

## Cognitive biases in infertility

Rabizade Z. (M.A.)<sup>1</sup>, Kormi Nouri R. (Ph.D.)<sup>2,3</sup>.

1-Research Specialist, Counseling Services, juvenile and social researches Institute, Astan-e Ghods-e Razavi, Mashhad, Iran.

2-Assistant Professor, Reproductive Biotechnology law and Medical Ethics Department.

3-Assistant Professor, Psychology Department, Faculty of Psychology and Educational Sciences, Tehran University, Tehran, Iran.

### Abstract

Problems in cognitive processes were reported in infertile persons. The present study has focused on biases as a type of cognitive vulnerability in these persons. The aim was at first, to determine whether there are memory, attention and problem-solving biases in these persons., and then which type of processing there are involved? One hundred ten subjects participated in the study including 55 infertile (30 females and 25 males), and 55 fertile (30 females and 25 males). In memory, subjects were asked to listen to a list of words including 12 infertility related words, 12 neutral words and 12 animal names. They were given free recall test to remember as many word as possible and then they were asked to recognize target words among 36 distractor words. In attention, the subjects were required to name the color of 34 words (17 infertility related and 17 neutral) as fast as possible. The subject's reaction time was recorded by computer. In problem solving, the subjects were required to complete 10 words (5 infertility related and 5 neutral) which were fragmented by some letters. Repeated measure analysis variance was used, in memory, the design was 2 groups (fertile, infertile)×2 sex (male, female)×3 type of word (infertility related, neutral and animal name) and in attention the design was 2 group (fertile and infertile)× 2 sex (male, female)× 2 type of word (infertility related and neutral), in problem solving independent T test was used for comparison between fertile and infertile women. The results of memory tests showed that infertile women as compared to fertile men recalled and recognized more infertility related words than other type of words. In attention test, there was no significant difference in reaction time between infertile and fertile groups in infertility related words and neutral words. In problem solving test in neutral words, infertile women as compared with fertile men, completed fewer words significantly, but in infertility related words there was no significant difference between them. Since, memory and problem solving the processes are deep and strategic and in attention are automatic, the results of memory and problem solving, showed that infertile women process the infertility related stimulus in controlled, strategic, and deep manner, and on the basis of attention results, they do not show the automatic and uncontrolled processing. Thus in treatment of psychological consequence of infertility, cognitive methods are the best method, because they focus directly on conscious thought.

**Keywords:** Infertility, Memory bias, Attention bias, and Problem solving.

**Corresponding address:** zahra rabizade, No.97, Resalat 5<sup>th</sup> Av., Ferdowsi Blvd., Mashhad, Iran

**Email:** z\_rabizade@hotmail.com