanwhile, the researcher flexibly probed further into the topics based on the participants' narratives, encouraged them to express their true thoughts in depth, and adjusted the order of interview questions to obtain more in-depth information. Each interview lasted 15–40 minutes and was terminated when the participant had no further information to provide or when data saturation was achieved for the interview. Finally, the researcher expressed sincere gratitude to the participants and reaffirmed the commitment to maintaining the confidentiality of all audio recordings and transcriptions.

2.4. Data Analysis

Within 24 hours of each interview, the researcher repeatedly listened to the audio recordings, transcribed them verbatim into textual data, and simultaneously documented non-verbal information (e.g., changes in participants' facial expressions and body language) observed during the interview. The Colaizzi phenomenological analysis method was used to analyze the interview data, and all participants were assigned unique codes to protect their privacy during the data analysis process [9]. The analysis process is as follows:

(1) Read the interview transcripts carefully and take detailed reflective notes;

(2) Screen and extract meaningful statements that align with the research phenomenon;

(3) Summarize and extract the core meaning from the meaningful statements;

(4) Identify common conceptual themes and semantic features to develop core themes, sub-themes and analytical categories;

(5) Link the identified themes to the research phenomenon and provide a comprehensive descriptive account;

(6) Illustrate the essential structural characteristics of the research phenomenon;

(7) Return to the original interview data to verify the authenticity and credibility of the themes

3. Results

Fifteen participants were recruited for face-to-face interviews using purposive sampling, as described in the Methods section. Half of the participants were aged 28–37 years, and approximately 50% of them had infertility attributed to female factors. Detailed demographic and clinical characteristics of the participants are summarized in Table 2.

Number	Age	Educational attainment	Occupation	Marital Status	Pregnancy and Delivery History	Number of cycles	Infertility factors
N1	37	Junior college	Unemployed	First marriage	G3P1	7	Female factors
N2	35	Undergraduate	Unemployed	First marriage	G1P1	3	Female factors
N3	36	Undergraduate	Police	First marriage	G1P1	4	Female factors
N4	34	Undergraduate	Unemployed	First marriage	G1P1	4	Female factors
N5	30	Undergraduate	Unemployed	Remarriage	G5P0	3	Female factors
N6	33	Junior college	Employee	Remarriage	G2P0	3	Both factors
N7	28	Junior High School	Unemployed	Remarriage	G0P0	3	Female factors
N8	30	Junior college	Unemployed	First marriage	G0P0	2	Male factors
N9	29	Junior college	Unemployed	First marriage	G0P0	8	Female factors
N10	32	Junior college	Civil servant	First marriage	G2P1	3	Female factors
N11	38	Junior High School	Unemployed	Remarriage	G3P0	2	Female factors
N12	32	Master's degree	Civil servant	First marriage	G0P0	2	Female factors
N13	32	Undergraduate	Accounting	First marriage	G1P0	4	Female factors
N14	32	Junior college	Unemployed	First marriage	G2P0	2	Female factors

N15	36	Junior High School	Salesperson	First marriage	G2P2	2	Female factors

Table 2: Characteristics of Semi-Depth Interview Participants

3.1. Theme 1: Subjective Stress Dilemma

3.1.1. Negative Emotional Distress

ART treatment is characterized by long cycles and uncertain outcomes, which meant that the participating women commonly experienced significant mood swings and negative emotions (e.g., anxiety and worry) during treatment. Such negative emotions were particularly pronounced during the critical stages of oocyte retrieval and post-embryo transfer. *N13: "I initially thought I would definitely succeed once I started treatment, without considering the possibility of failure. When oocyte fertilization failed, I experienced intense anxiety." N12: "Having 28 oocytes retrieved in a single cycle but still failing to conceive left me feeling immense grief and distress." N11: "I was anxious about the limited number of available embryos and feared repeated treatment failures; both of which intensified my anxiety about future treatment attempts.*"

3.1.2. Body Image Changes Dilemma

Most participating women experienced negative changes in body image during ART treatment, which caused significant psychological distress. The main manifestations included weight gain, induration at injection sites, and concerns about the potential carcinogenic risks of ART medications. *N11: "I gained a lot of weight during treatment and haven't been able to lose it despite trying various methods. This change in my body image has made me lose my self-confidence." N5: "I was more worried about hard lumps forming in specific areas of my body from long-term injections than about the injection pain itself, which made me extremely anxious about my physical health." N4: "Frequent blood tests led to bruising because of my fragile blood vessels, which was not only physically uncomfortable but also distressing to look at." N3: "Things I read online about ART drugs causing cancer and weight gain left me in a constant state of fear during treatment and made me extremely worried about my health."*

3.1.3. The Cognitive Bias Dilemma

Many participating women had limited and inaccurate knowledge of ART prior to treatment, with most of their information obtained from family, friends and online media platforms. This limited and unstructured access to information led them to hold overly optimistic beliefs about the success rate of ART. However, when treatment failed, they experienced a significant psychological gap and fell into deep self-doubt and distress. N6: "I had some basic knowledge beforehand, but what I knew about the technology only came from what I saw on my phone." *N12: "Mostly what I heard from people around me, I guess, and what I read on Xiaohong shu (Little Red Book). I think watching videos about different treatment stages—like the embryo implantation stage—and scrolling through the app too much made me feel anxious. Now I try to be more selective with the information I consume and only read scientific content from reliable sources, which has helped a bit." N9: "I actually knew very little about ART before coming to the clinic, even though I have a medical background. I only had a general understanding of the overall process but no knowledge of the specific details. I only learned the specifics after the doctor explained them to me."*

3.1.4. Plight of the Stigma of Disease

Influenced by traditional cultural beliefs, some participating women experienced an internal sense of shame when undergoing ART treatment, as they feared others would find out about their treatment experience. *N7: "We are an ethnic minority group, and our values are quite traditional. Even though some people around us have had IVF, it's still a very private matter otherwise, people will judge us differently." N13: "I don't think there is any shame in having IVF treatment, but I still don't want too many of my friends to know about it." N15: "I still feel I can't let other people know that I'm unable to conceive naturally." With societal development, an increasingly open and tolerant social climate, and the gradual popularization of ART, the sense of shame associated with infertility has diminished among some women. N11: "Maybe it's related to the changing social climate these days. It might have been shameful in the past, but now more and more people are having IVF, and this kind of thing seems to be becoming normalized." N9: "Personally, I don't think it's a big deal because infertility is becoming more common these days. This kind of thing feels normal, and after all, many single mothers also opt for IVF treatment."*

3.2. Theme 2: Objective Stress Dilemmas

3.2.1. Dilemmas in the Social Support Environment

The lengthy ART treatment cycle requires participants to travel to and from the hospital frequently for injections, examinations and other procedures, which creates a significant conflict with their work schedules. Many participants have to sacrifice their jobs to ensure the smooth progress of treatment, and some even face the risk of unemployment and compromised workplace status. *N9: "I think the biggest sacrifice I made was my job. I was actually earning a good salary, but IVF treatment is a very long process, which meant I couldn't keep the job, so I eventually quit." N11: "Taking time off work constantly wasn't feasible, so I had to quit to focus on my treatment." N7: "My health isn't very good and I have anemia. If I had to juggle frequent hospital visits with work, my body wouldn't be able to cope." N3: "It used to be easy to take time off work, but now it's very difficult. I have to make up excuses every time I need to take time off for hospital visits." Family support is crucial during ART treatment, yet some participants reported a lack of such support, particularly low spousal involvement. This leaves women to endure the physical and psychological stress of treatment alone, and undermines the intimacy of their marital relationship. N14: "It seems like the men aren't really involved in the entire treatment process. I'm the one who has to do everything,*

so my spouse doesn't even understand the pain and stress I'm going through." N12: "I still feel my husband's involvement is quite minimal he only comes for the occasional check-up. It feels like this isn't something that concerns him much, and he can't take my place for the injections or tests, so it's definitely taking a toll on our relationship."

3.2.2. Dilemmas of Treatment-Related Costs

The high cost of ART treatment places a significant financial burden on participants and their families. The protracted nature of treatment requires ongoing financial investment, and if treatment fails, participants have to spend a significant amount of money to start a new cycle of treatment. This poses a tremendous financial strain on the average family. *N11: "Because it's so expensive, it's actually quite stressful." N3: "I think it's too costly, and while it's true that Medicare currently reimburses, it's only a few of the things." N15: "Since we are not in a good financial situation and the doctor informed that we need to continue if we are not successful the first time, I will just try my best to try once, I just can't afford it" In addition to the financial costs, the time costs are also a heavy burden for participants to bear. Frequent hospital visits take up a great deal of participants' time, disrupt their daily routines, and create significant inconvenience in their lives. N9: "There were so many runs on this day that it made me feel like a bit of a waste of time." N14: "It takes an entire day to get to the hospital, and staying in a hotel is a bit inconvenient and a huge waste of time." N7: "In the morning I take a taxi over to the hospital, I need to get up very early, I have to get up at 5:30 a.m. Not only does the quality of my sleep deteriorate, but the whole process is too time consuming for me to do alone."*

3.3. Theme 3: Dilemmas in Stress Coping Styles

3.3.1. Dilemmas of Self-Regulation

Faced with the stress of the ART treatment process, most participants attempt to alleviate their negative emotions through self-regulation, yet they generally lack scientific and effective self-regulation strategies to achieve the desired outcomes. *N9: "There's no specific way for me to cope with it except to tell myself not to think about the stress." N12: "The first time an embryo transfer fails are especially tough, and it left me feeling somewhat resistant later on. The treatment process is so long and full of uncertainty you never know what the final outcome will be, so I just have to talk myself out of overthinking it." N7: "I just take my time to process my feelings. Ultimately, it means I fall apart emotionally first, then I try to work things out."*

3.3.2. Dilemmas of Inadequate External Support

Some participants have tried seeking professional psychological counseling, yet the results have been unsatisfactory. Such counseling fails to address the core emotional struggles of participants effectively, and the advice given is irrelevant and impractical, making it hard to provide truly effective psychological support. *N1: "I've been to counseling before, but the counselor's advice just felt like things I already do on my own anyway it didn't help much." Communicating with family members is an important way to relieve stress, yet miscommunication places an additional burden on participants. While family members care about me, their well-meaning concern is often counterproductive because they lack a thorough understanding of ART treatment. N15: "Sometimes when I'm in a bad mood and want to talk to my family, they really do care about me, but they don't understand what I'm going through. They keep asking for updates on the treatment, and hearing those questions only adds to my stress."*

4. Discussion

4.1. An In-Depth Analysis of the Subjective Stress Dilemma

4.1.1. Exploring the Causes of Negative Emotion

The lengthy cycle of assisted reproduction treatment and the high degree of uncertainty about the outcome are key factors in triggering negative emotions in women. Studies have shown that uncertainty about the outcome of treatment is a major trigger for negative emotions, and women often experience emotional reactions such as anxiety and depression when faced with failure [10]. During the treatment process, women need to go through a number of complicated stages, such as ovulation promotion, egg retrieval and embryo transfer, etc., each of which is accompanied by physical discomfort and psychological suffering. Especially in the post-ovulation and post-embryo transfer stages, a woman's expectation for the success of the treatment reaches its peak, and once the result is not as expected, she is very prone to anxiety and worry [11]. In addition, mental toughness theory states that an individual's ability to cope and recover from stress and adversity has a significant impact on their emotional state [12]. Combined with the findings of this study, the negative emotions of Chinese infertile women are not only affected by individual psychological resilience, but also deeply bound to the traditional Chinese cultural concept of "valuing offspring". For women with low psychological resilience, the double pressure of treatment failure and the disappointment of family elders further exacerbates their anxiety and depression, which is a typical manifestation of the integration of individual psychological characteristics and local cultural context. In this study, participants such as N12 and N13 who expressed intense grief after treatment failure all mentioned the pressure of family expectations, which verifies that the psychological resilience of Chinese women in ART treatment is tested by both individual stress and cultural-related family pressure.

4.1.2. Multidimensional Effects of Body Image Change

During the process of assisted reproduction treatment, a series of changes will occur in a woman's body, such as obesity and hardening at the injection site, etc. These bodily changes will have a profound impact on a woman's self-perception and psychological state [13]. Obesity not only affects women's outward appearance, but can also trigger dissatisfaction and low self-esteem about their bodies [14]. Hard knots at the injection site, on the other hand, make women fearful and anxious about the treatment, worrying that their bodies will suffer long-term damage as a result [15]. Socio-cultural aesthetic standards of body image play a contributing role, with the dominant aesthetic promoting a slimmer figure making women more sensitive and uncomfortable with treatment-induced obesity [16]. The body image theory emphasizes that an individual's perception and evaluation of their own body

image is influenced by a variety of factors such as socio-cultural and personal experiences [17]. In the context of Chinese social aesthetics, which advocate a slim and well-proportioned figure, the body image changes of women in this study (e.g., weight gain, induration at injection sites) are more likely to trigger low self-esteem, which is consistent with the core view of the theory. Combined with the interview findings, participants such as N11 who suffered from weight gain not only expressed dissatisfaction with their physical appearance, but also worried that such changes would be noticed by relatives and friends, reflecting the influence of Chinese collectivist cultural values on individual body image evaluation unlike Western individualistic cultures that focus on self-perception, Chinese women's body image evaluation is more susceptible to the views of the surrounding social group. In this study, the interaction between body image change and negative emotions forms a vicious cycle that is marked by cultural aesthetic characteristics. For example, some women felt low self-esteem due to weight gain during treatment, which in turn led to anxiety, which in turn led them to be more concerned about their body changes, creating a vicious cycle.

4.1.3. Sources and Effects of Cognitive Biases

Most women have limited knowledge of assisted reproductive technology before treatment, relying mainly on friends and relatives and online media for relevant information. However, such information is often one-sided and inaccurate, leading women to have overly optimistic expectations about the success rate of assisted reproductive technology. When the treatment outcome is not as expected, they fall into a cognitive bias dilemma and question the technique, which in turn aggravates their psychological stress [18]. This cognitive bias not only affects women's psychological adjustment to the treatment process, but may also interfere with their communication with the healthcare team and treatment decisions. The theory of information asymmetry states that when individuals do not have enough information about a certain area, they are easily misled by inaccurate information from the outside world, which leads to the formation of erroneous perceptions and expectations [19]. In this study, the information asymmetry faced by Chinese infertile women shows obvious localized characteristics that are different from Western countries: Western women mainly obtain ART-related information from professional medical institutions and official websites, while the participants in this study mostly acquire information from social media platforms such as Xiaohongshu, as well as oral communication with family and friends (e.g., N6, N12). Such unstructured and non-professional information channels lead to their overly optimistic expectations of ART success rate, and the subsequent treatment failure causes a huge psychological gap. In addition, women with lower educational backgrounds (e.g., N7, N11 with junior high school education) are more likely to be misled by fragmented online information, which is consistent with the conclusion of the systematic review and further verifies the amplification effect of localized information acquisition methods on cognitive bias in Chinese women. There are differences in the degree of cognitive bias among women with different educational backgrounds and occupations, and women with lower levels of education and non-medical related occupations are more likely to be misled by inaccurate information, resulting in more serious cognitive biases [20]. A systematic review study found that less educated women generally had higher pre-treatment expectations of success with assisted reproductive technology than they actually did, and were more likely to have psychological adjustment difficulties after treatment failure [21].

4.1.4. Socio-Cultural Roots of Stigma

In many socio-cultural contexts, fertility is seen as an important female responsibility, and assisted reproductive technology, while offering hope to infertile women, carries a certain amount of stigma due to traditional attitudes [22]. Some women fear that they will be looked at differently by their colleagues and friends if they know that they have undergone assisted reproduction treatment, and this sense of stigma places an additional psychological burden on them [18]. This sense of stigma is more pronounced in specific cultural groups, such as ethnic minorities, where the constraints of traditional attitudes make them more stoic and conservative when facing fertility issues [20]. Socio-cultural theory emphasizes that socio-cultural perceptions have a profound impact on the behavior and psychology of individuals. Although the stigma of infertility has been reduced to a certain extent with the development of time and social progress, it still exists. This suggests that changing socio-cultural attitudes and eliminating prejudice against assisted reproductive technology is a long and arduous task [19]. Some studies have shown that the psychological impact of stigma on women can be effectively mitigated through public education campaigns and raising social awareness and understanding of infertility issues [23].

4.2. A Comprehensive Analysis of the Objective Pressure Dilemma

4.2.1. A Multifactorial Exploration of the Lack of Support

Work conflict is an important objective pressure faced by women during assisted reproduction treatment. The long treatment cycle and the need to travel frequently to and from the hospital create a serious conflict with normal working hours, making it difficult for women to balance work and treatment [13]. Some women have to reduce their working hours or even give up their jobs in order to ensure the effectiveness of their treatment, which adversely affects their career development and financial income. Lack of family support, especially low spousal involvement, is also a major challenge for women in the treatment process. Assisted reproduction treatment is not only a physical experience for women, but also a challenge that couples face together. However, some men lack sufficient understanding and attention to the treatment process and are less involved, making women feel isolated in the face of the pain and stress of treatment. This lack of family support not only affects the harmony of the couple's relationship, but is also detrimental to women's psychological adjustment and recovery during the treatment process [24]. Social support theory states that adequate social support can alleviate an individual's negative emotions in the face of stress and improve their ability to cope [18]. In assisted reproduction therapy, there was a significant correlation between the level of support for women's treatment

in the workplace and home environment and women's treatment adherence and psychological status. A study of professional women's experiences with assisted reproduction therapy found that occupational stress due to work conflicts was positively associated with anxiety during women's treatment, whereas active spousal involvement significantly reduced women's anxiety levels and improved treatment adherence [25].

4.2.2. Economic and Social Impacts of Economic Burdens

The high cost of assisted reproduction treatment places a heavy financial burden on many families. From the cost of medication to the cost of surgery to the cost of follow-up examinations and care, each item is a significant expense. For families with limited financial resources, it may take everything they have to complete a treatment cycle, and if the treatment fails, the financial pressure to continue the treatment will be even more difficult to bear [26,27]. This economic pressure not only affects the continuity and success of women's treatment, but may also have a negative impact on the family's quality of life and social stability [28]. The limited coverage of assisted reproduction treatment under the current health insurance policy is unable to effectively alleviate the financial burden on families, which also reflects the inadequacy of society's attention and support for this special medical need [20]. The economic stress theory emphasizes that financial burdens are important factors that affect an individual's mental health and quality of life [28]. A study of the economic status of families undergoing assisted reproduction treatment showed that the proportion of treatment costs to annual family income was significantly and positively correlated with women's psychological stress, and that the greater the financial stress, the greater the women's anxiety and depression during the treatment process [18].

4.3. Assessment and Reflection on the Dilemma of Stress Coping Styles

4.3.1. Manifestations and Causes of Self-Regulation Dilemmas

In the face of the various stresses associated with the process of assisted reproduction treatment, most women try to alleviate their emotions through self-regulation. However, they generally report that they can only cope with the stress through simple self-soothing or temporary avoidance, which often only have a short-lived effect and cannot solve the problem at its root. Meanwhile, during the treatment process, the medical team mainly focuses on women's physical condition and treatment effect, and pays relatively little attention and support to the psychological aspect, which makes women lack effective coping strategies and guidance when facing psychological stress [18]. Emotion regulation theory states that individuals need to use effective regulation strategies, such as cognitive reappraisal and problem solving, to better cope with stress when facing negative emotions. However, this study found that most women mainly used emotion-focused regulation strategies, such as self-soothing and emotional venting, but less problem-focused regulation strategies during assisted reproduction therapy. This suggests that their ability in emotion regulation needs to be improved, while more psychological care needs to be provided by healthcare professionals.

4.3.2. Difficulties in Solving the Lack of Outside Help

Psychological counselling in the field of assisted reproduction therapy is not yet well developed, and the existing system of psychological counselling services suffers from a lack of professionalism and a lack of relevance. Some psychological counselors lack in-depth knowledge of the specifics of assisted reproduction therapy and the psychological characteristics of women, and the counseling advice they provide fails to meet the actual needs of women, resulting in unsatisfactory psychological counseling results. The causes of family communication barriers are complex and varied, including generational gaps, information asymmetry, and psychological stress on family members. Family members' lack of understanding of assisted reproduction treatment and their neglect of women's stress make it difficult for women to seek family support. Therefore, there is a need to strengthen the construction of professional psychological counseling teams to improve the quality and relevance of psychological counseling, as well as to carry out educational activities for family members to enhance their understanding of and ability to support assisted reproduction treatment [29].

5. Conclusions and Limitations

This study found that the stressful dilemmas faced by women in the process of assisted reproductive technology (ART) treatment are characterized by multidimensionality and complexity, such as the special manifestation of disease stigma in a specific cultural context and the impact of cognitive bias on treatment decision-making, etc. These findings provide a useful supplement and expansion of existing theories, and offer a new perspective for a more comprehensive understanding of women's psychological experience in assisted reproduction treatment. At the same time, this study provides important insights for optimizing clinical practice in the process of assisted reproductive technology treatment. First, in terms of psychological care, medical teams should strengthen their attention to women's psychological status, identify and intervene in negative emotions in a timely manner, and provide personalized psychological support and guidance. Secondly, patient education needs to be further strengthened, so that diverse educational activities can be carried out to improve women's correct knowledge of assisted reproductive technology and reduce the psychological pressure caused by cognitive bias. At the same time, it is also necessary to strengthen the construction of a family support system, encourage men to actively participate in the treatment process, and carry out education and support programs for family members to improve family support for women's treatment. In addition, the present study also has certain limitations in that the sample selection mainly focuses on female groups in specific regions, and the diversity of the sample needs to be further improved. The study design failed to adequately consider the dynamic impact of the time factor on women's stress dilemma. Future studies could adopt a longitudinal study design to track and observe women's psychological changes throughout the entire process of assisted reproduction treatment, in order to more accurately capture the dynamic characteristics of stress dilemma.

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