

## Aspects of Psychosocial Development in Infertile Versus Fertile Men

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### Abstract

**Background:** Infertility is one of the most difficult life experiences that a couple might encounter. Infertility as a bio-psycho-social phenomenon, could influence all aspects of life. While paying special attention to the psychological aspects of infertility in couples; many studies have investigated the non-clinical aspects of infertility, however, they rarely have evaluated the psychosocial development of infertile versus fertile men. We aimed to study the effects of infertility on psychosocial development in men.

**Methods:** In fact, we designed the study based on "Erikson's theory of psychosocial development". We focused on the relationship between psychosocial development and some self-conceived indices. For this purpose, we divided the participants volunteers into two groups of cases (80 infertile men) and controls (40 fertile men) and asked them to complete a 112 (questions questionnaire based on "self description"). The statistical analysis was performed by SPSS (version 13) using independent t-test, Pearson correlation coefficient and analysis of covariance. A p-value <0.05 was considered significant.

**Results:** Data analysis showed significant inter and intra group differences. Infertile and fertile groups showed significant differences in trust, autonomy, generativity and integrity stages ( $p < 0.05$ ). Infertile intergroup analysis represents us to higher scores in positive than negative stages.

**Conclusion:** Infertility as a phenomenon had its own effects on the psychosocial development of infertile men. However, good coping skills are powerful tools to manage these myriad of feelings surrounding infertile men.

**Keywords:** Erikson's theory, Infertility, Men, Psychosocial development.

**To cite this article:** Akhondi MM, Binaafar S, Behjati Ardakani Z, Kamali K, Kosari H, et al. Aspects of Psychosocial Development in Infertile Versus Fertile Men. *J Reprod Infertil.* 2013;14(2):90-93.

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Received: Sept. 3, 2012

Accepted: Dec. 17, 2012

### Introduction

Inability to bear children may be one of the most difficult life experiences that a couple could encounter (1). Although the rate of infertility differs across studies, approximately 50 to 80 million people worldwide experience infertility (1). Generally, 10% to 15% of the world's population suffer from infertility and male factors are suspected for half of these cases (2).

As a bio-psycho-social phenomenon, infertility can influence all aspects of life (1). While paying special attention to its psychological complica-

tions in couples (3–5), many studies have investigated the non-clinical aspects of infertility, and emphasized the relationship between gender and the infertility experience (6). Psychological studies have show "infertility" as a devastating experience, especially for women (3). In recent years, interdisciplinary studies have also focused on infertility. In spite of several studies evaluating the interaction between psychological status and infertility, there are poor documents in regard to the influence of psychosocial development, on deal-

ing with problems such as infertility. Psychosocial development theory that has been described by Erikson is one of the best-known theories of personality in psychology. Erikson has laid a great deal of emphasis on the impact of social experience that occurs throughout the lifespan. This theory has eight distinct stages, each with two possible outcomes. According to the theory, successful completion of each stage results in a healthy personality and successful interactions with others. Failure to successfully complete a stage can result in a reduced ability to complete further stages and therefore a more unhealthy personality and sense of self. These stages, however, can be resolved successfully at a later time.

Considering Erikson's theory of psychosocial development that states all of our senses might influence our new conditions and new experiences (5) and that rate of infertility in Iran is about 20.2% based on a national project conducted by Avicenna Research Institute (unpublished), we decided to study the effects of infertility on psychosocial development (7), in fertile and infertile men attending Avicenna Fertility Clinic in Tehran, Iran during the years 2009-2011.

**Methods**

Totally, 80 infertile and 40 fertile men, respectively as cases and controls were included in the present study. There were no psychological disorders or organic diseases in the participants. The mean age of the case and control groups were 37.5±7.3 and 35±4.8 years, respectively. The study was approved by Avicenna Research Institute's Ethics and Human Rights Committee and an informed consent was obtained from all the volunteers.

A questionnaire of 112 questions was designed based on "self description". The questionnaire contained eight sections and each being scored on a five-point scale (1=definitely similar to me to 5=definitely not similar to me at all) to convert the theoretical structure of Erikson's view into quantitative values. We also investigated the possible association of some external factors on psychosocial development, including age, education, age at marriage, infertility duration and body image in both groups. The validity of this questionnaire had been confirmed by Naseri et al. (9). Statistical analysis was performed by SPSS (version 13) using independent t-test, Pearson's correlation coefficient and covariance analysis of covariance. The p-values <0.05 were considered significant.

**Results**

Data analysis showed the mean durations of marriage in infertile and fertile groups to be 8.9±5.9 and 11±7 years, respectively. Moreover, duration of infertility in infertile men was 7±1.1 years. Completion of High school and university educations respectively were 51.3% and 48.7% in the fertile group and 48.1% and 51.9% in the infertile group. No significant differences were demonstrated between the groups in regards to age, education or duration of marriage.

Scores of the positive stages of psychosocial development were higher in the fertile than the infertile group. The two groups showed significant differences in trust, autonomy, identity, generativity and integrity stages (Table 1).

Infertile intergroup analysis demonstrated higher scores in the positive in contrast to the negative stages. Guilt, mistrust, isolation and inferiority stages in infertile men were of higher prevalence than other stages (Table 2).

Regarding certain self-conceived indices, we compared some body image subscales and psychosocial development in both groups, and found that "Appearance evaluation" and "Fitness evalua-

**Table 1.** Positive stages of psychosocial development in fertile and infertile male groups

	Infertile group	Fertile group	p-value
<b>Trust</b>	18.6 (4.8)	21.4 (3.8)	0.001
<b>Autonomy</b>	14.85 (4.1)	17 (3.8)	0.005
<b>Initiative</b>	16.75 (4.7)	17.6 (3.7)	0.285
<b>Industry</b>	18.5 (4.3)	18.2 (4.3)	0.799
<b>Identity</b>	17.6 (4.8)	17.6 (4.4)	0.021
<b>Intimacy</b>	17.4 (4.2)	18.4 (4)	0.208
<b>Generativity</b>	20.1 (5.5)	22 (4.3)	0.036
<b>Integrity</b>	16.6 (3.7)	19 (4.4)	0.004
<b>Total</b>	140.5 (25.8)	153 (23.8)	0.010

**Table 2.** Stages of psychosocial development in the infertile group

Positive stages	Scores	Negative stages	Scores
<b>Trust</b>	18.6	<b>Mistrust</b>	12.2
<b>Autonomy</b>	14.85	<b>Shame and doubt</b>	10.1
<b>Initiative</b>	16.75	<b>Guilt</b>	13.9
<b>Industry</b>	18.5	<b>Inferiority</b>	12.1
<b>Identity</b>	17.6	<b>Confusion</b>	10.5
<b>Intimacy</b>	17.4	<b>Isolation</b>	12.2
<b>Generativity</b>	20.1	<b>Stagnation</b>	9.5
<b>Integrity</b>	16.6	<b>Despair</b>	9.9

**Table 3.** Comparison some of body image subscales with psychosocial development in both groups

	Appearance evaluation	Appearance orientation	Fitness evaluation	Fitness orientation
Total value of psychosocial development	-0.002	0.318*	-0.433**	0.417**

\*Correlation is significant at 0.05 level (2-tailed).

\*\* Correlation is significant at 0.01 level (2-tailed).

tion" related to body image subscales had a negative correlation with psychosocial development (Table 3).

### Discussion

Across the world and almost among all cultures, infertility is a growing problem, and it involves 10% to 15% of couples in reproductive age (10). Infertility, as a phenomenon has its own psychological effects; therefore, we evaluated the psychosocial development of men with infertility in this study.

A number of studies have found that infertility could affect couples in many ways. Women may become "too" sensitive, and reduce their social activities, but men react differently (10). The present study showed that trust and autonomy decrease in infertile men, in contrast to guilt, mistrust, isolation or inferiority. These feelings add up and their obvious interactions form the attitude toward infertility. Edelman emphasized that infertile couples doubtlessly experience psychological consequences (11). Mahlstedt also found that the stress of infertility resulted in feelings of loss, anger, and guilt (12). Because of guilt and mistrust, infertile men experience anxiety and lower levels of self-esteem. Kedem et al. likewise found that infertile men have lower self-esteem (13). Dhaliwal et al. showed that infertility could affect the personality and social behavior of the male partner and cause anxiety (14).

As infertile men view infertility as a secret that nobody should be aware of, they attempt to overcome their inability by various means. As a result, they tend to focus on their work at places/situations where they feel they could be more successful (10). In fact, these compensatory reactions would conceal their lowered self-esteem. Their reaction towards this problem and keeping it a secret, has made them sensitive, not only to the behavior of others but also to their own. Subsequently, self conception of infertile men differs, to the extent that they become sensitive to their physical appearance and they might spend a lot of

money on their appearance and participate in sports and fitness training classes (8).

Whirlwind of emotions that infertility breeds could be so high that the role of education, age and duration of marriage are attenuated. Despite the confirmation of Erikson's theory in psychological development, Snarey emphasizes the role of training in the management of undesirable conditions (15).

Moreover, other researchers have suggested that good coping skill strategies and social support, could be useful in protecting against grief storm attacks (16, 17)

### Conclusion

Trust and autonomy are formed in early stages of life; however significant differences in scores between two fertile and infertile groups of men in this study posed a challenge to this. Psychological experiments show that all of our thoughts might be influenced by our new circumstance and experiences, and therefore, it is expected that infertility, as a more stressful experience in life, would have these consequences (5).

### Conflict of Interest

The authors declare no conflict of interest.

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