Abstract

**Objective:** The aim of this study is to investigate the effect of family-based training on attitude to drugs and irrational beliefs of female high school students with addicted parents in Sabzevar in 2016. **Method:** This research employed a quasi-experimental research design along with pretest-posttest and control group. The statistical population of this study included female high school students from Sabzevar with a parent with substance use disorder where 36 ones were selected through random cluster sampling method and were randomly divided into control and experimental groups. The experimental group received family-based training program for nine sessions and the control group received no training. The required data were collected through Attitude toward Drugs Questionnaire and Irrational Beliefs Scale. **Results:** The results of covariance analysis showed that family-based training had a significant positive effect on attitude to drugs components of female students with addicted parent (p<0.05); however, this educational plan only had a significant positive impact on demand for approval, blame proneness, and dependency (p<0.05) and there was no effect on other components of irrational beliefs (p>0.05). **Conclusion:** Since family-based training produced negative attitudes toward drugs and changes in some components of irrational beliefs among the students, it seems necessary that these training programs should receive the attention of high schools and universities.

**Keywords:** family-based training, attitude, drugs, addiction, irrational beliefs

The Impact of Family-Based Training on Attitude to Drugs and Irrational Beliefs among Female High School Students of Sabzevar with Addicted Parents

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Research on Addiction Quarterly Journal of Drug Abuse

Presidency of the I. R. of Iran
Drug Control Headquarters
Department for Research and Education

Vol. 12, No. 47, Autumn 2018
http://www.etiadpajohi.ir/
Introduction
In spite of the long history of drug-related disorders, this phenomenon has now become such a serious global problem that affects the social, psychological, economic, personal, family, and political factors (Vossius, Testad, Skjaeveland & Nesvag, 2013), and seriously threatens adolescents' mental health (Kumpfer, 2014). Therefore, the impact of drug abuse disorders on family and its members is worth paying attention. Each family and each member of the family are uniquely affected by the addicted person in the family because of problems, such as non-satisfaction of developmental needs, attachment disorders, economic problems, legal problems, emotional distress, and, sometimes, violence against the addict and, thereby, the risk substance abuse in these families is higher than that in other families (Zimic & Jakic, 2012). Substance abuse disorders arise from the interaction of genetic and environmental factors, such as developmental abnormalities and poor psychosocial status (Haber et al., 2010) and are associated with many cognitive, psychological, and welfare problems (Lombard, Pullen & Swabey, 2017). Substance abuse is referred to as any legal, illegal, sanitary or prescriptive consumption of psychoactive drugs (Gupta, Sarpal, Kumar, Kaur & Arora, 2013), and is initiated under the influence of improper behavioral patterns and negative emotions that originate from the family (Lander, Howsare & Byrne, 2013). Substance abuse not only afflicts the consumers but also imposes a great burden on the family and society (Daley & Marlatt, 2005), disrupts family life, and reduces the family members’ vitality and quality of life (Garland, Gaylord, Boettiger & Howard, 2010).

Usually, addicted parents do not enjoy appropriate parenting skills. In such families, poor parental supervision, the conflict between parents, the poor quality of parent-child interactions, low intimacy, and unstable discipline are prevalent (Arria, Mericle, Meyers, & Winters, 2012). Children who live with an addicted mother suffer severe psychological trauma and many complicated problems (Lombard, Pullen & Swabey, 2017); and the longer they live with an addicted parent, the more they are likely to suffer from physical illness (malnutrition) and neurodegenerative disorders (Nygård, Moe, Slinning & Walhovd, 2015). Studies have shown that the probability of addiction in children with addicted parents is 2 to 9 times much more than that in children with healthy families (Kumpfer, 2014). Adolescent substance abuse is also affected by inappropriate family functioning and problems caused by other systems, such as school, peers, and extracurricular activities (Choate, 2015).

The factors involved in the onset, continuation, and relapse of substance abuse disorder are diverse and include various personal, familial, and social factors. Pre-addictive backgrounds in addicts (personality traits, family relationships, lifestyle, beliefs, and opinions) are significantly different from those in healthy ones (Heyman, 2011). One of the protective and risk factors of substance abuse is individuals' attitude that is considered as one of the most important factors associated with the consumption and/or non-consumption of
drugs (Cooper, Frone, Russel, & Muder, 2007). Experts perceive attitudes as the beliefs that affect people's thinking, feelings, and behavior (Baron & Byrne, 1977). In other words, attitude refers to the individual's beliefs about the outcome and product of everything s/he intends to do and the value s/he assigns to the obtained outcome (Bagheri, & Bahrami Ehsan, 2013). One of the important and influential factors in the attitude towards addiction is the presence of addicted parents in the family who provide grounds for such an attitude due to their poor child-rearing skills, poor supervision of children's behavior, high conflicts, and unstable discipline (Arria et al., 2012). However, strong family ties, monitoring children's behavior, effective communication, and negotiation about family expectations and positive values are among the important protective factors against addiction. McCuller, Sussman, Dent, & Teran (2001) showed that individuals' intent to substance abuse was influenced by their attitude toward substance abuse at least during the initial period of consumption. Horigian et al. (2016) suggested that parents' substance abuse causes their children to become addicted. Tonato (2008) and Kumpfer (2014) also found that one may take refuge in substance abuse to escape stressful situations (rule breaking, high-risk behaviors, academic failure) and to temporarily relieve these pressures.

In the field of psychology, various theories have suggested different causes for addiction. While behavioral theories (Delgadillo et al., 2015) have emphasized the environment and psychodynamics has emphasized conflicts, cognitive theories focus on inefficient thoughts and irrational beliefs. According to cognitive theories, irrational beliefs are often presented automatically, unconsciously, and permanently (Bahremand, Saeidi, & Komasi, 2015); and play an important role in the growth and persistence of substance abuse (Dastjani Farahani, Rahmani, & Tizdast, 2013). Individuals' knowledge and beliefs have a significant effect on the incidence and progression of this disorder and its stages, including symptoms, causes, and behavioral changes (Bahremand et al., 2015). According to Woods (1993; as cited in Fayyaz, & Kiani, 2008), irrational beliefs include one's expectation to receive others' confirmation, excessive expectations of the self, readiness to blame, desperate reaction to failure, emotional irresponsibility, high worries along with anxiety, problem avoidance, dependency, helplessness to change, and perfectionism. The affective level provides one with some clues to understand his/her mistakes at the cognitive level. Therefore, one will hold healthy feelings when s/he has healthy beliefs. Healthy behaviors and healthy feelings are thought to create the right problem-solving approaches (Rovira, 2017). In this regard, various approaches to the prevention and treatment of substance abuse disorder have been proposed (Dolan, Martin, & Rohsenow, 2008). Cognitivism is one of the most important approaches among these ones. In this approach, attempts are made to change positive attitudes and beliefs towards drugs and to strengthen and consolidate the negative attitudes towards drugs. The basic assumption of the cognitive approach is that dysfunctional attitudes are involved in how one interprets and
evaluates the reality; in addition, that the behavioral responses that derive from specific interpretations contribute to the continuation of substance abuse disorder (Goodarzi, 2001). Based on this approach, individuals' interpretation from specific situations affects their feelings, motivations, and their actions. These interpretations are often shaped by the beliefs that are activated in these situations and result in the desire for consumption. These beliefs are the ones that are activated under certain predicted conditions and are likely to increase substance use (Beck & Emery, 1985; as cited in Ghorbani, Kazemi, & Ghorbani, 2011). Cognitive-affective therapy encourages people to look for the thoughts that appear automatically to observe what they state, and to understand that these ways of thinking have been constructed from irrational beliefs that can be modified (Ellis, 2005). Studies have shown that cognitive therapy can have a positive effect on mitigating the components of irrational beliefs, such as the need for approval and support from others, excessive expectation from the self, reaction to failure, over-concern along with anxiety about the future, and perfectionism (Solberg, Nysether & Steinsb, 2012; Loue, 2008). Faggiano et al. (2010) argue that group training and life skills can be effective in preventing addiction and recovering from it as well as in family functioning and interpersonal relationships. Since addiction is a widespread issue, and only training of an addicted person does not seem adequate; it is necessary to pay attention to the addicted person's family. In other words, instead of using the individual and group methods that focus mainly on the addicted individual(s), a family-based intervention approach that also assigns attention to the members of the addicted family should be used. Research has shown that family-based training programs are superior to individual and group therapy and prevention programs. The research findings reported by Dimitropoulos et al. (2015), Swenne, Parling & Ros (2017), and Rienecke (2017) showed that a family-based intervention program can have a positive effect on reducing eating disorder in adolescent girls. Habibi, Nikbakht Nasrabadi, Shabani Hamedan, & Saleh Moghadam (2016) indicated that family-based training program has a positive effect on improving self-efficacy and self-esteem, and on decreasing relapse rates among addicts. Kumpfer's (2014) findings suggest that it is possible to prevent adolescents' addiction and failure by means of family-based training programs. Na'emi (2015) investigated the effectiveness of family-based training in the mental health and the resiliency of women with addicted husbands and showed that family-based training has a positive effect on increasing the mental health and resiliency rates of women with addicted spouses; therefore, these women's participation in family-based training courses can lead to increased mental health and resiliency in them. Na'emi, & Tajabadi (2017) found that group training had a positive effect on the components of attitudes toward addiction among female students with addicted parents.

Due to the importance and status of adolescent girls in the society and their role in sustainable development of the country as well as the growth of addiction
and the lowered age of substance abuse in Iran and the serious risk that threatens female students with addicted parents, it is necessary to study the impact of training interventions. Therefore, the present research attempts to respond to the following question: Is family-based training effective in attitudes towards substance abuse and irrational beliefs among female students with addicted parents in Sabzevar?

Method
Population, sample, and sampling method
This research employed a quasi-experimental research design along with pretest-posttest and control group. The statistical population of this study included female high school students from Sabzevar with a parent with substance use disorder in 2016. The entry criteria included participants' willingness to participate in the study and having at least one addicted parent. By addicted parent in this research, we mean the students' parents who had physical and psychological dependence on drugs, stimulants, and hallucinogens. These persons were identified through the school authorities and the interview that the researcher had with them. Ethical considerations, in particular, subjects' consent, voluntary participation, and confidentiality of information were observed and emphasized by researchers. Then, multistage random cluster sampling method was used wherein two schools were randomly selected from girls' schools in Sabzevar. Then, the number of students with addicted parents was identified with the help of school officials where it amounted to 36 students. They were randomly divided into two groups and coding was randomly assigned to an experimental group (n = 18). After the determination of the groups and before the intervention, the two groups were pretested and, then, the experimental group (students with their mothers) received family-based training program for ten 90-minute sessions (one session per week) and the second group was placed on the waiting list to participate in the next round. The family-based training program in this study was an integrated program of cognitive-behavioral methods (Frey, translated by Mohammadi and Farnam, 2005) and life skills training (standard training package by Mohammadkhani and Nouri, 2004). The family-based training program was conducted at the site of one of the schools in 2016 by a female mentor who was an M.A. holder of psychology. The process of each session included reviewing the tasks of the previous session, direct teaching in the form of lectures, group discussions, brainstorming, and wrap-up, which were presented for female students with addicted parents and their mothers. After the end of the training program, both groups took the post-test. The summary of the training structure is as follows:

First session: Establishing initial relationship, expressing goals, discussing method of work, and examining how to identify addiction; Second session: Examining how to identify addiction, help-seeking, misconceptions; Third session: Addiction and community, disease and dependence; Fourth session:
Appropriate confrontation with addiction and problem-solving skills training; Fifth session: Perfectionism, emotional control, and desire for drug use; Sixth session: Mindfulness, self-expectations, and expectations of others; Seventh session: Empathy training; Eighth session: Response to disappointment and blame, and reliance on others; Ninth session: Accountability training; Tenth session: Decision-making training, replacement of logical beliefs with irrational beliefs, review of feedback, and closing ceremony.

**Instruments**

1. Attitude toward Drugs Questionnaire: This questionnaire was developed by Delavar, Alizadeh, & Rezaei (2004). It consists of 40 items and three components (effects of drug use: 21 items; consumption or desire to use drugs: 10 items, and the dangers of drug use: 9 items). Each item is scored based on a 5-point Likert scale from strongly agree (5) to strongly disagree (1). The scores range from 40 to 200, which means that the higher one's score on this scale, the higher his/her positive attitude toward substance abuse. The construct validity of this test was obtained equal to 0.938 and retest reliability coefficients were obtained equal to 0.94, 0.85, 0.86, and 0.85 for the total test, the effects of drug use, consumption or desire to use drugs: 10 items, and the dangers of drug use, respectively (Delavar et al., 2004). In this study, Cronbach's alpha coefficient for the whole scale was obtained 0.86 and it was reported equal to 0.79, 0.81, and 0.86 for the above components, respectively.

2. Irrational Believes Test (IBT): This questionnaire was constructed based on Ellis's (1970) theory to evaluate dysfunctional thoughts and it assesses ten questions pertaining to irrational thoughts. It contains 100 questions where each item measures an irrational thought. Examples of statements that are addressed in this questionnaire are: "It is important for me to be approved by others" or "I avoid doing things that I cannot do well." The ten sub-scales of this test include demand for approval, high self-expectation, blame proneness, frustration reactivity, emotional irresponsibility, anxious overconcern, problem avoidance, dependency, helplessness for change, and perfectionism. The retest reliability coefficients of the ten above sub-scales have been obtained from 0.66 to 0.80, and the average reliability value of all sub-scales has been obtained 0.74. Moreover, the validity of the test was confirmed by means of face validity and congruent validity methods where the correlation coefficient of this test with Beck's Depression Test was obtained equal to 0.82 (Alizadeh Sahraei et al., 2010). Cronbach's alpha for this test was obtained equal to 0.82 (Rashidi, Ghodsi, & Shafi Abadi, 2010) and was obtained 0.78 in this study.

**Results**

From among the 36 female students in this study, 27.8% of them were first graders, 33.3% of them were third graders, and 38.9% of them were fourth...
graders. The mean (standard deviation) of their age was 11.6 (1.09) years. The descriptive statistics of the research variables are presented in Table 1.

Table 1: Descriptive Statistics of Attitudes toward Drug Use and Irrational Beliefs for each Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control group</th>
<th>Experimental group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Effect of drug use</td>
<td>64</td>
<td>2.3</td>
</tr>
<tr>
<td>Drug use</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>Dangers of drug use</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>Total attitude</td>
<td>102</td>
<td>29</td>
</tr>
<tr>
<td>Demand for approval</td>
<td>32.44</td>
<td>5.19</td>
</tr>
<tr>
<td>High self-expectation</td>
<td>35.83</td>
<td>3.88</td>
</tr>
<tr>
<td>Blame proneness</td>
<td>32.39</td>
<td>5.57</td>
</tr>
<tr>
<td>Frustration reactivity</td>
<td>33.55</td>
<td>4.70</td>
</tr>
<tr>
<td>Emotional irresponsibility</td>
<td>31.89</td>
<td>7.30</td>
</tr>
<tr>
<td>Anxious overconcern</td>
<td>34.28</td>
<td>5.76</td>
</tr>
<tr>
<td>Problem avoidance</td>
<td>32.33</td>
<td>6.23</td>
</tr>
<tr>
<td>Dependency</td>
<td>34.83</td>
<td>6.22</td>
</tr>
<tr>
<td>Helplessness for change</td>
<td>32.05</td>
<td>5.52</td>
</tr>
<tr>
<td>Perfectionism</td>
<td>31.5</td>
<td>4.68</td>
</tr>
<tr>
<td>Total irrational thoughts</td>
<td>324</td>
<td>37</td>
</tr>
</tbody>
</table>

Kolmogorov-Smirnov test was used to ensure the normal distribution of the variables. The results of this test showed the normal distribution of the variables of attitudes towards drug use, irrational beliefs, and its components (p > 0.05). To investigate the homogeneity of variance in the variables, Levene's test was run. The results were indicative of the homogeneity of variances (p > 0.05). In the same way, the results of the homogeneity test of regression slopes pertaining to all variables were not significant (p > 0.05), which indicated the sameness of the relationship between the dependent variable and pretest for both groups. Therefore, multivariate covariance analysis was run and the results showed a significant difference between the two groups in the linear combination of the variables (P < 0.001, F=14.602, Wilks's lambda=0.82). To examine the patterns of difference, univariate covariance analysis was used, as presented in Table 2.
Table 3: The Results of Univariate Covariance Analysis Representing the Impact of Family-Based Training on Components of Attitude to Drugs and Irrational Beliefs

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Eta squared</th>
<th>Test power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect of drug use</td>
<td>1523.40</td>
<td>40.20</td>
<td>0.0005</td>
<td>0.38</td>
<td>1</td>
</tr>
<tr>
<td>Drug use</td>
<td>326.80</td>
<td>28.06</td>
<td>0.0005</td>
<td>0.46</td>
<td>0.99</td>
</tr>
<tr>
<td>Dangers of drug use</td>
<td>8.099</td>
<td>4.18</td>
<td>0.049</td>
<td>0.11</td>
<td>0.51</td>
</tr>
<tr>
<td>Demand for approval</td>
<td>27.85</td>
<td>1.49</td>
<td>0.0005</td>
<td>0.54</td>
<td>0.91</td>
</tr>
<tr>
<td>High self- Expectation</td>
<td>48.82</td>
<td>1.55</td>
<td>0.22</td>
<td>-</td>
<td>0.23</td>
</tr>
<tr>
<td>Blame proneness</td>
<td>4819.2</td>
<td>23.4</td>
<td>0.0005</td>
<td>0.45</td>
<td>0.97</td>
</tr>
<tr>
<td>Frustration reactivity</td>
<td>35.03</td>
<td>1.37</td>
<td>0.25</td>
<td>-</td>
<td>0.21</td>
</tr>
<tr>
<td>Emotional irresponsibility</td>
<td>16.02</td>
<td>0.41</td>
<td>0.52</td>
<td>-</td>
<td>0.10</td>
</tr>
<tr>
<td>Anxious overconcern</td>
<td>1.86</td>
<td>0.04</td>
<td>0.84</td>
<td>-</td>
<td>0.05</td>
</tr>
<tr>
<td>Problem avoidance</td>
<td>15.88</td>
<td>0.89</td>
<td>0.35</td>
<td>-</td>
<td>0.15</td>
</tr>
<tr>
<td>Dependency</td>
<td>426.80</td>
<td>24.06</td>
<td>0.0005</td>
<td>0.42</td>
<td>0.98</td>
</tr>
<tr>
<td>Helplessness for change</td>
<td>25.51</td>
<td>0.74</td>
<td>0.40</td>
<td>-</td>
<td>0.13</td>
</tr>
<tr>
<td>Perfectionism</td>
<td>2.95</td>
<td>0.15</td>
<td>0.70</td>
<td>-</td>
<td>0.07</td>
</tr>
</tbody>
</table>

As it has been shown in Table 3, family-based training has been effective in such components as the effect of drug use, drug use, dangers of drug use, demand for approval, blame proneness, and dependency.

Discussion and Conclusion

The aim of this study was to investigate the effect of family-based training on attitude toward drug use and irrational beliefs among female high school students of Sabzevar with an addicted parent. The results showed that family-based training has a positive effect on attitude toward drugs and all its components. This result is in line with the results of studies conducted by Heyman (2011), Kumpfer (2014), Swenne et al. (2017), Habibi et al. (2016), Hoorijian et al. (2016), and Na’emi (2015).

Substance abuse tendency is a phenomenon that is affected by various factors, including family and cultural factors (Rather, Bashir, Sheikh, Amin, & Zahgeer, 2013). Those children who are in interaction with drug abusers and do not benefit from preventive intervention programs may experience more behavioral and emotional problems and be more at risk of substance abuse (Vilela, Silva, Grandi, & Rocha, 2016). Because family plays an important role in the behavioral health of adolescents, the family-based problems can contribute to the incidence of such trauma as substance abuse, delinquency, sexually transmitted diseases, and HIV. These problems are more severely observed in addicted families. The children of families with addicted parents suffer from depression, high stress, and parental inefficiency. In such a situation, parents spend less time on children and these problems can increase the risk of tendency towards substance abuse in adolescents (Buehler & Gerard, 2013), whereas the selection of appropriate parenting styles by parents can act as a shield that can protect children from behavioral problems, mental disorders, and mistreatment.
In addition, those who have experienced more difficulties and hardships in childhood are more likely to get involved with substance abuse. In the meantime, those whose parents are addicted and who have more access to drugs find themselves in a more dangerous situation (Benjet, Borges, Medina-Mora, & Mendez, 2013).

Another research finding was that family-based training had a positive impact on three components, out of the ten components of irrational beliefs, including demand for approval, blame proneness, and dependency. This finding is not generally consistent with the research findings reported by Dimitropoulos et al. (2015), Rienecke (2017), Rovira (2017), and Swenne et al. (2017) where the studies were performed on female adolescents. The reason for this inconsistency cannot be attributed to gender because Rovira's findings (2017) suggest that there is no difference between male and female participants, and the research done by Dimitropoulos et al. (2015) and Swenne et al. (2017) has been conducted on female adolescents. Therefore, it can be attributed to the cultural and social differences as well as the addicted parent's pressure for not participating in this program, and the short duration of the training program; and gender is not involved. In this regard, it can be argued that addicted people hold more dysfunctional attitudes and irrational beliefs than non-addicts (Tonato, 2008). Also, families with an addicted parent do not want their children to receive individual or group intervention on awareness raising and addiction prevention (KelleyD’Lima, Henson, & Cotton, 2014) and, as a result, their children show more resistance and less willingness to participate actively in interventional programs. According to the cognitive theories, dysfunctional thoughts and irrational beliefs influence the way in which one interprets and evaluates the reality. Also, behavioral responses that derive from specific interpretations have an impact on the continuity of substance abuse (Goodarzi, 2001). Ideas such as "I cannot tolerate anxiety" can provoke the idea that "I have to take drugs to soothe myself" in such a way that Ellis (2005) states addicted people's way of thinking can lead to their tendency to repeated drug use. Therefore, students who are supported by their parents and their friends who participate in a family-based training programs reconsider their beliefs about distancing themselves from drug use and holding negative attitudes toward it. Obviously, if the family's awareness of substance abuse and its adverse consequences increases, it can be expected that irrational tendencies to and beliefs about drugs will also be modified in their children, and this is the goal that the family-based training pursues. This is, indeed, the same goal that Piko & Kovács (2010) have also referred to as they suggested that family is one of the most important factors influencing addiction prevention or tendency in children. In this regard, Kumpfer& Hansen (2014) also stated that increased awareness, cognitive skills development, increased attachment and love, improved discipline, communication skills, and reduced risk behaviors (such as addiction, delinquency, academic failure, and unintended pregnancy) can
contribute to the modification of children's positive beliefs towards narcotic drugs.

Generally, family-based training leads to increased mindfulness, accountability, provision of emotional needs, and reduced family disputes; contributes to the tackling of irrational automatic thoughts; creates a ground for modifying positive attitudes toward addiction; and reduces irrational beliefs. Therefore, the mental well-being of children with addicted parents will be improved. This important task is on the shoulder of social institutions, such as educational organizations and welfare institutions to address this social dilemma by means of family-based training. This study was limited to female high school students with addicted parents in Sabzevar. Therefore, it is necessary to exercise caution in generalizing the results to other populations in the long run. It is suggested that the next research examine family-based training on samples of male students along with their parents (especially their fathers), other levels of education, and positive psychological variables (self-compassion, resiliency, hardiness, etc.) to improve the individuals' ability in reducing the rate of addiction. Psychologists, counselors, social workers, and other responsible entities and organizations can also use the findings of this research to counteract the tendency towards addiction.

Reference


