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Investigating the Effectiveness of Cognitive-Behavioral Therapy on Reducing Driving Phobia and Driving Cognitions in Women Living in Shiraz

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Abstract--- *In the present study, the effectiveness of cognitive-behavioral therapy on reducing driving phobia and driving cognitions in women living in Shiraz was investigated. The design of this study was experimental with pre-test and post-test with a control group. First, using a convenience sampling method, 40 people completed two questionnaires, including driving cognition and driving situations questionnaire. In the second step, 30 people who had higher scores with a diagnosis of driving phobia, were randomly assigned to two groups (experimental and control) after being interviewed. The experimental group received individual treatment for 12 sessions. Data were analyzed using SPSS16 software. The results of multivariate analysis of variance (MANCOVA) showed that cognitive-behavioral therapy significantly reduced driving phobia and driving cognitions in the experimental group compared to the control group (p <0.001). Based on the results, cognitive-behavioral therapy can be useful for women with driving phobia.*

Keywords--- *Driving Phobia, Driving Cognitions, Cognitive-Behavioral Therapy.*

I. INTRODUCTION

Considering key role of cars in today's world, having driving skills is a necessity for most people, especially in big cities. In some communities, inability to drive affects individual independence, work and quality of life in a way that is considered a disability. Driving is a major part of life in today's community. It is a skill that helps one maintain his or her independence and enables communication with a wide range of activities (Taylor, Deane and Podd, 2002). Anxiety is one of the important variables that play a special role in driving behavior. A great number of drivers who have experienced accident suffer high levels of anxiety and lack of self-confidence. In Iran, traffic accidents are the second cause of death after cardiovascular diseases with 25% (Gooya and Delavari, 2005; quoted by Ferdowsi, 2011). Among various human, vehicle and road factors, the human factor has the highest effect on the incidence of accidents with 63% (Nayeb Agha, 2002, quoted by Ferdowsi and Ahmadi, 2011). Cognitive theories on anxiety disorders argue that cognitive factors such as dysfunctional beliefs and irrational thoughts play a key role in the etiology and persistence of anxiety. The effects of anxiety on performance depend on one's expectation in coping with anxiety and the ability to perform work as desired. Phobia is an irrational fear that leads to a conscious avoidance of a frightening object or situation and disrupts one's

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performance for an effective and comfortable life (Sadok and Sadok, 2003; translated by Rezaei, 2008). Phobia is reflected in the activities of the central nervous system, self-report, and avoidant behaviors (Alperz, 2005). It impairs one's functions and causes the person to respond strongly and unexpectedly to a frightening stimulus. These responses persist beyond expectations and seem to be uncontrollable through rational methods (Kalinal, 2002; quoted in Khodayari Fard and Parand, 2004). To overcome certain phobias, two goals must be followed: 1- To control anxiety, 2- to put aside avoidant behavior. In phobias, it is assumed that one of the factors that perpetuate the main part is avoiding the fearful stimulus. People with certain phobias typically avoid situations or objects that frighten them. Faced with these situations, the person feels stressed and even afraid of death. These reactions may also occur when faced with situations or frightening objects. Exposure to these stimuli almost always causes an immediate anxiety response. Driving phobia is defined as a specific type of situational fear with a strong and persistent fear of driving that increases when faced or expected to drive. Affected people know that their fear is excessive and irrational. People may have different worries during driving. Worries are usually about the risk of an accident, injury, unpleasant situations such as traffic, and symptoms of anxiety during driving, and evaluation by others (Ehlers et al., 2007).

Driving anxiety is different from driving phobia, and special tools have been developed to measure it. Driving phobia means complete avoidance or severe restriction of any driving (Blanchard and Hikling, 1997; quoted in Tylor, Deane & Podd, 2002). It is often stated that women are better drivers than men. Research on gender differences suggests that women drivers are more cautious. In other words, risk and violence are lower among female drivers. They have less driving experience (Edward and Olson, 2007) and drive less than men due to health issues. However, statistics suggest that from 1975 to 2001, the number of women with driver's licenses increased by 55% (Ferdowsi, Sarami and Rostami, 2010). Although investigation of phobias has a long history in psychology and extensive studies have been conducted on the treatment of its various types, evaluation of cognitions in phobias is a new subject. Driving cognitions refer to the disturbing thoughts that a person experiences during driving, which fall into three areas of worries related to panic attacks, accidents and social phobia (Ehlers et al., 2007). People may have worries during driving, but one cannot talk about driving phobia until these worries have resulted driving avoidance and restriction. Driving phobia problem is not solved without treatment and may become chronic (Mayou, Tyndel, & Brayant, 1997).

Cognitive-behavioral therapies are very effective in treating anxiety disorders, especially fears and phobias. Exposure to a fearful stimulus is one of the main elements of these methods. In cognitive-behavioral therapy, cognitive and behavioral techniques are used together. This type of treatment includes strategies designed to change people's thinking, attitudes, cognitions, and behaviors. The main assumption of these methods is that the correction of maladaptive cognitions leads to behavior change. Cognitive-behavioral therapy includes various methods, which common aspect of all of them is an agreement on the importance of the role of cognitive and behavioral processes in the formation and persistence of psychological disorders and the application of experimental methods based on behaviorism and cognitivism for treatment and influencing incorrect response patterns. The emphasis of cognitive-behavioral therapy is on therapeutic intervention by reducing the frequency and severity of adaptive responses of clients and teaching new cognitive and behavioral skills to reduce unwanted behaviors and increase more adaptive behaviors significantly (Zarb, 1992). This treatment model assumes that this disorder persists due to biased information processing. During treatment, common thoughts and related behavioral patterns are identified and challenged. Cognitive-behavioral therapy for driving phobia is a combination of cognitive techniques and behavioral exercises to reduce driving avoidance, tailored to individual therapy.

Bakhshaei (1993) found that cognitive-behavioral therapy is more effective in treating anxiety compared to pharmacotherapy. Driving phobia due to its prevalence in the general population (Ehlers, Haffman, Herda & Roth, 1994; Taylor & Deane, 2000; Ehlers, Hoffman, Roth, & Podd, 2006; quoted in Ehlers et al., 2007) and given its impact on daily

work and activity and quality of life, it is one of the topics interested clinically. This type of phobia is typically observed in young to middle-aged women (Taylor and Deane, 1999; quoted in Wald & Taylor, 2000). Many studies have been conducted on driving behavior to prevent accidents and control traffic. In traffic psychology, there is no single and complete theoretical framework, and each theory focuses on a specific topic and analyzes a part of driver's tasks. Thus, many specialized models such as perceptual, attentional, cognitive, social, motivational model and determinants of emotional factors of traffic behavior have been developed (Sheklag, 1996; quoted by Hole, 2007, translated by Shafiabadi and Ismaeili, 2010). Taylor et al (2001) also found that 6-session therapy was useful (Krijn, Emmelkamp, Olafsson, Biemond, 2003). However, this method is costly (Wood, 1996, quoted in Taylor, Deane, & Podd. 2006). Krijn et al. (2003) argue that these studies are based more on self-reports than on behavioral tests and it is not possible to decide on its use in clinics without sufficient research evidence. Williamson (2004) found that dissociative imagery was useful. Behavior therapy (Taylor, Deane and Podd, 2006) and Townend & Grant (2006) recommend cognitive therapy along with behavioral therapy, and it was followed in this study. Taylor et al. (2002) suggested that a good starting point could develop driving skills of those who have driving phobia (Taylor, Deane and Podd, 2006). Studies have been conducted in the field of traffic psychology and drivers' behavior in Iran. For example, Haghshenas, Hosseini, Jamshidi and Azizi (2008) investigated the relationship between personality traits and driving behavior in Shiraz. Arizi and Haghayegh (2009) also investigated the psychometric properties of the Manchester Driving Behavior Questionnaire.

However, based on the available information, no research has been conducted on driving phobia in Iran. The strength of studies conducted abroad is the study of etiology and prevalence of driving phobia and the effectiveness of treatment as a case study and their weakness is the lack of attention to controlled studies in this area and the small number of studies conducted. However, driving phobia and its treatment has received less attention and according to the information available in Iran, no research has been conducted on it and only the behavior of drivers in the form of driving and traffic psychology has been considered. The present study is a novel study in this regard and can provide new results to psychological community. Further studies in this area increase the knowledge of people (both specialists and patients) about this type of phobia, which is useful in enhancing the knowledge and treatment of these people. It should be noted that most of these people attribute their driving problems to lack of talent and rarely consider the psychological aspect of it involved in this regard. As a result, they either give up driving or go to driving training centers and unfortunately, and despite spending much cost on driving, some of them still feel disable to drive and show avoidant behaviors. However, the desired result can be achieved in a shorter time with the help of psychological therapy and the use of experienced and knowledgeable trainers. Hence, the results of this study can be used in medical centers and it is cost-effective for clients of free driving centers plans. Given what was stated above, the main question of the present study is whether cognitive-behavioral therapy can be effective in reducing driving phobia and driving cognitions of women living in Shiraz?

II. METHODOLOGY

The design of the present study is experimental with "pre-test-post-test with a control group". Out of 40 initial samples, after interview, 30 were randomly assigned to the experimental and control groups. The experimental group received individual cognitive-behavioral therapy and the effectiveness of cognitive-behavioral therapy on reducing driving phobia and driving cognitions in women living in Shiraz was investigated. The statistical population of the present study included women with driving license living in Shiraz and avoided driving due to phobia. Subjects were selected using a convenience sampling method in July 2011. Accordingly, after coordinating with the officials of driving centers and explaining the subject of research, the questionnaire was submitted to free plan clients and people who had at least 6 months of driving license but showed avoidant behaviors and were willing to attend treatment sessions. In total, out of 40

distributed questionnaires, 30 people who had higher scores in driving cognitions and driving situations questionnaire were selected as sample and divided into experimental and control groups.

Research instrument

In the present study, driving cognitions questionnaire, driving situations questionnaire, and driving phobia questionnaire were used and treatment sessions were developed based on the self-help program of driving phobia program (Rich Presta, 2009). Driving Cognitions Questionnaire (DCQ): It was developed in 2007 by Ehlers et al. It is a 20-item questionnaire assessing three major worries, including worries about panic attacks, worries about accidents, and worries about social evaluations. The reliability of this test using internal consistency (Cronbach's alpha) was obtained at 0.88 and the reliability of each of the test subscales was reported as follows: phobia: 0.78, accident: 0.82 and social evaluation: 0.86 (Ehlers et al., 2007). In this questionnaire, the Likert scale is used and the answers are classified in a range from never to always. The subject will receive the scores of 0, 1, 2, 3, and 4 for answering to the options of never, rarely, sometimes, usually, and never. Therefore, the minimum score for each question is 0 and the maximum is 4. The sum of the scores in each of the three main areas of worry calculated accordingly. In the present study, Cronbach's alpha to assess the reliability for the total score was obtained at 0.97 and it was obtained at 0.90, 0.92, and 0.90, respectively, for each of the subscales of worries related to panic attacks, accidents and social evaluations. To assess the validity, the correlation of the total score of DCQ with a general question was used to measure the worrying thoughts on a scale of 0 to 10 and it was obtained at 0.77, which is significant at the level of $p < 0.01$.

Driving Situations Questionnaire (DSQ): It was developed in 1994 by Ehlers et al. It is a self-reporting instrument that assesses the severity of driving phobia. In this questionnaire, subjects rate their phobia as well as their avoidance according to 42 driving situations on a scale from 0 to 4 (Taylor and Solman, 2009). In the present study, the avoidance subscale of this questionnaire, which is related to driving situations in residential areas, high-traffic areas and highways, was used to evaluate avoidance behavior in pre-test and post-test. Other situations such as driving in snow, fog and storms were eliminated due to non-availability of the situation. In this study, the total FQ score was used to examine the correlation and determine the validity of the driving avoidance scale. The correlation coefficient between the total FQ score and the driving avoidance scale was obtained at 0.75 that is significant at the level of $p < 0.01$ and it is acceptable. The correlation between total DSQ score and total FQ score was obtained 0.75, which was significant at the same level. Cronbach's alpha was used to determine the reliability, which was obtained at 0.91 for the avoidance subscale score.

The Fear Questionnaire (FQ): it was developed by Marks and Matthews (1979) and has 23 items. FQ assesses more phobia avoidance and in addition to total fear score, it assesses transient fear, blood injection fear, harm, and social phobia. In examining its reliability through internal consistency, the correlation coefficient was reported between 0.68 and 0.76 (Bakhshipour, Beyrami and Kakaei, 2009). In terms of validity, people with specific phobia, transient phobia, and social phobia score significantly higher on FQ and its subscales compared to general population (Page, 2003; quoted in Bakhshipour, Beyrami and Kakaei, 2009). In a study conducted by Kakaei (2005), total reliability of the fear questionnaire through internal consistency was obtained at 0.86 and the validity of the test content was reported with an agreement coefficient of 0.95. In this study, the total FQ score was used to examine the correlation and determine the validity of the driving avoidance scale.

Operational definition of variables

Cognitive-behavioral therapy for driving phobia: The cognitive-behavioral therapy used in this study consisted of 12 treatment sessions (2 sessions per week and 60 minutes per session), which is a combination of driving phobia self-help treatment program (Rich Presta, 2009) and some cognitive-behavioral therapy techniques of panic attacks and social

phobia). Six sessions were performed as cognitive therapy with the presence of the therapist and 6 sessions were performed as gradual desensitization and real exposure with the help of a driving instructor.

Driving phobia: In this study, driving phobia is the total score that a person obtains in the avoidance subscale of the driving situation questionnaire.

Driving cognitions during driving: It is total score that a person obtains in the cognitions questionnaire during driving (Ehlers et al., 2007).

Research implementation method

The researcher went through the following steps to obtain the research sample.

Step 1: First, after selecting female social security employees and obtaining the necessary permissions, the researcher referred to all 5 branches of this department in Shiraz and submitted the questionnaires to female employees who have received their driving license for at least 6 months and were willing to cooperate in this research. Necessary explanations on the way of answering the questions and time of delivery of the questionnaires were provided for them.

Step 2: After collecting the questionnaires, the data were coded and entered into SPSS software 16 software for analysis. Subjects who scored higher on the driving cognitions questionnaire and driving situations questionnaire and avoided driving were contacted in person and in some cases by telephone, and after talking about the test results, they were invited to participate in the treatment program, if they were willing.

Step 3: In this step, after coordination with the officials of driving centers in different parts of the city, a call for participation in cognitive-behavioral therapy of driving phobia was installed on the bulletin boards of driving centers and also submitted to a number of free plan trainers who announced their cooperation with the researcher.

Step 4: Via phone call with the researcher, the subjects were selected after completing the questionnaires and interviews and after meeting the necessary criteria for driving phobia, and after completing the questionnaires, 30 people were selected randomly and were assigned into two control and experimental groups.

Step 5: In August, after coordination with Talash non-profit school principal, this school was given to the researcher for holding the sessions. Given 60-minute time of each session and the individual nature of treatment, two sessions per week were determined for each person. The day before each session, if necessary, the necessary arrangements were made with the subjects via phone call.

Step 6: In this step, after the end of the sessions, the post-test was performed on the experimental and control groups.

Treatment sessions

Treatment was held in 12 sessions of 60 minutes twice a week and individually. Six sessions of cognitive therapy and 6 sessions of behavioral therapy were performed in the form of real exposure and regular desensitization with the help of a driving instructor.

Session 1

Communicating and reviewing the treatment, its methods and goals

Investigating the logic of cognitive-behavioral therapy and investigating the relationship between thoughts, feelings and behavior

Teaching the concept of homework and the importance of time management to do homework

Examining the questions and ambiguities and recommendations to improve the treatment process

Session 2

Teaching the concepts and definitions of anxiety, phobia and the difference between them

Familiarity with etiology of anxiety and especially specific phobia

Defining driving phobia, providing information on prevalence, chronicity, and treatment prognosis

Familiarity with automatic thoughts and cognitive distortions

Examining irrational thoughts affecting driving phobia

Familiarity with avoidance behaviors and self-monitoring skills training to determine avoidance behaviors in themselves and rating them as homework

Session 4

Teaching relaxation techniques and focusing on gradual muscle relaxation skills

Diaphragmatic breathing training and emphasis on exercise and doing it as homework

Session 5

Investigating the main area of one's worry about driving cognitions

Providing treatment recommendations according to the principles of cognitive-behavioral therapy related to type of worry

Session 6

Teaching positive thinking

Teaching imaginary exposure and the effects of nutrition and medications

Exercising mental imagery as homework

Sessions 7 to 12

It includes behavioral training and exercises with appropriate conditioning and elimination of incompatible conditioning and regular desensitization to avoid driving and reviewing previous homework and programs. In sessions 6 and 7, the subjects, with the help of trained instructors, started driving from non-crowded areas and low-traffic hours. Sessions 8 and 9 were assigned to high-traffic areas of the city, but not during traffic peak hours, and half of the last session was assigned to attending city traffic. Finally, post-test was performed.

Data analysis method

In the present study, descriptive statistical methods of mean, standard deviation, minimum and maximum scores and inferential statistics including multivariate analysis of variance (MANOVA) were used to compare the experimental and control groups to analyze the data.

Cronbach's alpha was used to evaluate the reliability and Pearson correlation coefficient was used to validate the instruments. The probability level for the significance of the hypotheses was considered at 0.05. The data obtained from the study were statistically analyzed using SPSS 16 software.

III. Results

Demographic information of research sample

Table 1- Mean, standard deviation, minimum and maximum and frequency of demographic information of the subjects

index / group	frequency	mean	SD	min		max
experimental	15	31	3.8	23		58
control	15	34	5.7	23		45
group statistical index	experimental group			control group		
	single	married	total	single	married	total
frequency	7	8	15	8	7	15
percentage of frequency	7.46	3.53	100	3.53	7.46	100
index / group	frequency	mean	SD	lowest duration of obtaining certificate		highest duration of obtaining certificate
experimental	15	4.85	7.9	9		408
control	15	105	6.8	8		324

group index (history of accident)	experimental group				control, group			
	0	1	2	3	0	1	2	3
frequency	10	3	1	1	9	5	1	0
percentage of frequency	7.66	20	7.6	7.6	60	3.33	7.6	0

As shown in Table 1, the mean age and standard deviation of the experimental group were 31 and 8.3 years, respectively and the mean and standard deviation of the control group were 34 and 7.5 years, respectively. Table 1 shows that in the experimental group, 53.3% are married and 46.7% are single and in the control group, 53.3% are married and 46.7% are single. The mean and standard deviation of duration of receiving driving certificate in the experimental group was 85.4 and 9.7, respectively, and its mean and standard deviation in the control group were 105 and 8.6, respectively. Table 3-5 presents the frequency and frequency percentage of people in both groups according to the accident history. Also, 66.7% of the people in the experimental group had no history of accidents; 20% had a history of one accident and 6.7% had a history of two or three accidents. In the experimental group, a person had no history of accidents more than three times. In the control group, 60% had no history of accidents, 33.3% had a history of one accident and 6.7% had a history of two accidents, and no person had a history of three or more accidents.

Descriptive results

Table 2- Mean, standard deviation, minimum and maximum scores of cognitions and driving phobia of the experimental and control groups in pre-test and post-test stages

index variable	mean		SD		min		max	
	experimental	control	experimental	control	experimental	control	experimental	control
driving cognitions (pretest)	20.51	52	75.10	08.6	37	40	73	62
driving phobia (pretest)	60.111	33.111	13.11	71.10	91	92	128	128
driving cognitions (posttest)	60.21	13.48	56.8	84.9	40	62	11	26
driving phobia (posttest)	93.40	104	85.2	30.2	10	48	11 6	128

Table 2 shows that mean cognitions of the experimental and control groups in the pretest is 51.20 and 52, respectively, and the mean driving phobia in experimental and control groups in the pre-test is 111.60 and 111.33, respectively. Also, mean cognitions of the experimental and control groups in the posttest is 21.60 and 48.13, respectively, and the mean driving phobia in experimental and control groups in the pre-test is 40.93 and 104, respectively

Inferential results

In the present study, multivariate analysis of variance (MANOVA) was used to test the hypotheses and determine the significant difference between the scores of the experimental and control groups in the dependent variables of driving cognitions and driving phobia. The reason for using this method was to compare the two groups (experimental and control) in terms of two dependent variables in the posttest. Multivariate analysis of covariance (MANCOVA) was not used, since covariance assumptions were not confirmed.

Research hypothesis: 1- Cognitive-behavioral therapy reduces driving phobia and driving cognitions

1-1- Cognitive-behavioral therapy reduces driving phobia

1-2- Cognitive-behavioral therapy reduces driving cognitions

Based on the results, the difference between the variances of the experimental and control groups was not significant, so variances are homogeneous. Table 3 shows the results of examining the first hypothesis.

Table 3- Results of multivariate analysis of variance (MANOVA) on the difference between the mean scores of pretest and posttest driving phobia and cognitions of experimental and control groups

test	value	f value	degree of freedom of hypothesis	degree of freedom of error	effect size	statistical power	significance level
Pillai Trace	872.0	837.91	2	27	872.0	1	001.<0
Wilks' lambda	128.0	837.9	2	27	872.0	1	001.<0
Hoteling's Trace	803.6	837.91	2	27	872.0	1	001.<0
Roy's Largest Root	803.6	837.91	2	27	872.0	1	001.<0

As shown in Table 3, there is a significant difference between the experimental and control groups in terms of compared variables at the level of $p < 0.001$. Thus, Hypothesis 1 of the present study was confirmed. Accordingly, it can be stated that there is a significant difference between the two groups in at least one of the dependent variables. To find out this difference in the next step, one-way analysis of variance (ANOVA) in MANCOVA, two sub-hypotheses of this research were examined. The results are presented in Table 4.

Table 4- Results of ANOVA analysis in MANCOVA on the difference between the mean scores of pre-test and post-test driving phobia and driving cognitions in experimental and control groups

variable	source of change	squared sum	degree of freedom	squared mean	f value	effect size	statistical power	significance level
driving phobia	group	333.2465	1	333.2465	762.62	691.0	1	001.<0
	error	667.10998	28	810.392				
	total	76722	30	4.2557				
driving cognition	group	333.4813	1	333.4813	517.167	857.0	1	001.<0
	error	533.804	28	733.28				
	total	14220	30	33.47				

As shown in Table 4, there is a significant difference ($p < 0.001$ and $F = 62.762$) between the experimental and control groups in terms of driving phobia. Therefore, Hypothesis 1-1 of this study was confirmed. Also, the effect size coefficient indicates that 69% of the difference between the two groups is related to the experimental intervention. Also, the statistical power of the test is equal to 1. According to this table, there is a significant difference between the two groups in terms of the variables of driving cognitions ($p < 0.001$ and $F = 167.517$). Thus, Hypothesis 2-1 of the present study was also confirmed. The effect size coefficient is 0.857 and the statistical power of the test is equal to 1.

IV. DISCUSSION

The aim of present study was to evaluate the effect of cognitive-behavioral therapy on reducing driving phobia and driving cognitions in women living in Shiraz. The results indicate that there is a significant difference between the subjects of the experimental and control groups in terms of the variables of driving cognitions and driving phobia. Cognitive-behavioral therapy has reduced cognitions and driving avoidance. Since it is necessary to reduce avoidance behavior to affect the phobia, it has been effective on driving phobia. Thus, the research hypotheses based on the effect of cognitive-behavioral therapy in reducing driving phobia and driving cognitions in women living in Shiraz were confirmed. As stated before, little research has been conducted on driving phobia and majority of these studies have been case reports of treatment for this type of phobia. No controlled study was found to investigate cognitive-behavioral therapy on this type of phobia based on available information. As stated before, research on treatment of driving phobia disorder is at the beginning of its path. Thus, some of the results of this study cannot be compared with the results of other studies. Driving is also a skill and learning skills requires time and practice, and with more practice, it becomes better and easier, but in the case of people with driving phobia, safety behaviors or repeated avoidance create vicious cycle, making this disorder chronic. In explaining the effectiveness of the results of this study, it seems that giving information such as prevalence of the disorder can be effective in improving the feeling of shame and embarrassment in people. In fact, this treatment increased their motivation by increasing their understanding and awareness. It seems that people knowledge about the mechanism of symptoms and the etiology of the disease based on its psychology has been effective in reducing symptoms. Most of the patients did not attribute source of their worries to psychological and suffered lack of insight into the root of the problems and attributed it to lack of talent and inherent nature of driving skills in people, as pointed out by Wald (2004).

Taylor, Deane, & Podd (2000) argue that lack of confidence in driving skill is one of the factors related to driving fear. In this study, people also underestimated their skills and did not believe in their driving and it was effective in their avoidant behaviors. This treatment tried to make patients familiar with the disorder, its prevalence and its causes. These trainings increased people awareness of the problem and they realized that they are not the only ones who suffer this disorder. The advantages and disadvantages of the treatment were also stated for them. This issue was also effective in increasing hope and motivation. One of the causes of anxiety is thinking, and management of anxiety requires changing anxious thinking. By encouraging people to perform new actions, behavioral techniques strengthen their intellectual changes and gradually create lasting behavioral changes (Frugat, translated by Firoozbakht, 2006). Cognitive-behavioral therapy also refers to techniques and methods that emphasize cognitive and behavioral processes and their role in the formation and continuation of a behavior. Cognitive-behavioral methods are selected according to their basic assumptions. Kendall & Hammen (1998) have proposed four hypotheses in this regard (Seamus, translated by Jalali, 2004), which were also considered by the therapist in the present study.

1- Most clients respond to environmental stimuli based on their interpretations. Thus, they do not see the world around them as it really is. Thus, the therapist helped to change clients' thinking by analyzing environmental stimuli and the ways in which clients respond to stimuli.

2- Thoughts, behaviors and feelings of humans are related to each other and affect each other. Thus, each cannot be investigated separately. In the present study, the therapist helped clients to improve thoughts and behaviors by using cognitive and behavioral techniques.

3- Successful treatment requires making change in people thinking about themselves and the world around themselves. Accordingly, the therapist by the use of methods such as positivism changed people thinking.

4- The therapist should try to investigate the clients' cognitive processes and behaviors and make changes in them. Teaching self-reviewing and stress reducing and desensitization methods were some of the methods that the therapist used in this study to teach clients how to monitor themselves and maintain their peace of mind and reduce stress.

Based on cognitive-behavioral therapy model, biased information processing leads to the establishment of distorted negative beliefs. Treatment includes psychological training that enhances the patient understanding of the disorder and justifies it according to a cognitive-behavioral model. During treatment, patients use self-monitoring to record maladaptive thoughts and behaviors to identify the symptoms targeted by treatment. Symptoms are reduced by fighting against distorted thoughts and beliefs and avoiding behaviors. The core of worries is identified and patients learn to identify their negative thoughts and replace them with positive ones. Also, by using techniques such as coping and providing experiences that cope with negative beliefs and finally regular desensitization, they are saved from incompatible conditionings. Elimination of maladaptive behaviors, including inappropriate conditioning, is one of the most sensitive components of treatment. By identifying avoidance and safety behaviors through self-monitoring skills training, individuals learned not to use safety behaviors during exposure to reduce anxiety (breaking a vicious cycle). This method can also be effective in reducing symptoms. During treatment, individuals learn to communicate with their thoughts and feelings differently. Understanding that more thoughts are just thoughts and not reality gives people more insight and creates a greater sense of control over life. People are trained to allow their thoughts to come and go easily without any effort to suppress or expand them. They learn to see their thoughts as psychological events, not reality. People are faced with positive and negative aspects of their thoughts and not immersed in their thoughts.

Not all subjects of experimental group had a history of accident or significant anxiety in panic attacks, but it seems that the cognitive aspect of treatment in reducing misinterpretations and information processing could reduce scores. Hypersensitivity to environmental stimuli and having memories of being mocked or criticized can make people more anxious than others. Thus, by modifying driving cognitions, it is possible to prevent driving phobia in people. Affected people have biased information processing that helps identify cognitive errors. One of the maladaptive cognitions is the idea that the person has lost control, resulting in performance anxiety and learned helplessness. Physiological arousal is another factor that has been reduced with the help of respiratory retraining and cognitive correction to remove worry about complete loss of control, and as a result, it has been effective in improving driving anxiety. In general, based on the obtained results, it should be stated that this type of treatment, according to its underlying principles, could affect the main areas of driving cognitive cognitions and driving avoidance in women. However, based on the research sample, we should treat with caution in generalizing the results to other areas.

Research Limitations

1-In the present study, treatment was not performed on male samples, so it was not possible to compare women and men in this regard.

2-In the present study, it was not possible to fully control the variables (such as cultural, economic and social status, etc.).

3-The present study was conducted on women living in Shiraz, so we should treat with caution in generalizing the results to women living in other areas

Recommendations

1-It is recommended to conduct this study on male samples.

2- It is recommended to compare the effectiveness of this treatment with other treatments used for driving phobia

3- By training people and increasing their awareness that the symptoms are psychological, they can be invited to psychological treatment instead of frequent visits to driving training centers. It is recommended that training be held to increase the awareness of trainers in driving training centers about the factors affecting the formation and persistence of driving license, since it is effective in timely identification of these people and prevention of its chronicity.

4- Reducing driving cognitions can also be useful for those who do not avoid driving but are anxious during driving and can be used in driving trainings.

5-It was revealed that cognitive-behavioral therapy is appropriate and effective for women with driving phobia, so it is recommended to use it in medical clinics.

REFERENCES

[1] Taylor, J., Deane, F, Podd, J. (2002). Driving – related fear: A review. clinical psychology review, 22, 631-645.
[2] Ferdowsi, T, Ahamdi, AA (2011). Comparative study of the personality of drivers with an experience of accident and non-accident drivers, Psychological Studies, Volume 7, Issue 2.0, 85-103
[3] Sadok, B and Sadok, V (2003). Summary of Psychiatry, translated by Farzin Rezaei (2008) Volume 2, Tehran: Arjmand.
[4] American Psychiatric Association (2000). Revised text of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR). Translated by Mohammad Reza Nikkhah and Hamayak Avadis Yans (2002). Tehran: Sokhan Publications
[5] Alpers, G. W. (2005). Driving Phobia. Journal of Anxiety psychology,114, 1, 126-139.
[6] Khodayari Fard, M, and Parand, A (2006). The effect of family therapy with emphasis on cognitive-behavioral approach in the treatment of social phobia, Journal of Psychology and Educational Sciences, University of Tehran, Volume 35, Issues 1 and 2, 123-142
[7] Ehlers, A., Taylor, E., Ehring, T., Hofmann, S.G., Deane, F.P., Roth, W. T., Podd, J. V (2007). Driving Cognitions Questionnaire. Journal of Anxiety Disorders, 21, 493-509.
[8] -Taylor, J., Deane, F, Podd, J. (2002). Driving – related fear :A review. clinical psychology review, 22, 631-645.
[9] Ferdowsi, T, Sarami, Gh, and Rostami, A (2010). A comparative study of psychological factors affecting traffic accidents based on gender of driver, Woman in Development and Politics (Women Research), Volume 8, Issue 4, 141-157
[10] Anthony, M, Irenson, G, & Sneiderman, N (2007). A practical guide to cognitive-behavioral stress management. Translated by Seyed Javad Al-Mohammad, Solmaz Jokar and Hamid Taher Neshatdoost, (2009). Isfahan: University Jihad, Isfahan Branch.
[11] Hell, G (2007). Driving psychology. Translated by Abdollah Shafiabadi and Alireza Ismaeili (2010). Tehran: Termeh Publications
[12] Mayou, R, Tyndel, s., & Brayant, B. (1997). Long – term outcome of motor vehicle accident injury. Psychosomatic Medicine, 59, 578- 584.
[13] Zarb, JM (1992). Evaluation and cognition-behavior therapy of adolescents, translated by Mohammad Yarifard and Yasmin Aydini (2004). Tehran: Roshd Publications
[14] Bakhshaei, NM (1993). Evaluation of the effectiveness of cognitive-behavioral methods in the treatment of anxiety disorders, Master Thesis, Iran University of Medical Sciences: Tehran Institute of Psychiatry.
[15] Ehlers, A., Hofmann, S. G., Herda, C. A., & Roth, W. T. (1994). Clinical characteristics of driving phobia. Journal of Anxiety Disorders, 8, 4, 323-339.
[16] Taylor, J, E., Deane, F (2000). Comparison and characteristics of motor vichicle accident (MVA) and non-MVA driving fears. Journal of Anxiety Disorders, 14, 281-289.
[17] Wald,J .Taylor, S. (2000). Efficacy of virtual reality exposure therapy to treat driving phobia: a case repor. Journal of Behaviour Therapy and Experimental Psychiatry, 31, 249-257.
[18] Krijn,M., Emmelkamp,P. M. G., Olafsson,R.P., Biemond.R. (2004). Driving skil & driving behavior. Psychology Review, 24, 259-281.
[19] Krijn,M., Emmelkamp,P. M. G., Olafsson,R.P., Biemond.R. (2004). Virtual reality exposure therapy of anxiety disorders: A review, clinical psychology Review,19, 136-159.
[20] Williamson, A. (2004). A case of driving phobia treated with dissociative imagery. Contemporary Hypnosis, 21, 86-92.

[21] Townend, M., Grant A. (2006). Integrating Science with Practic Reflexity : Cognitive Therapy with Driving Phobia. Journal of Psychiatry & Mental Health Nursing, B, 554-563.
[22] Haghshenas, H, Hosseini, M, Jamshidi, M, and Azizi, HR (2008). The relationship between personality traits and driving behavior in Shiraz. Hakim, Issue 3, pp. 47-54
[23] Arizi, MR, and Haghayesgh, A (2009). Psychometric properties of the Manchester Driving Behavior Questionnaire. Payesh Publications, Issue 1, 21-28
[24] Ehlers, A., Hofmann, S. G., Herda, C. A., & Roth, W. T. (1994). Clinical characteristics of driving phobia. Journal of Anxiety Disorders, 8, 4, 323-339.
[25] Bakhshipour, A, Beyrami, M, and Kakaei, A (2009). Psychometric properties of fear table - Third Edition (FSS-III). Psychological Research, Volume 13, Issues 1 and 2.
[26] Wald. J. (2004). Efficacy of Virtual Reality Exposure Therapy for driving phobia: A multiple Baseline Across-Subjects Design, Behaviour Therapy, 35, 621-635.
[27] Seamus, G (unknown). Cognitive Behavioral Therapy, translated by Ahmad Jalali (2004). Tehran: Parada Publications
[28] Rich presta (2009). Driving Fear Program