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# The role of technology in interaction with the audience in digital art

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### Abstract

The present paper examines the role of technology in the production of work of art; and the impact on the audience in digital-oriented works with the aim to study the interaction of the audience and the digital effect based on the assumption that technology only raised the appearance of artistic forms into the problem. Examining the studies and available evidence by descriptive-analytical method, the results indicate that digital world has brought a new identity and new characters that have different psychology. In this situation, the artist and audience are present in a continuous interaction and are constantly converging.

**Keywords:** Technology, Perception, Audience, Digital Art.

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# Aceptación y efectividad de la terapia de compromiso para reducir la depresión en las mujeres que dejan el cristal

### Resumen

El objetivo de esta investigación fue estudiar la efectividad de la terapia de aceptación y compromiso para disminuir la depresión de las mujeres que abandonan el cristal. Nuestro método de investigación fue cuasi-experimental del tipo de prueba-prueba-post-prueba con el grupo de control. Los resultados mostraron que la terapia de aceptación y compromiso para reducir la depresión en mujeres que han abandonado el cristal es efectiva y hay una diferencia significativa entre las puntuaciones de los grupos experimental y control de mujeres deprimidas que abandonan el cristal y la terapia de aceptación y compromiso muestra efectos terapéuticos en el campo de reducción de la depresión de las mujeres que consumen cristal.

Palabras clave: aceptación, compromiso, terapia, depresión, cristal

### 1. INTRODUCTION

Addiction has been one of the greatest difficulties and tragedies of human society since the past. Drug consumption in various parts of the world is considered to be of value by some cultures of different societies. But in other societies, addiction is an immoral thing and the addict, in social attitude, is seen as a person with the weak or irresponsible will (Mokri, 2014). Addiction is a compulsory behavior in consuming drug, along with person's consciousness of its negative

effects in the future. The effect of substances in the individuals' nervous system is accompanied with disorder in all aspects of life. Addiction means becoming accustomed and the addict is one who becomes accustomed. The crystal is a chemical substance of the methamphetamine group; it is a stimulant which increases the activity of the nervous system. The crystal is very addictive and with its use one time the brain tolerates it, which is due to the addictiveness of the crystal. It is also positive invigorator of the behavior. In psychology, substance dependence is a chronic disease, which, due to psychological and physical resistance, increases the consumption and, therefore, eagerness for some time. If this desire is not met, it will be associated with psychological and physical suffering such as weakness, inability, anxiety (Parvizifard, 2008), insomnia, aggression, and depression. Depression is a mental disorder that is characterized by anxiety, despair and fatigue, and is often associated with less or more severe anxiety that is characterized by varying degrees of sadness, despair, loneliness, hopelessness, and doubt about self and guilty feelings. According to the high mood oscillations, the depression spectrum disorders are common by drug users; diagnostic criteria emphasize that depression is associated directly with substance abuse (Tajeri, 2011). Also, the prevalence of depression in these crystal consumers is an evidence for this. In Iran, Parvizifard emphasized the overlapping of mood disorders and anxiety disorders in crystal consumer women. So far, no specific drug has been approved for the treatment of dependence on stimulants such as crystal and the basis for treatment of this disorder consists of psychological interventions. Nowadays, psychological methods have a special place in the treatment of addicts

because addicts face a lot of anxiety; in the third wave treatments the modifications and integration of the cognitive-behavioral approach with the basic principles of responsibility and understanding of reality have found their importance. In the approach of acceptance and commitment, the ways in which people deal with their experiences are important. In the approach of acceptance- and commitment-based treatment, the individual does not correct his thoughts and feelings, but changes the response to them (Bach and Moran, 2010). Also, some researches reveal the effect of acceptance- and commitment-based treatment on depression; also (Mahmoudi and Ghaderi, 2017; Alawizadeh and Shakerian, 2016; RezaeiMirghaed et al., 2016) refer to the effectiveness of acceptance- and commitment-based treatment on depression, stress and anxiety of addicts who are leaving drugs. So far, in Iran, there has been no research on the effectiveness of acceptanceand commitment-based treatment in reducing depression in women who are leaving the chemical substance crystal. The question is now: Is acceptance- and commitment-based treatment effect on the depression of women leaving the chemical substance crystal and is there a significant difference between the scores of the experimental and control group?

### 2. METHODOLOGY

This research was applied in terms of purpose and crosssectional in terms of collecting data; quasi-experimental (experimental) method was applied based on pretest-posttest with a control group and

a follow-up phase. The statistical population of this research was all women who were leaving and who referred to addiction treatment centers during the period from September to December 2009 in Isfahan province, who simultaneously had depression. According to the research method and the unlimited target community (there is no specific number due to its dynamism), the sampling method used to be about two steps. First, using convenient non-random sampling method, 80 women who were referring to all 18 rehabilitation centers (shortterm, medium-term, long-term) of addicts covered by the Welfare Organization of Isfahan were selected; in the second stage, the sample size was determined based on the number of samples and the ability of 80% of the tests in the previous studies, and also considering that the minimum number of suitable samples for experimental studies was recommended for each group to be 15 people (Delaware, 2009). Therefore, 30 subjects were selected randomly from among 56 people and assigned to the groups randomly in a test group (15 people in the acceptance- and commitment-based treatment group) and one control group (15 people). Statistical analysis was used.

### Research tool

**Beck Depression Inventory II (BDI-II)**: The Second Edition of Beck Depression Inventory printed by DSM-III-R and DMS-IV was provided. Descriptions and observations were graded in the form of 21 signs and collection attitudes and ranked on a four-level scale from 0 to

30 based on intensity. The questions related to dyspnea and chestnut were reviewed, and the increase and decrease in sleep and appetite were both taken in consideration. In fact, except to three questions (questions about feelings of being punished, thoughts on suicide and sexual inclinations), all questions were changed. BDI-II also includes 21 questions with a value scale of 0 to 3. The cut-off point in this form varies with two other forms: 0 to 16 indicates a minimum depression. 17 to 23 represent mild depression and 24 to 32 the moderate depression. A score of 33 to 63 indicates severe depression (Aminian et al., 2014). Beck, Stear, Ball and Ranieri 1996 obtained a retest reliability of 0.93 for the Beck Depression Scale and reported internal consistency of 0.89-0.94. Its construct validity was reported through convergent validity and its simultaneous implementation with the Beck Desperation Scale, Suicidal Thoughts Scale, Beck Anxiety Inventory, Hamilton Depression Scale, and Hamilton Anxiety Scale. In Iran Dobson and MohammadKhani (2007) reported the total coefficient of BDI-II to be 0.91. Ghasemzadeh, reported the alpha coefficient of this questionnaire (0.87), its retest coefficient (r = 0.74), and its correlation with Beck Depression Inventory version 1 (r = 0.93). Also, in the research of Taheri, the validity and internal consistency of the confirmation questions and the internal consistency of the questions were confirmed and the test's internal stability was obtained, using the Cronbach's alphabet and the split-half, by 0.93 and 0.64, respectively. In the present research, measuring the reliability of the questionnaire, after a preliminary study and determining the variance of the questions, was calculated through the Cronbach's alpha coefficient and the splithalf and the total coefficient of the questionnaire was 0.81 (TaheriNakhost et al, 2015).

### Research in application

The research method is effectiveness with a group (independent variable); therefore, in order to collect the samples, according to the referral of women in a convenient form, some individuals were selected. Then by two-stage sampling two desired groups (one experimental group and one control group) were randomly selected from among the number of people who were eligible for inclusion criteria. The implementation of the therapeutic process in the health clinic in Isfahan province according to the acceptance- and commitment-based treatment protocol included closure of medical contract and performance evaluation, Creating despair and expression of values and creating commitment and control as a replacement problem for the controlling practice of acceptance of Cognitive coming apart, screening barriers to strengthening values and acceptance and commitment, internal discussion that took place in 15 sessions of 90 minutes on the experimental group during the period of the last three months from the beginning of September 2016 with a group in two different days and during the week. During the implementation of the therapeutic process, 1 patient in the Monday experimental group was excluded due to shedding (personal problems). For the control group no intervention was done with regard to the independent variable (Acceptance and Commitment Treatment Protocol), but the sessions of the control group without psychotherapy (15 sessions of 90 minutes,

conversation with neutral content) were conducted simultaneously by the experiment group. The measurement of the dependent variable was performed for the experimental group at a time and under the same spatial condition. Also, after three months of post-test, only one follow-up stage was received from the experimental group. In addition, the post-test received 1 person in the experimental group and due to the decrease (some personal problems, which are the reason for leaving the research). After collecting information, raw data were analyzed and finally, the research hypothesis and questionnaire were studied. By obtaining information about the questionnaire, the results were compared with each other.

## Contents of Treatment sessions based on acceptance and commitment

The treatment protocol based on acceptance and commitment in addiction has been done by Heath, (Wilson et al., 2014). This treatment program was performed on the sample group during 15 sessions for 90 minutes in the group; 8 first sessions have been done twice a week one session of which was conducted weekly (to conduct a previous training session and to review the experience of client from weekly tasks) and 7 other sessions once a week in [Table 1].

 Table 1: Summary of Treatment sessions based on acceptance and commitment

First Session: Providing pre-requisites, what clients and therapists should seek is to avoid long-term ineffective methods.

Second session: Performance measurement, task review, creative helplessness. With the help of the therapist, the learned methods should be measured to control the thought.

Third, fourth, and fifth sessions: Performance Measurement: The therapist measures and evaluates any (internal and external stimulating) change in his client and environment, such as the frequency, severity or disorder created in thought.

Sixth, seventh and eighth Sessions: Reviewing the response to the previous session, reviewing the task, introducing the desire/acceptance, studying the behavioral commitment, providing the task

Ninth, Tenth, and Eleventh Sessions: Performance Measurement, reviewing Response, Reviewing task and Behavioral Commitment, Introducing himself as a background and coming apart, providing task, exercising Behavioral Commitment

Twelve and Thirteenth Sessions: task of values, Performance Measurement, Reviewing Previous Session Responses, Introducing Values, Behavioral Commitment

Fourteenth and fifteenth sessions: Performance measurement, review of reactions to the previous session, introducing himself as background and coming apart, introduction and value tasks.

### **Findings**

Regarding the scale of the interval-based questionnaire tools, the data were normalized initially according to the Shapiro Valik test. Regression slope test and homogeneity of variances were confirmed by

Box and Levine test. The descriptive Findings of mean and standard deviation, the pre-test and post-test scores of depression were presented in [Table 2] by the experimental and control groups (ACT and CBT).

**Table 1:** Mean and standard deviation of pre-test, post-test and depression follow-up scores in two groups

depression follow up secres in two groups									
		Pre- test		Post- test		Follow- up			
Independent variable	Group	mean	standard deviation	mean	standard deviation	mean	standard deviation		
depression	Experiment (ACT)	33.73	1.71	18.73	1.91	18.52	2.34		
	Control	32.33	2.50	32.73	2.46	49.30	2.77		

As shown in [Table 2], the mean scores of pre-test depression, the experimental group (based on acceptance and commitment), and control were approximately equal, but in the post-test of depression, they were smaller than the mean scores of the control group, while in the post-test is the control group; also in the table above the follow-up values are observable.

**Table 2:** Results of one-way variance analysis of repeated measurement through inter-group and inner-group factors in two control and

experimental groups Sources of Total Freedom Mean Size of Factors F Significance change Squares of degree squares effect Intra-Stages of 63.985 0.000 223.654 223.654 0.867 group treatment factor Interaction 14.687 14.687 6.987 0.001 of stages 1 Group\* 698.241 698.241 Error 1 Inner-2 Group 4687.953 2343.9765 28.987 0.000 0.936 group 40 10.649 Error 425,971 Factor

The results of Table 2 show that there is a significant difference between the mean scores of pre-test, post-test and follow-up of depression scores in the triple stages of pre-test, post-test and therapeutic follow-up.

**Table 3:** Summary of the results of Bonfreni's follow-up test in the experimental and control group

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Stages	Difference of means	Standard error	Sig.
Pretest-Posttest	1.586*	0.243	0.001
Pretest-Follow-up	4.658*	0.276	0.001
Posttest-Follow- up	4.081*	0.370	0.001

The results of [Table 4] show that there is a significant difference regarding the scores of depression between the stages of pre-test and post-test, pre-test and follow-up and post-test and follow-up.

### 3. DISCUSSION AND CONCLUSION

According to the analysis and the aim of the research based on the effect of acceptance- and commitment-based therapy in reducing the depression of women leaving the chemical substance crystal, the results showed that there was a significant difference between the mean scores of post-test, the effect of acceptance-based therapy and control group on reducing depression in women leaving crystal of the test and control group. Therefore, it can be concluded that acceptanceand commitment-based therapy had an effect on reducing the depression of women leaving the chemical substance crystal. These findings were consistent with the findings of (RezaeiMirghaed et al., 2016), on the effects of acceptance- and commitment-based therapy, and the effect of acceptance- and commitment-based therapy in the reduction of depression, decreased anxiety, decreased emotion, decreased Physical symptoms, improvement in social performance, and decreased reliance on narcotic drug reuse among drug users.

In a general look, one can find that the classical behavioral therapy assumed that behaviors can be modified based on the events before and after it; for example, they can be strengthened or discounted by applying rewards and punishments. Classical behavioral therapy has had many successes, but the problem was that humans, unlike other animals, translated the behavior of the individual and sometimes inferred or were affected differently by the expectation of the rewarder or the punisher. Regarding cognitive and behavioral viewpoints, in cognitive behavioral therapy, this method, in addition to paying attention to positive and negative invigorators, deals with investigating and detecting cognitive errors such as excessive generalization, black and white interpretation, which is based on the basic rules of depressed individuals. It seems that this process of treatment for the improvement of depression based on cognitive chain such as human problems has a factor; their cause must be found; the causes are generally thoughts, feelings, or unpleasant memories (Rezaei Mirghaed et al., 2016). The majority of addiction treatment interventions was based on the behavioral cognitive model oriented to temptation control at the time

of occurrence, teaching methods for controlling thoughts that cause temptation (such as stopping thoughts), avoiding stimuli tempting thoughts (such as being away from the place of consumption or the consumer); some research findings of (Azizi, 2011; Mehling, 2010) explain this subject. In other research findings, we can refer to the psychological view of tension respecting material abuse. In this view, tension is a part of life and is inevitable, and what threatens the health of the behavior is not self-stress, but an individual assessment method of the stress and methods of coping with it (Tajeri et al., 2011). To explain this result, it should be said that acceptance- and commitmentbased therapy is essentially a behavioral therapy and its subject is a practice that in the first step is value-oriented. Techniques like coming apart are used to reduce the blending of the client with conceptualized self (Kafashian, 2011). From the point of view of individuals, negative thoughts and feelings are a threat to the meaning of their identity, as the depressed individual experiences the thought that "I am a worthless man". This person is natured with the content of this thought, and this influences his interpretation and perception of himself (Bernstein and Marcy, 2003).

An acceptance- and commitment-based treatment helps the client understand and accept all the abusive and negative thoughts and feelings as resulting from unreal mind. It can be seen that psychotherapy based on acceptance and commitment is unwittingly affected by many external issues that are acquired through verbal reasoning and learning and are known as the effect of "environment". Based on the cognitive social vision the humans act at any moment on

the basis of advice, listened and learnt knowledge, and subjects that we read in books and journals; how to predict the future; how to behave in any situation and with anyone; as well as many other rules and laws that people know only "ought" or "ought not" do, but never really doing or not doing them has not caused harm to anyone.

On the other side, the acceptance- and commitment-based psychotherapy tries to turn around the arguments and other verbal paths and instead using the similes, metaphors, and real experiences of the individual help the client to achieve the ultimate goal of treatment, which is the general improvement of problems of human beings (rather than eliminating the imaginary reasons for these problems, such as unpleasant thoughts and feelings); this fundamental rule leads to fundamental changes in the foundations of attitude and behavior of the individual and even the basic schemas. In the domain of depression improvement in addiction, we can see the core of these cognitive understandings in these beliefs and emotions. Focusing on this treatment method makes clear its effectiveness in treating depression. Among the limitations of this research, it can be noted that this research has only been carried out on women aged 30 to 45 years old leaving crystal with a high school and university education in Isfahan province. In general, the results should be taken cautiously to other populations like men. The number of sessions also has been specified for acceptance- and commitment-based treatment. One-step follow-up was also carried out in this research after three months of follow-up. The lack of control of women's dosage at the beginning of the research has been the other constraint of this study. The impossibility of longitudinal study due to high costs, labor hardiness, high shedding of abusive samples and their non-commitment to participate in the study, which was done in a cross-sectional manner. Therefore, in the longitudinal study, more precise and more accurate results are obtained, and the time and place limitation of implementation and selection is another limitation to the implementation of this research.

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