



Prediction of Life Quality Based On Time Perspective and Perceived Stigma in Infertile Women

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Abstract: Infertility as a crisis in marital life, has psychosocial consequences for the individual. The concept of life and interpersonal relationships vary from infertility. This study aims at predicting quality of life based on time perspective and perceived stigma in infertile women. The research method is correlation. The statistical population of the study consisted of all women infertility who visited Infertility Center located in Shahid Akbar Abadi Hospital in Tehran to receive infertility treatments during winter of 2015 until the sample size was completed. From this statistics, 147 people were selected using non-random sampling. The collected data were analyzed using Pearson correlation and structural model. The results showed that the time perspective predicts the quality of life of the infertile patients positively and significantly, as well as the perceived stigma does this negatively and significantly.

Keywords: Quality of Life, Women, Patients, Infertile, Perceived Stigma, Time Perspective.

INTRODUCTION

Infertility refers to not occurring pregnancy naturally within one year or more of regular sexual intercourse without pregnancy protection. Infertility is a biological, psychological, social phenomenon, in which the psychological, physiological, environment and interpersonal aspects conflict with each other; as a result, infertility cannot be considered as a disorder in the functioning of the organs, but its other dimensions are also important (Hashemi, 2011). Lowdermilk and Pery (2004) state that infertility seemingly leads to stress and depression and brings critical problems in the marital lives which causes to their relation with each other and with relatives (Furoghi, 2013).

Infertility throughout the world and in all cultures is recognized as a stressful and threatening crisis to individual, marital, family and social stability (Covington & Hummer Borns, 2007). The psychological problems of infertile women are of infertility consequences. Many studies revealed that infertility has a negative effect on marital compatibility and sexual performance, anxiety, depression, and poor quality of marital life (Monga et al., 2004). The quality of life from this perspective of health is "one's perception of his position in life, and in the heart of the culture and the system in which he/she lives and is connected with her/his goals, expectations and needs" (Sherborne et al., 2014). Regarding the value of fertility in the culture of Iranian society, which considers children as a result of marital life, infertility has the potential to change the quality of life and the perspective of individuals towards the future. Infertility is a phenomenon that affects people's social identity by socializing and categorizing them as an infertile trait, and separates them from other women; additionally, it degrades an individual from a complete and normal person to an incomplete and low-value one. According to the stigma theory, Gaffman considers women who suffer from stigma. Infertility and its treatment as a crisis in the marital

life, not only undergo psychological problems, but can act as a stressful factor and a powerful blow against couples' relationships and family solidarity (Heidari, Latifnejad, 2010). When patients are deprived of their living cohabitation product, not only their concept of life, but also the concept of their interstitial relationships are questioned (Dufeai & Dehghani, 2002). In the theory of Flip Zimbardo's time perspective, future perspective is defined as a tool for achieving a goal in the future. Accordingly, infertility alters the hope in women, as well as the attitude of an individual to achieve goals and privileges in the future, affecting people's time perspective of the future, indicating the value of having a child in life. Among infertile women who label infertility, those who have more social capital than others have more social relationships. Due to the positive effects of these social relationships, their quality of life is less affected by infertility stigma and have a more positive outlook for the future.

Studies carried out in Canada, Japan, and the United States have proved that infertility and its consequences and problems during the quest for pregnancy, impose a significant psychosocial-social burden on couples. Considering that these evidence and studies relate to societies that despite fertility valuableness, in many countries, women's identity, their social status, and even their safety are dependent on their reproductive capacity. Among infertile women, excitements or things such as feeling anxious, depressed, depreciated, guilty, grieving, jealousy, possible violence, and disrespect have been reported (Zandourt, 2001).

A study has shown that differences between the two groups of fertile and infertile women in terms of quality of life and psychological capital have been statistically significant. But in the variable of social capital, there was no significant difference (Pari, 2012). Infertile women's psychological problems are of the consequences of infertility. In many studies, infertility affects marital compatibility and sexual performance, anxiety, depression, and poor quality of marital life negatively (Monga, 2004). Many couples face a non-progressive treatment process with a period of repeated and painful treatments, and finally in the infertile couple a feeling of weakness appears in reaching the goal (Bahrami et al., 2010).

The futuristic time dimension positively correlates with awareness, responsibility, health and control and life satisfaction (Milton et al., 2008). Individuals usually have ambiguous status when being under treatment and are uncertain about the future. When individuals are in ambiguous situations and the achievement of goals is not certain in those conditions, they may preserve their will and ambition by resorting to diverse strategies. For example, they may be find their own will in achieving the goals through a socially sponsoring network or through benchmarking strategies that other people have used in the past. Research has shown that high hope contributes to self-esteem, self-efficacy and the well-being of individuals. It has been shown that quality of life has a positive effect on hope, meaning that people with high quality of life are determined to achieve their goals (Breivette, 2004). Given what has been expressed, infertility leads to a variety of psychosocial-social problems, but there is not enough research in this area. Therefore, in order to improve the treatment process and enhance the quality of life, it is important to recognize the psychosocial consequences of infertility. Therefore, in current correlation research, we try to predict the quality of life based on the time perspective and perceived stigma in infertile women.

Research methodology

The present study is regarded as an applied research in terms of purpose, and of correlation-predictive one in terms of the relationship between variables. The statistical population of the study was "all women with infertility referred to Shahid Akbar Abadi Hospital in Tehran from December to March 2015 for fertility treatment. Of this population, 147 infertile patients were selected through convenience sampling. Due to the low sample size, this kind of sampling method was used.

The criterion for the entry of sampling members to study: infertile women in need of infertility treatment, having infertility criteria, informed consent of the patient to enter the study; and the criteria for the withdrawal of sampling members from the study: women in need of infertility treatment that do not include infertility criteria, age of the patient, outside the range of 18 to 47 years, the presence of a serious medical illness that reduces the quality of life, the presence of a cognitive disorder or a weakness in the patient's cognitive function, dependence of the patient on the drug and the occurrence of sexual dysfunction in the spouse having been diagnosed before Infertility diagnosis.

In the first execution step, after coordinating with the hospital's staff, selecting the interviewers and obtaining satisfaction from the patients, the patient's information including: demographic information and medical records were completed through personal interview with them. In addition, at this stage of the study, information about the quality of life, the time perspective and stigma perceived by the questioners were acquired. Then, in the next stage, after controlling the questionnaires, the information would be completed through a telephone conversation if there were incomplete questionnaire. Finally, after completing the questionnaires, the patients' data were defined in SPSS software. Then, those data were analyzed by Pearson and regression tests.

Research tools

A. Quality of life questionnaire: FertiQoL quality of life questionnaire has been designed to evaluate the quality of life of infertile women by two accredited institutions. 36-item form was created by the European Institute for Reproductive Biology and the American Fertility Medicine Association in 2011. This tool was designed by a multi-disciplinary and international team. FertiQoL quality of life questionnaire in infertility-experienced women and men in different cultures (20 languages) owns good validity and reliability. 34 items of this questionnaire have been categorized into two general factors of core (Core FertiQoL) and treatment (Treatment FertiQoL) and six subscales of emotional, social, mind-body, relationship, tolerance therapy, and therapeutic environment. 2 additional items are considered out of the total two general factors of core and treatment for overall satisfaction and general health. The 36-item form was validated by Boavin, Teckoffman and Brayman in 2011 in infertile women and men. Reliability of this research was confirmed by Cronbach's alpha.

B. Time perspective questionnaire: People have a positive or negative view of their lives and goals over the past, present and future times. The perspective of individuals over a time-specific period (past, present or future) refers to their time perspective. Based on Zimbardo and Boyd (1999), future perspective is the representation of an attitude through which one seeks to achieve goals and concurrency in the future. The reliability coefficient of this scale in the original study has been reported 0.77 (Zimbardo and Boyd, 1999) and in Iran, it was 0.75 according to the retest technique (Taj, Makarie, & Fotouhi, 2004).

C: ISS Infertility Stigma Scale: in this research, stigma is measured based on a questionnaire developed by (Bondj et al. 2014). The ISS questionnaire has four subscales of low-sensitivity, social isolation, social stigma and family stigma feelings. For this Cronbach's alpha was gained 0.94, and the coefficients of split half and retest correlation for the whole scale are 0.94 and 0.90, respectively. This questionnaire was developed by Pikel to assess the stressful data and the level of stress experienced in people's lives in 1971.

Research findings

In this study, 147 infertile women were involved. Demographic information of the research samples is presented in the following tables.

Table 1- Sample group description based on height and weight

height and weight	mean	Standard deviation
Age	33.51	8.06
Height	162.62	35.70
Weight	68.50	12.00

Table 2: Sample group description based on abortion experience

Abortion background	Frequency	Percent
Without abortion background	96	65.3
Once	33	22.4
Twice	10	6.8
Three times or more	5.5	8

According to the above tables, 96 people (65.3%) of the participants in the present study lacked a history of abortion, 33 people (22.4%) once, 10 people (6.8%) three times, and 8 people (5.5%) had more than twice the experience of abortion.

Table 4: Correlation between research variables

	1	2	3	4	5	6	7	8	9
1. Quality of Life - Emotions	-								
2. Quality of Life - Mind / Body	0.764 ³³	-							
3. Quality of life-relationship	0.692 ³³	0.634 ³³	-						
4. Quality of life – society	0.459 ³³	0.488 ³³	0.482 ³³	-					
5. Quality of Life – Tolerance Therapy	0.764 ³³	0.149	0.156	0.142	-				
6. Quality of life - environmental therapy	0.531 ³³	0.587 ³³	0.447 ³³	0.363 ³³	0.212 ³³				

7. Time perspective	0.217 ³³	0.152	0.764 ³³	0.342 ³³	0.143	0.181 ³³	-		
8. Perceived Asthma	-	-	-	-0.284 ³³	-0.073	-0.354 ³³	-	-	
	0.542 ³³	0.472 ³³	0.574 ³³				0.220 ³³		

Based on the results, exception of the tolerance therapy component of life quality, all its components were negatively correlated with perceived stigma at a significant level of 0.01. The life quality components of emotion, relationship and society were correlated at the level of 0.01 as well as its environmental therapy component at the level of 0.05 with the time perspective.

Table 5. Total and direct path coefficients between research variables in structural model

Paths		b	S.E	β	Significance level
Total effect	Social Capital - Quality of Life	0.105	0.068	0.170	0.133
Direct effect	Social Capital - Quality of Life	0.007	0.055	0.012	0.904
	Social Capital - Time Perspective	0.236	0.048	0.355	0.001
	Social Capital - Stigma	-	0.214	-0.181	0.045
	Stigma - Quality of Life	-	0.025	-0.584	0.001
	Time perspective – Quality of Life	0.137	0.069	0.147	0.040
Indirect effect	Social Capital - Quality of Life	0.097	0.038	0.158	0.008

According to the results of Table 5, the path coefficient between the time perspective and quality of life is positive and significant at the level of 0.05 ($P < 0.05$, $\beta = 0.147$). Thus, in response to the first question of the research, it was concluded that the time perspective predicts positively and significantly the quality of life of infertile patients. Furthermore, the path coefficient between the perceived stigma and the quality of life is positive and significant at the level of 0.01 is significant ($P < 0.01$, $\beta = 0.585$). As such, to answer the second question of research, it was concluded that perceived stigma predicts the quality of life of infertile patients negatively and significantly.

Discussion and conclusion

The results of the first research question implied that the time perspective predicts the quality of life of the infertile patients positively and significantly. The relationship of these two variables between infertile patients has not been studied both either nationally, or internationally; but the time perspective variable plays a decisive role in predicting the quality of life of people afflicted with other diseases. The results of this study are consistent with the results of other studies in other diseases. To exemplify, in a study conducted by Owendald and Biola

(Casal, 2014) on patients with major depression, diphtheria, schizophrenia, personality disorder, and healthy people, they concluded that the time perspective affects the level of health. There was a significant difference between the clinical and healthy sample in terms of the time perspective. People with a closer time perspective profile had better health and less hopeless. The results indicated a prediction of quality of life and treatment based on the time perspective of the individual. (Lagoti et al. 2013) concluded in a study entitled Quality of Life and Time Perspective in patients with intestine inflammation that the pessimist past and pleasure-oriented present predict the quality of life of such patients. The results show that the perspective is one of the predictors of life quality. In a study conducted by (Perio et al. 2007) in France on AIDS-afflicted patients, there was seen a correlation between different dimensions of the time perspective and quality of life. Particularly, it includes the dimensions of the quality of life concerning self-perception, subjective assessments from individual's quality of life influenced by the time perspective. (Mohammadi, 2015) showed in a quasi-experimental study that training time perspective increases psychological well-being and academic achievement in students. Also, in the second question, it was concluded that perceived stigma negatively predicts the quality of life of infertile patients.

In overseas research, the relationship between stigma and quality of life in infertile women has not been seen. But these two variables are measured individually in infertile patients. The result of the research is consistent with the results of other studies with above-mentioned variables. (Eur, 2012) made a case study in Turkey on the effects of infertility on gender differences in marital relationship and quality of life. Two fertile and infertile groups are matched in terms of social and demographic characteristics, the results demonstrated that the difference of infertile individuals in quality of life was significant compared to fertile and infertile persons, but this difference was not significant between the two sexes. In studies, stigma as the predictor of quality of life in patients with AIDS, Parkinson's disease, obesity, eating disorders, urinary incontinence, psoriasis, lung cancer, breast cancer, hepatitis C and leprosy in women has been investigated. The results of several surveys are as follows:

(Wu et al. 2015) in a study conducted on people with AIDS, in China, examined perceived stigma, medically social support, and quality of life. They found that social support and perceived stigma associated with quality of life in these patients. (Ma Hi, 2016), in a study entitled "Stigma as a key determinant of health-related quality of life in Parkinson's patients" found that stigma determined 77.8% of the variance in quality of life in these patients. (Waljee et al. 2011) in a study entitled "Selection of Breast Cancer Surgery: can the quality of life of women with breast cancer and stigma-associated diseases be predicted accurately?" concluded that women prior to surgery rated the stigma high. The quality of life of this group of patients relates to their stigma perception resulting from breast cancer surgery. In 2003, Zickmond et al. in the United States in a study entitled "They treat me like a Leper. Stigma and the quality of life of people with hepatitis C disease" reported that women experience much more stigma than men. Age, education, professional status, and infection status did not affect the likelihood of stigma. Contrarily, stigma was accompanied by anxiety, depression, loss of control, and poor quality of life. People who experienced more stigma than others suffer more problems with health care, family members, and the workplace. Stigma poses a heavy emotional experience for people with this disease and can jeopardize social support. This phenomenon also influences the physician and other health care providers in the medical environment.

According to the research findings, the following suggestions are made:

- ✓ Involving more samples for higher generalizability in the future researches.
- ✓ Using samples of both sexes (male and female).

✓ Given the findings, raising the level of social capital of a community is a promising way to improve the infertile women's quality of life. Therefore, it is necessary to strengthen and develop social capital by using strategies such as strengthening the social network, establishing security and strengthening trust among individuals, developing social relations and cooperation.

✓ Cases such as establishing counseling sessions with patients and their families, strengthening family coherence status and strengthening family's support network, participating in social circles and arranging support groups and membership in relevant associations, attempting to strengthen social relationships with the aim of expanding and facilitating the communication network and social links, raising the level of access of individuals and groups to economic and social resources are highly effective to enhance future time perspective and social capital in infertile women. The rise in the number of links and their connections raise the various forms of social capital (inter-group and intra-group) of infertile persons which these all will improve the quality of life of infertile persons.

✓ Increasing infertility centers with governmental tariffs due to lowering the cost of treatment provides follow-up treatment for the infertile individuals and strengthens their hope. In order to make a change in the community's dominant culture towards infertility, cultural-educational planning is suitable at the community level.

References

- Amiri Ebrahim Mohammadi, R. (2015). The educational effectiveness of time perspective on psychological well-being and academic achievement of high school male students in Lordegan County. Master's thesis of Counseling and Guidance. Faculty of Humanities. Islamic Azad University. Khomeini Shahr Branch.
- Bahrami, N. Sattarzadeh, N. Ghoujizadeh, M. Soleimani, M. A. Kazemi; Al. Sadeghi, T. (2010). Investigating the relationship between infertility and couples' sexual satisfaction. *Journal of Qazvin University of Medical Sciences*. 4, (2); 11-5.
- Pari, M. (2012). Comparison of quality of life, psychological capital and social capital in fertile and infertile women. Master's thesis. Faculty of Psychology and Educational Sciences. Tabriz University.
- Heidari, P. Latifanjhad, R. (2010). The relationship between psychosocial factors and marital satisfaction of infertile women. *Scientific Journal of Qazvin University*, Fourteenth, No. 54: 27-32.
- Dafeai M. Dehghani, A. (2002). A survey on the relationship between coping methods with religious beliefs and social activities in infertile couples referring to Yazd Infertility Center. *Journal of Yazd Sadoughi University of Medical Sciences and Health Services*. 10; 80-86.
- Hashemi, F. 2011. The effectiveness of stress management (cognitive-behavioral) training on happiness, Mental Health and Stress Reduction in Infertile Women, Master's Thesis, Payame Noor University of Tehran.
- Brairwaite V. (2004). The hope process and social inclusion *Ann Am acad Political and Soc Sci*. (5): 92-128.
- Covington, S.N, Hammer Burns, L (2007). *InFertility counseling. 2 ed*. New York: Cambridge university press, 1(17), 175- 180.
- Eur, J. Onat G1, Kizilkaya Beji N. (2012). Effects of inFertility on gender differences in marital relationship and quality of life: a case-control study of Turkish couples. *Obstet Gynecol Reprod Biol*. 165(2):243-8.
- Foroughi, sedighe. Ghaemi Seyed Zahra. (2013). A survey of psychosexual disorders in inferitile women referred to the zainabiee infertility center of shiraz university of medical sciences. *Journal of biological sciences*.
- Laguet, V. Etall. (2013). Quality of life and time perspective in inflammatory bowel disease patients. *Qual Life Res*. 22(10):2721-36.
- Lowdermilk, D. L., & Perry, S. E. (2004). Postpartum complications. *DL Lowdermilk et SE Perry (sous la dir. de), Maternity & Women's Health Care, 8e éd., St. Louis, Mosby*, 1036-1050.

- Ma HI, Saint-Hilaire M3, Thomas CA3, Tickle-Degnen L4. (2016). Stigma as a key determinant of health-related quality of life in Parkinson's disease. *Qual Life Res*. [Epub ahead of print].
- Milfont, TL, Andrade PR, Pessoa VS, RP Belo. (2008). Testing Zimbardo time perspective inventory in a Brazilian sample. *Interamerican Journal of Psychology* 42 (1), 49-58.
- Monga et al., 2004, M. Monga, B. Alexandrescu, S. Katz, M. Stein, and T. Ganiats, Impact of inFertility on quality of life, marital adjustment, and sex-ual function, *Urology*; 63(1):126-130.
- Préau M. Etall (2007). Time perspective and quality of life among HIV-infected patients in the context of HAART. *AIDS Care*. 19(4):449-58.
- Sherbourne, Cathy Donald, Meredith, Lisa S, Ware, John, Rogers, William H. (2014). Social support and stressful life events: Age differences in their effects on health-related quality of life among the chronically ill. *Quality of Life Research* 1(4):235-46.
- Wu X Etall. (2015). Perceived stigma, medical social support and quality of life among people living with HIV/AIDS in Hunan, China. *Appl Nurs Res*. 28(2):169-74.
- Zandvoort van H. (2001). Medical inFertility care in low income countries: the case of concern in policy and practice. *Trop Med Int Health*. 6:563-569.