RESEARCH ARTICLE

• Arch Hyg Sci 2014;3(3):133-139.
• Journal Homepage: http://jhygiene.muq.ac.ir

A Comparative Study of Psychological Well-being, Meta-emotion, and Resiliency in Fertile and Infertile Women

Zabih Pirani[a], Moslem Abbasi[b], Shahriar Dargahi[c,d*], Abdollah Dargahi[e], Aziz Kamran[f], Mohammad Taghi Savadpour[g]

[a] Department of Psychology, Islamic Azad University, Arak, Iran.
[b] Department of Psychology, University of Salman Farsi, Kazeroon, Iran.
[c] Department of Psychology, Kermanshah University of Medical Sciences, Kermanshah, Iran.
[d] MSc Student in FamilyCounseling, ,University of Kharazmi, Tehran, Iran.
[e] Department of Environmental Health Engineering, Kermanshah University of Medical Sciences, Kermanshah, Iran.
[f] Department of Public Health, Faculty of Medical Sciences, Ardabil University of Medical Sciences, Ardabil, Iran.
[g] Nursing Department, Faculty of Medical Sciences, Ardabil University of Medical Sciences, Ardabil, Iran.
[*]**Correspondence** should be addressed to Mr. Shahriar Dargahi; **Email:**:shahriardargahi@yahoo.com

A-R-T-I-C-L-E I-N-F-O

Article Notes:
Received: Jan 6, 2014
Received in revised form: Feb 24, 2014
Accepted: May 22, 2014
Available Online: Dec 5, 2014

Keywords:
Infertility
Meta-emotion, Psychological well-being
Resiliency

A-B-S-T-R-A-C-T

Background & Aims of the Study: According to the high prevalence of mental problems of infertility in infertile women and the necessity of identifying their mental statuses to carry out interventions to help them, the present study aims a comparative study of psychological well-being, meta-emotion, and resiliency in fertile and infertile women. .

Materials & Methods: This study is a A case-control study was conducted on infertile women who referred to health centers of Gonabad, Iran. The subjects are 80 infertile women and 80 fertile women selected via an available sampling method. Questionnaires of resiliency, psychological well-being, and meta-emotion were employed, and the data were analyzed by SPSS software and multivariate variance analysis test (MANOVA).

Results: Significant differences were observed in terms of psychological well-being ($p<0.01$), positive meta-emotion ($p<0.05$), and resiliency ($p<0.01$). .

Conclusions: thus, infertile women showed lower level records than fertile women. Lower levels of psychological well-being, positive meta-emotion and resiliency in infertile women confirms the importance of attending to infertile women's mental health and emotional statuses even more.

Please cite this article as: Pirani Z, Abbasi M, Dargahi Sh, Dargahi A, Kamran A, Savadpour M. A Comparative Study of Psychological Well-being, Meta-emotion, and Resiliency in Fertile and Infertile Women. Arch Hyg Sci 2014;3(3):132-139.

Background

Infertility is known as the pregnancy failure after a year of normal, constant, and without prevention intercourse (1). Infertility and its problems are not caused only because of not having a child, but other factors such as disorders in marital and familial relationships, feelings of rejection when others judge them, self-blame, and others' disapproval have a large

impact on psychological and personal aspects, familial and communicative functions, and eventually decrease the overall quality of life in couples, and in some cases they find their lives spoiled (2).

Infertility, especially in women, is an extremely stressful phenomenon. Because of the severity of this stressor and its emotional pressures, confronting with it affects an individual's psychological resources, undermines the resiliency and mental well-being (3). Psychological well-being is the perception of positive engagement with challenges of life and striving for realizing the true potential abilities. Because of the repeated failures in conceiving children, infertile couples have a lower level of psychological well-being in comparison with normal subjects (4). Cooper has reported the prevalence of psychological well-being problems in infertile couples compared with a control group (5). Eisenberg, Fabes ,Guthrie & Reiser, comparing psychological well-being in normal individuals and infertile women, found that the infertile women showed lower levels of positive relationships with others, purposefulness, and self-acceptance.

Furthermore, infertile women represent significantly lower scores in physical functioning, levity, social functioning, emotional functioning, and mental health (6). In a research on mental health, comparing the fertile and infertile women, Besharat found that sources of stress and damage in infertile women cause mental health indicators to be in a weaker position compared with fertile women (7). The results of some studies such as Andrews, Abbey, and Halman suggest that infertile couples experience less satisfaction with their lives compared to fertile couples (8).

Resiliency is another variable which decreases due to infertility stress. Resiliency is the capacity to face, overcome, and be strengthened by the experience of problems or damages (9). Issacson (10) states that resiliency is merely adjustment, and positive coping with problems and troubles. According to this view, resiliency is not only ability or a personal characteristic, but these abilities and characteristics in interaction with stressors determine whether a person has the ability to cope with stressors. Researches also suggest that infertility reduces the personal strength in facing with problems of life, and generally infertile people show less hardiness and resiliency against difficulties than normal individuals (11, 12).

Another variable which infertile individuals are faced with is meta-emotion. Emotions can influence a range of cognitive processes such as attention, memory, judgments, and decision-makings (13). Meta-emotion is beyond meta-cognition (14) and may create a malicious cycle and it reflects the effects. When a person is faced with a situation, good feeling and optimism alone are not enough to control his emotions. He needs to be in the best cognitive function at the moments as well in order to control his emotions (15). In general, meta-emotion enables us with greater flexibility to respond to various environmental events. Many studies have shown that ability of an individual in cognitive emotion regulation plays an important role in his adaptation to stressful life events (6, 16). Yousefi in his study showed that non-adaptive and negative emotion regulation strategies such as self-blame and catastrophic consideration of an event are considered as the factors associated with the development of psychopathology (17). Therefore, infertility stress, due to its intensity, can affect the meta-

emotion of the individuals, and consequently may result in failure to cope with infertility stress.

Aims of the study: Considering infertile women's psychological problems due to the stressors of infertility, the present study sought to investigate the difference between fertile and infertile women in terms of psychological well-being, meta-emotion, and resiliency.

Materials & Methods

A case-control study was conducted on all infertile women who referred to health centers of Gonabad, Iran for following diagnosis and treatment. Subjects included 80 fertile females and 80 infertile women selected by an available sampling method. The samples were organized according to variables of age, marriage duration, and education.

The subjects wereaged 20 to 40 years old with at least an associate's degree, and were married for 1 to 10 years. Also, the issue of infertility was attributed to the female who was conscious of it for at least a year, and in terms of health status, she should have been physically healthy and the infertility problems were not caused by chronic diseases such as diabetes, kidney disease, cardiovascular disease, and psychological diseases.

The meta-emotion questionnaire was created for meta-emotion variables. This questionnaire has 28 items and each item is subjected to a six-degree (a completely false to completely true) answer. Meta-emotion scale has six components: (1) sympathized attention, (2) meta-rage, (3), meta-interest, (4) meta-humiliation, shame, (5) meta-mind control, and (6) meta-self-control. Cronbach's alpha coefficient has been reported 70% to 80% (18). The correlation of this scale was reported meaningful with NEO Personality Questionnaire, Positive and Negative Emotions Scale, Beck Depression Scale, and Meta-Cognition scale (19).

In order to determine the well-being of fertile and infertile women, Ryff Scales of Psychological Well-Being (RSPWB) (1989) was used. In this scale, answering to each question is determined on a six-degree range (from strongly disagree to strongly agree). Psychological well-being of each scale has 14 questions involving self-acceptance, environmental dominance, positive relations with others, life purposefulness, personal growth, and independence. Ryff and Keyes has calculated the internal consistency of the questionnaire 0.91, using Cronbach's alpha coefficient (20). The six-factor Ryff Scale achieved 0.94 for the total scale, and was 0.63 to 0.89 for subscales using the internal consistency (Cronbach's alpha) in 2004 by Zanjani (21). Scores in this method according to Likert scale were 1 to 5, and in some questions, the inverse grading procedure was used.

To measure resiliency, Conner-Davidson Resilience Scale (CD-RTS9) (2003) was used. Conner-Davidson Resilience Scale has 25 items in which the items are scored based on a Likert scale from zero (completely false) to five (always true). The scale has been normalized in Iran by Mohammadi (22). To determine the scale validity, the correlation of each item with the total score of coefficients was calculated 0.41 to 0.64. To assess the reliability of Conner-Davidson Resilience Scale (CD-RTS9),

reliability values of Cronbach's alpha were used and coefficient of 0.89 was obtained.

Results

Results showed that 36.2% of fertile women and 34.8% of infertile women were aged between 20 and 25, 35% of fertile women and 42.5% of infertile women were aged 26 to 31, and 28.8% of fertile women and 23.8% of infertile women were aged 31 and above. 46.2% of fertile women and 38.8% of infertile women were married for 1 to 3 years, 27.5% of fertile women and 47.4% of infertile women for 3 to 6 years, and 26.3% of fertile women and 13.8% of infertile women were married for more than 6 years.

Before conducting the multivariate variance analysis, in order to verify the homogeneity assumption of variance-covariance, Box test was used, and the results were found to beinsignificant (P>0.85, Box's Mean= 5.35). Covariance matrices of psychological well-being, meta-emotion, and resiliency variables for the varying levels of fertility were equal. Results of fertilization study, using Wilks Lambda test on linear combinations of psychological well-being, meta-emotion, and resiliency variables, showed significant effects of the variable (η^2=0.73, P<0.01, F=4.34) on the psychological well-being, meta-emotion, and resiliency of the subjects.

According to the statistical significance of Wilks Lambda test, in order to determine the source of significance of multivariate effects, multi-variant analysis (MANOVA) was performed for each of the psychological well-being, meta-emotion, and resiliency variables, separately. According to the single-variant variance analysis to assess reproductive effects (Table 2), there are statistical significant differences between fertile and infertile women in terms of resiliency (P<0.01, F (1) = 5.88), meta-emotion (P<0.05, F (1) = 2.65), and psychological well-being (P<0.01, F (1) = 8.35). Looking at the averages of these variables (Table 1), fertile women scored higher levels on the variables of resiliency, meta-emotion, and psychological well-being, compared with infertile women.

Table 1: Mean and standard deviation of psychological well-being, meta-emotion, and resiliency variables

Groups	Psychological well-Being		Meta-emotion		Resiliency	
	M	SD	M	SD	M	SD
Fertile women	61.2	27.1	74.8	11.9	58.8	27.9
Infertile women	32.7	21.7	56.7	9.2	34.0	23.5

Table 2: Multi-variant of variance analysis (MANOVA) to assess reproductive effects on psychological well-being, meta-emotion, and resiliency

Source of changes	Dependent variable	MS	SS	Df	F	P
Fertility	Resiliency	61.1	53.4	1	5	0.001
	Meta-emotion	248.5	4.7	1	2.6	0.005
	Psychological well-Being	545.5	272.7	1	8.3	0.001

Discussion

The study aimed to compare the variables of psychological well-being, meta-emotion and resiliency in fertile and infertile women. The results showed that there were significant

differences between fertile and infertile women with respect to all three variables. Infertile women compared to infertile women had lower scores in psychological well-being, meta-emotion, and resiliency. Lower levels of psychological well-being, meta-emotion, and resiliency of infertile women compared to fertile women are consistent with the studies of (4, 5, 6, 7, 8, 12, 11, 16) that reported lower levels of psychological well-being, meta-emotion, and resiliency in infertile women. Generally, this research suggests that infertile women have more problems in terms of psychological well-being, in the scales of positive relationship with others, purposefulness, self-acceptance, physical functioning, levity, social functioning, and emotional functioning. They also have lower mental health levels andlower mental health indicators. Moreover, they experience less satisfaction with life and show more anxiety and depressive symptoms. Infertility and its problems are not caused only because an individual does not have a child, but also because disorders in marital and familial relationships, feelings of rejection by others, and self-blame and others' disapproval greatly affect individuals' psychological and personal aspects, and familial and communicative functions, and altogether, decrease the quality of life in couples. Female infertility undermines the personal and social values i.e. the sense and value of being a mother and a wife, and it makes the meaning and purpose of marriage as meaningless for the individuals. Because of the severity of this stressor and its emotional pressures, confronting with it imposes on the individual's psychological resources, undermines the resiliency, and reduces the mental well-being (12).

Resiliency occurs when a person adjusts herself with her circumstances. To describe this mode, psycho-social bio-balance term is used. Psycho-social bio-balance is a period in which a person physically, mentally, and socially adjusts to a set of circumstances, good or bad. Psycho-social bio-balance is typically threatened by urgency, stressors, adverse conditions, opportunities, and other forms of internal and external changes. These threats externally or internally can be due to the severity or due to the thoughts and feelings, respectively (23).

Stimulators can be the new bits of information, experiences or repetitive thoughts and feelings. To cope with the emergency of life, using the past experiences, individuals extend the quality of resiliency so that more incidents have become common events, and less likely to be destructive. Chronic or severe stressors when they occur to people, according to their intensity and duration, undermine their coping resources and resiliency, and make them vulnerable to mental health problems. In addition to the severity of the stressor in an individual, her thoughts and feelings are effective in her ability to cope with encountered stressors. The threats cause primary emotions such as anger, hurt, loss, guilt, fear, confusion, and disorientation, and these emotions, in turn, can lead to setting up the secondary emotions. In this case, given that these are negative emotions, they cause a vicious cycle and enhance the intensity of the negative emotion.

Conclusion

According to lower levels of psychological well-being, positive meta-emotion, and resiliency recognized in infertile women than fertile women, the necessity of attending to

infertile women's mental health status and their emotions is perceived rather more. Intervention measures to be carried out for this group of people are teaching resiliency skills, cognitive, and meta-cognitive interventions to improve their evaluation of the stressfull event, and accept their emotional reactions towards themselves.

The effects of other stressors on infertile women, such as spouse support and family income (due to the high treatment costs) have not been assumed in this course of investigation. Thus, further studies are recommended to assess the effects of other stressors.

Footnotes

Z.P. and M.A. and S.D conceptualized, designed the study, drafted the manuscript, interpreted data and participated in data collection A.D and A.K and MT.S. performed statistical analyses,. and helped draft the manuscript and edited the English version of the manuscript. All authors approved the final manuscript for submission.

Conflict of Interest:

The authors declared no conflict of interest.

References

1. Sheibani H. Examining the relationship between androgen and neurosis whit quality of life in fertile and infertile women, a master's thesis Basic Psychology, University of Mohaghegh Ardabil. 2005.
2. Diener E. Subjective well-being: The science of happiness and a proposal for a national index. American Psychologist. 2003;55(1):34-43.
3. Lee GL, Blyth ED, Chan CL. Understanding the patterns of adjustment to infertility of IVF users using narrative and autobiographical timeline. Asia Pac J Reproduction. 2012;1(2):125-134.
4. Rossman P, Niemann L, Schmidt S, Walach H. Mindfulness-based stress reduction and health benefits and psychological well-being: A meta-analysis. J Psychosom Res 2004; 57(1):35-43.
5. Cooper S. Mental ill health in adults with intellectual disabilities: prevalence and associated factors. Br J Psychiatry. 2007;190:27-35.
6. Eisenberg N, Fabes RA, Guthrie IK, Reiser M. Dispositional emotionality and regulation: Their role in predicting quality of social functioning. J Per Soc Psycholo. 2000;78:138-157.
7. Basharat MA, Hossein Zadeh R. Comparison of psychological and sexual problems fertile and infertile women. IJPCP. 2006; 12 (2) :146-153. (in Persian)
8. Andrews F, Abbey A, Halman J. Is fertility problem stress different? Fertil Steril. 1992;57:1247-1253.
9. Kumpfer KL. Factors and processes contributing to resilience: The positive resilience framework. New York: Academic Plenum Publishers, 1999: 179-224.
10. Issacson B. Characteristics and enhancement of resiliency in young people. A Research paper for Master of Science Degree with major in guidance and counseling, university of Wisconsin-stout 2002.
11. Kagan L, Psaros C, Alert MD, Styer AK, Shifren JL, Park ER. Improving resilience among infertile women: A pilot study. Fertil Steril. 2011; 96:151.
12. Sexton MB, Byrd MR, Kluge S.Measuring resilience in women experiencing infertility using the CD-RISC: Examining infertility-related stress, general distress, and coping styles. J Psychiatr Res. 2010; 44: 236-241.
13. Mohammadi M, Khalajabadi F. Emotional and psychological problems of infertility and ways of coping with it. Journal of fertility and Infertility. 2001;3:33-39. (in Persian)
14. Amanati L, Alami M, Shokrabi Sh, Haqqani H, Ramazanzade H. Quality of life and its influencing factors in infertile women. Iranina J Obstet Gynecol Infertility. 2009;12(4):25-31. (in Persian)
15. Gross JJ, Richards JM, John OP. Emotion regulation in everyday life, pathways to dysfunction and health. Washington, DC: American Psy Association. 2006: 13-35.
16. Gross JJ. The wisdom of feelings: Psychological processes in emotional intelligence. New York: Guilford press. 2003: 297-318.
17. Yousefi F. Examined the relationship between of cognitive strategies emotion with depression and anxiety in students of guidance centers brightest

talent. Research in the field exceptional children. 2000; 6: 871-892. (in Persian)
18. Ferrari M. Koyama E. Meta-emotions about anger and amae: A cross-cultural comparison. Consciousness & Emotion, 2002;3(2):197-211.
19. Gottman JM, Katz LF, Hooven C. Meta-emotion: How families communicate emotionally. Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc. 1997.
20. Ryff CD , Keyes CLM , Shmotkin D. Optimal well–being : Empirical encounter of two tradition. J Pers Socl psychol. 2002; 82(6): 22- 1007.
21. Zanjani R. Construction and standardization of psychological well-being test pilot. General Psychology, Master's Thesis, Tehran University. 2004. (in Persian)
22. Mohammadi M. Factors affecting resiliency in individuals at high risk for substance abuse. PhD Thesis, University of Welfare and Rehabilitation Sciences. 2005. (in Persian)
23. Conner KM, Davidson JRT. Development of a new resilience scale: The Conner-Davidson resilience scale (CD-RISC). Depression and Anxiety. 2003;18:76-82.