

不孕婦女接受試管嬰兒治療的情緒困擾和社會支持對生活品質的影響

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摘要

輔助人工生殖科技帶給不孕婦女希望，但也深深地影響她們的生活品質。本研究的目的為：(1)探討不孕婦女接受試管嬰兒治療的生活品質狀況；(2)探討不孕婦女接受試管嬰兒治療的生活品質之相關因素；(3)預測相關變項對不孕婦女接受試管嬰兒治療的生活品質之解釋情形；(4)為未來相關研究提供建議以促進不孕婦女在治療期間的生活品質。本研究採描述性相關、橫斷面的問卷調查法，收集80位正在接受試管嬰兒治療的不孕婦女。資料以 t -test、oneway ANOVA、多元複迴歸進行分析。結果顯示：(1)整體而言，本研究之婦女的生活品質平均總分為 66.94 ± 14.80 ；(2)社會支持、情緒困擾及懷孕經驗與生活品質達到顯著性差異 ($r = .349, p < .01$; $r = -.366, p < .01$)；(3)社會支持、情緒困擾及懷孕經驗對生活品質可解釋總變異量為37.5%。本研究提供了解接受試管嬰兒治療的不孕婦女之生活品質影響因子，因此臨床醫護人員對不孕婦女的不同治療階段應有正確認知，以能適時提供解釋、支持和照護。

關鍵詞:不孕症、試管嬰兒、生活品質

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Effects of emotional distress and social support on quality of life in women undergoing the IVF therapy

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Abstract

Assisted reproductive treatments provide the hope of pregnancy for infertile women, but it has a considerable impact on a woman's quality of life. The purposes of this study were to (1) explore the effect of life quality in women who are undergoing IVF; (2) identify the relationship between life quality with emotional distress and social support; (3) predict the possible explanations of how the related variables affect life quality of women about IVF. A cross-sectional, correlation coefficient design was used. A total of 80 consecutive women undergoing IVF treatment filled out a questionnaire. The descriptive χ square, Pearson's correlation and multiple regressions were used for data analysis. The results were as follows: (1) overall, the total score for life quality was 66.94 ± 14.80 ; (2) social support, emotional distress and experience of pregnancy were strongly related to quality of life on the women undergoing IVF therapy ($r = .349, p < .01$; $r = -.366, p < .01$); (3) 37.5% of variance in quality of life can be explained by social support, emotional distress and experience of pregnancy. This study provides that IVF therapy may affect women's quality of life, based on that, the infertile women's demands in the treatment stages will be understood, and the professional caregivers can be more adequately explain, support and care.

Keywords: infertility, In Vitro Fertilization (IVF), quality of life.

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Introduction

Traditionally, childbearing is a crucial turning point for women. In particular, Chinese society has a profound opinion stated as: “There are three ways one may dishonor his or her parents; whereas lack of offspring will be the foremost.” For women, infertility is a profound impact. People may fall in the mud of frustration, self-accusation, sense of guilt, low self-esteem and so on. Moreover, it may lead to family and marital crisis (Chan, Chan, Ng, Ng & Ho, 2005; Lin, 2002). Meanwhile, the best solution is to search for help and through aggressive treatments, usually the development of assisted reproductive technology (ART) programs such as In Vitro Fertilization (IVF) therapy becomes the ‘end of the line’ (Chuang et al., 2003). Unfortunately, the pregnancy rate of IVF treatment is between 20 and 50% (Orvieto et al., 2004). Higher depression Stressful life events incidence was found among women who follow IVF procedures (54.1% vs 19.4% in the general population). Moreover, It has also been suggested that elevated anxiety and depression may cause lower pregnancy rates (Ebbesen et al., 2009)

Quality of life is multi-faceted and is strongly affected by a variety of subjective factors, and if the quality is directly concerned with the well being, the information related to personal diseases and treatments is very significant (Cella, 1992). Summary of several investigations, the quality of life evaluation should include layers of influences, such as life satisfaction, self-concepts, physical / functional / social-economic / emotional factors (Cella, 1992; Guido et al., 2005). It is still not clear whether this elevated level of distress occurs in all couples planning to undergo infertility treatment or certain sub-groups may have more problems. As Goodinson and Singleton (1989) evidently indicate, the best evaluation timing should consist having ongoing and post-treatments if the subjects can tolerate chronic diseases.

The most important factor of health relating to quality of life is within physical factors. They include symptoms of diseases, discomfort invasive treating techniques, side effects and complications of treatment (Guido et al., 2005).

Moreover, infertile women experience various invade treatment of IVF, it including repeated blood tests, hormone injections to induce ovulation, vaginal ultra sound scanning to detect follicle growth, oocyte retrieval, and embryo transfer (Lee, 2003; Rashidi et al., 2008). The functional factors include role functions, ability performances, personal ideas, life mechanics (as actives and entertainment), personal responsibility, and individual expectation (Cella, 1992). The emotional phenomenon is relative to other factors and personal characteristics. Numerous studies have demonstrated that infertile women have higher emotional abnormalities, such as anxiety, depression, frustration and stress (Fekkes et al., 2003). Most of them have life crises (Lee, 2003), their perceptions of life experiences are frustrating and stressful (Yang, 2002). The last field discussion presented here is the social-economic factor, such as societal support, relations among clients and families, and sexual activities as well. Many subjects were worried and bothered by the strong social and cultural expectations; their emotions fell into a state of ambivalence (search for support or ignore others) (Yang, 2002). They were in desperate need of supports and resources but they isolated themselves. Active participation and supports from significant personal or groups would be beneficial (Domar, et al. 2000). If social support is unadjusted, it will hinder the client's social relationships, especially within couples (Karlidere et al, 2008). The purpose of the study was to explore the quality of life, emotional distress, and social support on the women undergoing the IVF therapy.

Conceptual Framework

This research's conceptual framework was determined in reference to various literatures as well as the purpose of this research as shown in Figure 1.

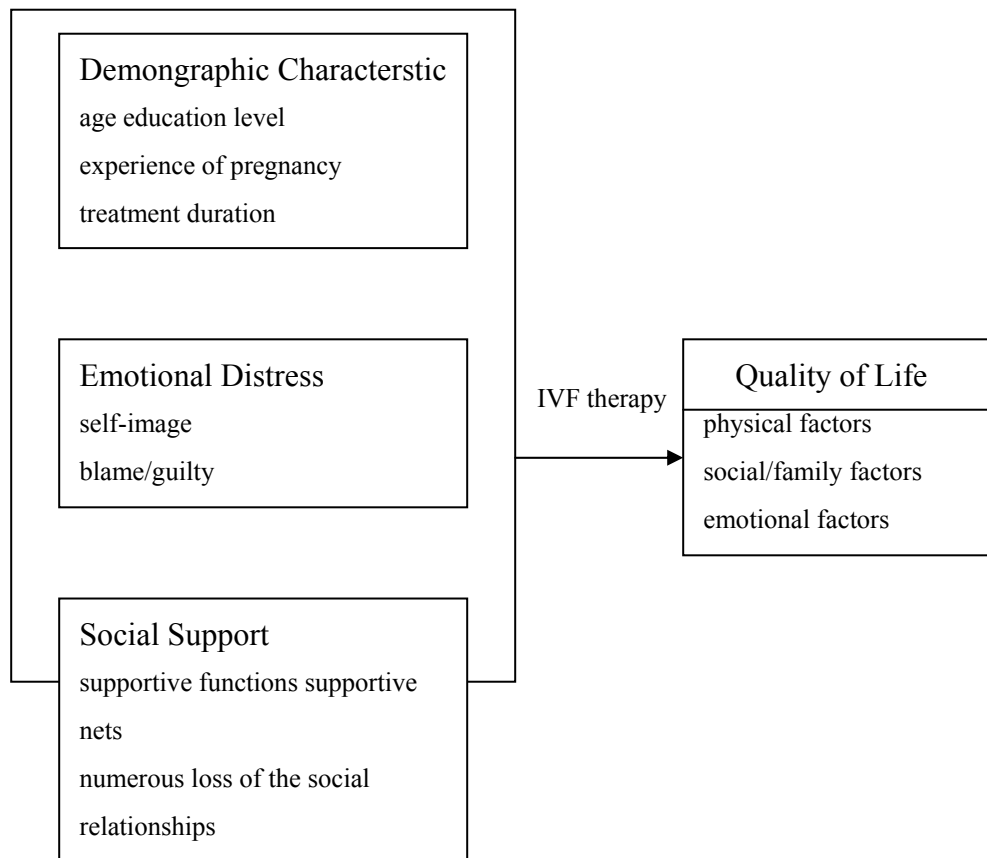


Figure 1. The conceptual framework of quality of life , emotional distress, and social support on the women undergoing IVF therapy women.

Methods

Procedure and Sample

The study employed a survey designed and aimed to collect detailed description of quality of life, emotional distress, and social support in a collection of Taiwanese women undergoing the IVF therapy. Participants attending two teaching hospitals in Taipei from October 2008 to January 2009, 80 infertile females within 24 hours after having been received the In Vitro Fertilization-Embryo Transfer program were recruited into the study. The research assistant described the

purpose of this study and obtained informed consent from participants. Criteria's were: marriage, coherency, and ability to communicate verbally, and have no obvious diseases or previous psychiatric history.

Instruments

The tools used in this study included a Demographic data questionnaire, The Quality of Life with IVF Therapy (LQ-IVF), the Infertility Questionnaire (IFQ) and the Norbeck Social Support Questionnaire (NSSQ). A pilot study using 30 women was performed to ensure internal consistency. Five doctoral and master nursing professionals whose specialties were in infertile and nursing were invited to verify the content validity of these questionnaires.

Demographic data questionnaire

The demographic characteristics questionnaire included age, education level, religious preference, family income, length of in fertility, experience of pregnancy, existing number of children, infertility causes, duration of receiving treatments.

The LQ-IVF

The life quality-IVF therapy (LQ-IVF) Questionnaire used for the current study, and modified from Cella's (1992) Functional Assessment of Cancer Therapy Quality-of-Life Instrument (FACT). There were five parts: physical factors (7), social/family factors (7), emotional factors (6), functional factors (7) and extra concerned factors (9). Additionally, an extra concerned factor that was assessment about the IVF therapy. A 5-point scale was used to measure the frequency of events, while the rating scores was higher that meant the item or part has showed significant. The alpha coefficient (internal consistency) for the LQ-IVF total score was high ($\alpha = .95$), with subscale alpha coefficients ranging from .63 to .86. Higher score means better quality of life.

The Infertility Questionnaire (IFQ)

The Infertility Questionnaire (IFQ) developed by Bernstein et al. (1985) was used to measure the emotional distress level of infertility on 3 subsections: self-image (8), blame/guilty (5), and sexuality (8). A 5-point scale was used to measure

the frequency of events; while the rating scores were higher, the emotional distress level subsequently went up higher.

The Norbeck Social Support Questionnaire (NSSQ)

The Norbeck Social Support Questionnaire (NSSQ) developed by Norbeck et al. (1981), focused on 3 subsections: supportive functions (emotion · material), supportive nets (numerous, relationships and contact frequency) and numerous loss of the social relationships. It was also administered to assess the frequency of events; while the rating scores were higher, the social support was higher as well. All the LQ-IVF, IFQ and NSSQ were translated into Chinese and The Cronbach's α of three questionnaires were presented as follows: LQ-IVF 0.86, IFQ 0.85 and NSSQ 0.95, the validity and reliability of each ascertained.

Data Analysis

SPSS for Windows analyzed data. Frequency distributions, central tendency measures, and variances were presented. Pearson's correlation, t-test, and χ square to measure the relative test. And regression was applied on the power of explanations to quality of life. The p value for the significance level was less than .05.

Results

Demographic Data of Infertile Women Receiving IVF Therapy

80 participants, mean age of 33.42 years (range = 25- 47; SD = 4.51), most were high school graduates (61.3%). About two thirds (61.3%) were employed and 43.8% had an annual income from 17,000 to 35,000, 37.5% were more than \$35,000. The women receiving medical evaluation / treatment for infertility were 3.83 years, 33.8% had pregnancy experiences and 13.8% had existing number of children, etiology of infertility in male factor 20.0%, female factors 51.3%, both male and female factors 11.3%, and unknown factors 16.3%.

Descriptive Statistics

Mean and standard deviations for the study variables are presented in Table 1. The result of the mean score of the LQ-IVF was 66.94 (SD=14.80) with a range from 0 to 100. Overall, the average score of all subjects in this study indicated a slightly poor quality.

Table 1.

Mean score of LQ-IVF, IFQ, NSSQ and subscales (N=80)

Variable	<i>M</i>	<i>SD</i>	Range
LQ-IVF	66.94±14.80	14.8	22.92-94.44
Physical factors	75.36±16.92	16.92	24.98-99.02
Social/family factors	70.85±23.60	23.60	14.29-98.26
Emotional factors	63.65±24.02	24.02	4.17-96.54
Extra concerned factors	63.26±18.00	18.00	13.89-99.68
Functional factors	62.19±25.14	25.14	10.71-99.56
IFQ			
Self-esteem/ image	2.13±0.62	0.62	8-30.00
Blame/guilty	1.97±0.78	0.78	5-24.00
Sexuality	2.60±0.52	0.52	11.04-37.04
NSSQ			
Social support function	107.49±50.87	50.87	
Emotional	72.14±39.68	39.68	
Material	35.35±18.83	18.83	
Supportive net(people)	4.24±2.27	22.91	0-10.00
Loss of the Relationships			
Nil	73 (91.3%)		
Yes	7 (0.8%)		

Note. LQ-IVF = The Life Quality-IVF therapy; IFQ = Infertility Questionnaire ;
NSSQ = The Social Support Questionnaire

The highest score subscale was physical factors, the lowest was functional factors, and that was the main factor leading to decreasing quality of life. The score variance of IFQ was large (37-5), and the highest emotional distress was sexual life. The NSSQ performance was emotional supports better than material supports; the average of the supportive numbers was 4.24 (SD=2.27). The most resource was from families (69.7%), the first important source was from his husband, and the secondary was from the mother of participants, from the medical members only 3.0%. The loss of relationships in the last year, 91.3% was none significant is found.

Quality of Life, Emotional Distress and Social Support

The relative analysis between three main variances (quality of life, emotional distress and social support) revealed that social support was positive related with quality of life ($r=.349$, $p<.01$), negative related with infertility emotional distress ($r=.562$, $p<.01$); infertility emotional distress was negative related with quality of life ($r=-.366$, $p<.01$). As a result, if the subject's perceived support were more, the quality of life would be better; but if the subjects' infertility emotional distress were decreased to the minimal, it would be helpful to elevate the clients' quality of life.

The predicted power of quality of life was analyzed by stepwise multiple regression with all variances; there were three factors (Results were illustrated in Table 2) selected in terms of especial emotional distress, and the power attained to 37.5%.

Table 2.

Multiple Regression of the Quality of Life (N=80)

Variance	Original regression Scores (B)	Standardized regression coefficient (Beta)	p-value
Emotional distress	-4.37	-0.25	.000**
Social supports	1.64	0.31	.000**
Experience of pregnancy	1.12	0.35	.000**
R ²	0.37		

** $p<.001$

Discussion

The present study examined the relative contributions of women on the quality of life, emotional distress and social support of those perceiving IVF Therapy, although previous research has indicated that infertility women had inclinations with anger, tension, guilt, low self-esteem, anxiety, depression, frustration and stress (Harlow et al., 1996; Hirsch & Hirsch, 1995). Because does not have the similar research, and that scores was similar to Brady's (1997) study for the subjects of breast cancer (stage III, IV) whom were in the therapeutic period. However they actually do not have the disease, but actually has the same life quality to be surprising. We think the results of this study were a slightly for life quality was 66.94 ± 14.80 .

That's a shocking and unfortunate finding which showed us that the quality of life of infertile women should be well concerned. The range of scores in respect to quality of life was broad; in the same culture and city, the difference was interesting. It is well worth future investigations on IVF issues. In the literature reviews, the study explored that many subjects might auto-limit the actives (such as daily activities, jobs, household duties and so on) strictly for elevating the therapeutic success rate. It will cover somebody else or be suspended, and the limited sources may depend on medical reasons, but it may be caused by the client's deep concerns. However, it may also change the life styles or daily routines, even leading to social isolation. As the above mentioned, it can be inferred that the functional problems has critical effects on the subjects' lives; but those women would rather bear the side effects, sacrifices stems mainly from having their own children. This result is consistent with many western and Chinese studies (Abbey et al., 1992; Kuo & Wang, 1993).

The results of IFQ found that the first emotional distress was sexual life in this study, and it was similar to other researches found, such as Lee & Sun (2000). Likewise, the results in Hirsch and Hirsch's (1989) studies were found while the infertile couples facing stress. They were exhausting their physical and emotional

threshold and couldn't satisfy each other's demands. The status led to decreasing satisfaction of marriage and sexuality.

In this study, the highest score in NSSQ was emotional support and the material support (such as life and economic assistance) was the lowest. The average of the supportive numbers was around 4 persons, lower than studies of Norbeck's scale (1981). Those results had shown many infertile females were short of support and assistance. Maybe it was related with the concern about the daily activities or household caused by the IVF therapeutic effect, so they would need additional help; but they didn't want to alert others, so many would prefer it be confidential, they fell into the emotional mud; the cost of IVF treatment was too expensive. A study pointed out that while the infertile females received IVF therapy and families were almost significant, their attitudes tended to be encouraging and supporting (Tseng, Mu, Hsia, & Chao, (2000). There were different results, but both were pointed that social support was closely positive related to quality of life. As a result, the families' understanding and acceptances were very important; for this reason, aggressive building and opening the clients' supportive net is necessary. If the infertile females would disclose their medical conditions to fellow faculties, which might gain sympathy and support in the office, decreasing degree of social isolation would improve their quality of life. It was like Denny's (1993) study outcomes.

In conclusion, this study demonstrated that while social support got better, the infertile emotional distress became inversely lower and their quality of life would be improved. Unfortunately, the study showed those subjects' social support was obviously defective. If the medical institutions would actively and aggressively group the numerous clubs (such as assistant, supportive counseling), offer chances for interactions within other infertile clients, expand and enhance their social supportive network and strength, manage their stresses and questions, help them to elevate their quality of life within IVF therapies. This study was designed by cross section; if possible, the future research could be longitudinal observation and

evaluation on infertile female's quality of life, including all process (since they were be R/O infertile until they were delivered). Thus, the infertile women's quality of life and demands in the different stages will be understood; based on that, the professional healthy caregivers can provide more patient care adequately. Another limitation is the lack of clarity regarding how QOL changes over time. In a longitudinal study, Limitation is the lack of clarity regarding how QOL changes about in women undergoing the IVF therapy, future longitudinal study design may give a better illustration.

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