

# The effect of Bandura's social cognitive theory implementation on addiction quitting of clients referred to addiction quitting clinics

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## ABSTRACT

**Background:** Addiction, especially addiction quitting, has been the main problem of health systems of many countries in recent years. High percentage of addiction recurrence (more than 80%) indicates that the nature and therapeutic method of addiction have not been recognized and it demands more efforts in this field. Thus, the present study was conducted with an aim to examine the effect of Bandura's social cognitive theory implementation on addiction quitting of clients referred to Imam Reza Hospital addiction quitting clinic.

**Materials and Methods:** This two-group experimental study was conducted on 60 clients (30 clients in test group and 30 in control group) referred to Imam Reza Hospital addiction quitting clinic. The study tools were demographic and addiction-quitting self-efficacy questionnaires. After gathering demographic data and conducting pretest, the intervention was carried out based on Bandura's social cognitive theory for the test group and post-test was taken 1 month after the intervention. Data were analyzed by SPSS using related tests.

**Results:** According to the results, test group was more successful than the control group in addiction quitting. There was a significant difference between the two groups in terms of recurrence; it was less in the test group. A significant difference was also found between self-efficacy scores before and after the intervention in the test group.

**Conclusion:** Using Bandura's social cognitive theory was effective on addiction quitting. So, it is recommended to apply it for clients referring to addiction quitting clinics.

**Key words:** Addiction quitting, Iran, recurrence, self-efficacy, social cognitive theory, substance-related disorders

## INTRODUCTION

Iran is considered both as a transit path and a market place for drugs due to a common border with Afghanistan, the largest center of drug production. Using drugs is more common among youth and its morbidity age has considerably decreased.<sup>[1]</sup> Addiction to natural and synthetic agents has increased in the recent decade. As a result, it has become a serious problem in social and psychological health issues.<sup>[2]</sup>

Statistics of international organization, especially World Health Organization (WHO), showed an increase in drug

use worldwide.<sup>[3]</sup> As to the annual report of WHO (2005), there are around 200 million drug users across the world; interestingly, based on this report, the highest rate is related to Iran with 2.8%.<sup>[4]</sup> Based on the UN report (2005), Iran is at the top of the list for drug users related to heroin and opium, 1 out of 17. Furthermore, 20% of 15-60 year Iranian population are involved with drug abuse. In the latest UN report (2005), the number of Iranian addicts was reported as 10 million people.<sup>[5]</sup> The consequences, especially regarding heroin and morphine, in addition to the known impacts, carry high-risk diseases like HIV/AIDS and hepatitis that result in the death of the patient in the course of time.<sup>[6]</sup> Addiction extension could undermine ethical, moral, economical and social bases of a community, and corrupt it internally and finally lead to community decline.<sup>[7]</sup>

The aim of addiction treatment is helping the client to accept addiction as a chronic disease and change his lifestyle to prevent the disease progress.<sup>[8]</sup> Since addiction is a multi-dimensional phenomenon and related to structural, communicational, and personal characteristics, addiction eradication is possible by structural, communicational, and personal changes and modifications.<sup>[9]</sup>

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Nurses play a key role in the identification of drug abuse and planning proper interventions for treatment of addiction. The nurses' knowledge on community resources and the way of application could influence the clients' quality of care.<sup>[10]</sup> Treatment of addiction decreases criminal activities and improves social function, as well as decreases drug abuse.<sup>[11]</sup> The results of a study in California at the therapeutic center for addiction showed for 1 dollar spent for treatment, 7 dollars are saved because of decrease in health care expenses and criminal expenditure.<sup>[7]</sup>

Recurrence is a big problem of addiction. Recurrence of quitted addicts is one of the indexes used for evaluation of health care system and its function.<sup>[8]</sup> According to the findings of a study in Iran, the most recurrence rate is related to 1 month after detoxification.<sup>[12]</sup> Also, 50% of Iranian addicts referred to rehabilitation centers had a history of one episode of quitting; thus, recurrence after quitting is very high based on statistics.<sup>[13]</sup>

According to a study, just 20% of the clients could experience sustained quitting.<sup>[14]</sup> Other researchers reported recurrence rate of 80% at addiction quitting clinics.<sup>[15]</sup> Based on most studies, drug addiction is a medical disorder and could be treated medically.

Medical treatment would be effective when primary supportive services such as psychological consultation, treating accompanying disease, and accessibility to medical and rehabilitation services are provided. Treatment of addicted patients is a complex process which requires multiple therapeutic periods and different approaches.<sup>[16]</sup>

As pharmaceutical treatment is not sufficient solely and the recurrence rate of clients referred to addiction centers is high, finding proper strategy against addiction recurrence is one of the basic challenges in nursing. Community health care nurse could be a great help in prevention and treatment of drug abuse based on his role and tasks and his crucial role in compiling preventive programs across the community. According to the literatures, successful preventive education programs are conducted based on well-known models.<sup>[17]</sup>

Since Bandura's cognitive social theory is based on interactive dynamic relationship between environmental, personal, and individual behavior, this theory could be applied as a basis for interventional strategies. This theory is based on the concepts of personal efficacy, self-regulatory process, and self-efficacy. This definition is a current definition of self-efficacy in the literature. However, the following sentence can be added for further clarification: In other words, self-efficacy is a person's

belief in his or her ability to succeed in a particular situation.<sup>[18]</sup>

Considering the above-mentioned necessities and importance of this issue from different aspects and the effective role of community health care nurses in prevention and helping to treat undesirable behaviors across the community and as no study has been done on the effect of applying Bandura's cognitive social theory on addiction quitting in Iran, this study was carried out with an aim to examine the effect of Bandura's cognitive social theory on addiction quitting and recurrence.

## MATERIALS AND METHODS

This experimental study is a before-after two-group design. Sixty eligible addict clients were selected from Imam Reza Hospital clinic in Mashhad, Iran. Addiction confirmation by physician, history of addiction less than 10 years, lack of recurrence more than two times, no drug dependency other than opium, and no chronic and psychiatric disease were the study eligibility criteria. The clients were assigned randomly to two groups of test and control (30 each for test and control groups). After gathering demographic data, all subjects completed self-efficacy questionnaire before and after the intervention. Intervention was carried out based on Bandura's social cognitive theory for the test group; the control group received just conventional treatment. Self-efficacy questionnaire included 16 questions, and examined skills such as problem-solving, decision-making, self-protection, and communication.

The validity and reliability of the self-efficacy questionnaire was examined and confirmed by Martin (1995) and Bramson (1999). The Cronbach's alpha coefficient for Martin's study was 0.91 and for Bramson's study was 0.87.<sup>[18,19]</sup> Furthermore, the validity of the questionnaires was reconfirmed in the present study through face and content validity.

Data were collected from June to December 2010. They were analyzed using independent *t*-test, Chi-square test, ratio differences, exact Fisher test, and paired *t*-test. Intervention was carried out for the test group based on Bandura's social cognitive theory during eight 60-90 min sessions according to the steps of the model, which were run by group discussion, as follows:

- First step (information): Content on addiction process, complications, and treatment was presented after educational need assessment
- Second step (inspiring vulnerability): In this step, clients were divided into groups of six to eight. It was tried to change their attitude by group discussion. The

knowledge of health risk was converted to preventive behaviors using education and development of self-regulatory skills and required risk elimination

- Third step (enhancement of social self-efficacy): This step included four sessions.
- In the first session, clients were taught problem-solving skill; then it was followed by group discussion wherein the actual problems encountered by the clients and problem-solving method were discussed, with their objective situations and their strategy for resolving the problem under the supervision of the researcher. In the second session, decision-making skills were discussed. Third session was allocated to applied self-projection skills, and in the fourth session, the previous skills were reviewed and communication skills were taught.
- Fourth step (social support): It includes two sessions. In the first session, kinds of family support during quitting period were debated. In this session, one of the family members, who was very close to the client (concerning member), was invited. In the last session, discussion was about self-governing group; their active members were invited and they introduced their group and activities and invited the clients to participate in their meeting.

Finally, at the last session, the presented content during the eight sessions was summed up and clients were guided for their future referrals.

Post-intervention step: In this step, clients were followed up for a month, and weekly morphine-measurement test was conducted for them (at least tests). At the end, the research tool was recompleted for post-test. Post-test used addiction-quitting self-efficacy questionnaire for analyzing the effect of the presented educational course.

## RESULTS

According to the findings, the two groups matched and showed no significant difference with respect to age, self-efficacy level before intervention, sex, marital status, educational level, type of quitting, way of using drug, addiction of family members, number of children, history of cigarette smoking, history of alcohol abuse, and profession. It means random allocation could distribute confounding variables between the two groups equally.

Data analysis showed that 90% of clients could experience addiction quitting in the test group in comparison to 73.3% in the control group. The statistical test of ratio difference showed significant difference between the two groups in the rate of successful addiction quitting, i.e., intervention based on Bandura's cognitive social theory could be effective on the rate of successful quitting ( $P \leq 0.05$ ).

According to the findings, 4 (14.8%) people in the test group had recurrence in comparison to 9 (40.9%) people in the control group. Based on Fisher's exact test, there was a significant difference between the two groups in terms of recurrence ( $P \leq 0.05$ ).

The mean scores of self-efficacy before and after the intervention were compared and a significant difference was obtained using paired *t*-test ( $P \leq 0.05$ ) [Table 1].

## DISCUSSION

The findings of the study showed that implementing educational program based on Bandura's theory had a significant effect on successful quitting. These findings are in agreement with the findings of a study regarding relapse prevention in primary care.<sup>[14]</sup> The findings of this study revealed although pharmaceutical treatment is the first choice for addiction, clients need nonpharmaceutical interventions as well as detoxification to experience stable and effective behavior.

The aim of Bandura's cognitive social theory is change of learned behavior or action which is called abnormal by the community.<sup>[20]</sup> The study results showed 23.4% of the test group and 56.7% of the control group had quitting failure, resulting in recurrence. These findings are in agreement with those of Tatari and colleagues (2007) and Green Stein (1996). Overall, the recurrence rate was 61.4% during the first year, of which 50.6% occurred during the first 4 months.<sup>[12,21]</sup>

In another study, the recurrence rate was reported as 69%, which is more than that of the present study.<sup>[22]</sup> Other studies showed that 80% of addicted clients had recurrence after 6 months. As to the findings of these studies, when the clearance period reached more than 1 month, the chance of recurrence decreased to 98%.<sup>[15,21]</sup> It seems a regular program based on biological, cognitive, social, and behavioral factors could be significantly effective on decreasing recurrence. As this theory focuses on increasing

**Table 1: Mean and standard deviation of clients' self-efficacy score before and after intervention in the test and control groups**

	Test group	Control group
Self-efficacy score	Mean±SD	Mean±SD
Before intervention	65.3±15.1	71.64±14.37
After intervention	84.9±15.6	77.5±14.97
Result	<i>t</i> = -5.89	<i>t</i> = -1.634
Paired <i>t</i> test	<i>P</i> = 0.000	<i>P</i> = 0.111

SD: Standard deviation

the knowledge and teaching skills such as communication, decision-making, problem-solving, and self-projection, it can lead to positive behavioral change.

Running the educational program based on Bandura's theory has had a significant effect on clients' self-efficacy. It increased up to 19.64% in the test group and 5.93% in the control group. Although self-efficacy level showed increase in both the groups, which could be as a result of current clinical programs such as medical treatment, consultation, etc., this change was not significant in the control group. It is apparent that applying cognitive social theory could increase the self-efficacy level in the test group. In a study, it was shown that higher self-sufficient people could quit cigarette smoking more successfully, because they were confident of themselves for quitting smoking.<sup>[23]</sup> The low self-sufficient people did not even try to quit.<sup>[24]</sup>

## CONCLUSION

Findings reveal that as both cigarette smoking and addiction are behavioral disorders, high self-efficacy could lead to increased quitting and prevention of recurrence of these disorders. Therefore, the hypothesis of positive effect of Bandour's cognitive social theory on addiction quitting in clients referred to Imam Reza Hospital addiction quitting clinic is proved.

Since the harm reduction approach to substance abuse focuses on promoting health and preventing disease, and nurses are well prepared for this purpose, they can have an effective role in the addiction quitting process.<sup>[10]</sup>

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