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Investigating the Effect of Emotional Intelligence on the Addiction Relapse after Quitting

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Abstract

Background: Addiction is multi-dimensional medical problem and psychologic defects have a major role on its establishment. This study was designed to determine the effect of emotional quotient (EQ) on the rate of addiction relapse after quitting.
Methods: This was a prospective cross-sectional study on 22 to 51 year old subjects who were being treated at chemical dependency rehabilitation centers in Mashhad, Iran, during December 2012 to May 2013. For assessment of EQ, the Persian version of Bar-On EQ questionnaire was employed at first visit of each patient. During the rehabilitation therapy, the subjects were visited monthly. The data of patients were collected during the first 6 months post-quitting.
Results: One-hundred sixty subjects were studied which 87% of them were men. Mean (SD) score of patients' EQ was 11.9 (2.8). The mean number of addiction relapses was 2.1 (2.8). Data analysis showed that there was a significant inverse correlation between EQ score and the number of relapses (r = -0.82, P = 0.05). In addition, it was found that the EQ score had a direct significant relationship with age (r = 0.33, P = 0.05). No significant correlation between type of abused substance and the number of relapses was found.
Conclusion: EQ has a positive impact on preventing addiction relapse. Increasing EQ through educational programs can be used as a preventive measure for treating addict persons.

Keywords: Addictive Behavior; Emotional Intelligence; Substance-Related Disorders

INTRODUCTION

Nowadays, addiction to illicit drugs is considered as one of the greatest harms to the human communities. According to a report by World Health Organization (WHO), a large number of people lose their lives annually due to addiction, and great expenses are imposed on the society (1). Researchers have always looked for the fundamental causes of and solutions to this problem. The impact of emotional intelligence or emotional quotient (EQ) on this problem has not been well studied. Environmental, social and psychological factors are also influential in orientation or disorientation toward abusing drugs and other substances (2).

One of the most remarkable causes is problem in emotional management (3). It seems that most drug addicts possess hidden defects in their social skills, and do not have good relations with their peers (4). The other possible causes of orienting toward drugs are defects in problem solving, stress-management, and prevention from dangerous and impulsive behaviors (3). In a study, Lutz and Kieffer have demonstrated that some factors including social skills, drug receptors of the brain and cognitive function can have strong effects on people's relapse into addiction (5). These components are included in the subcategories of EQ and are capable of leading a person to a healthier life (6).

EQ refers to a set of social and life skills on which the standard psychological life is based on. EQ is mainly an acquired characteristic and can be increased and learnt through teaching. The aforementioned capacity inspired researchers to take advantage of EQ in reducing social harms (7). As it has been illustrated by various studies, harmful conditions for people with low EQ, result in weakness in decision-making, especially in personal and social issues (8). The findings of another study expressed that EQ is correlated with mental health, and increase in social skills can lead to a decrease in the tendency toward immature behaviors (9). Researches in the field of drug abuse have indicated that low self-esteem, inability to emotion expression and lack of communicative skills are correlated with driving a person to drug abuse (10). In a study, Li and Sinha found that abuse of psycho-stimulant drugs is correlated with stress processing and regulation (11). Ruetsch et al. concluded that drug addiction at primary stages is correlated with inability to manage relationship with parents and peers (12).

Recurrent craving towards drugs is probable to be formed after detoxification; and therefore, it has been recommended to find appropriate treatments to prevent such craving. In

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this regard, psychological and educational services can be helpful. These days, the impact of EQ on addiction relapse has been received researchers' attention. Theoretically, EQ and its components are means to increase compatibility. EQ is a source of emotional managements as well as, adopting a proper defense mechanism (13). In a study, it was found that the components of EQ, including evaluating emotions, taking advantage of them, and the total EQ score are strongly correlated to addiction; i.e., the higher person's EQ is, the lower is the risk of addiction. Therefore, the construct of EQ plays a key role on becoming addicted or quitting drugs (14).

This study was designed to determine the effect of EQ on the rate of addiction relapse after quitting.

METHODS

Study design

This was a prospective cross-sectional study on subjects who were being treated at chemical dependency rehabilitation centers in Mashhad, Iran, during December 2012 to May 2013. The subjects included all opioid, amphetamine or alcohol dependents aged between 22 and 51 years.

Data collection

Demographic features including age, gender and type of abused drug were collected from each patient. For assessment of EQ, the Persian version of Bar-On EQ questionnaire was employed at first visit of each patient. The reliability of the questions in the above-mentioned version was previously examined with Cronbach's alpha (0.93) by Samouei et al. in 2002 (15).

During the rehabilitation therapy, the subjects were visited monthly and were inquired about the number of their relapses. The data of each month was recorded in a checklist and after 6 months (post-admission to rehabilitation centers), all the relapses were calculated and noted down.

Ethics and Data analysis

All the subjects gave informed written consents. The patients' information was kept confidential.

Using the Statistical Package for the Social Sciences 16

Table 1. Characteristics of patients (n = 160)

Variables	Results
Demographic features	
Age, mean (SD)	36.7 (7.5)
Male gender, n (%)	139 (87)
Type of abused substances	
Opium, n (%)	94 (58.8)
Heroin, n (%)	56 (35)
Alcohol, n (%)	6 (3.7)
Amphetamine, n (%)	4 (2.5)
EQ, mean (SD)	11.9 (2.8)
Frequency of relapses*, mean (SD)	2.1 (2.8)

* During the first 6 months post-quitting

(SPSS Inc., Chicago, IL), the data were analyzed. Pearson correlation coefficient and one-way ANOVA tests were used to analyze the hypotheses.

RESULTS

During the study period, 160 subjects were studied which 87% of them were men. Mean (standard deviation (SD)) age of patients was 36.7 (7.5) years (Table 1). The most common abused substance was raw opium (58.8%) followed by heroin (35%). Mean (SD) score of patients' EQ based on Bar-On EQ questionnaire was 11.9 (2.8) and their mean (SD) number of addiction relapses during the first six months post-quitting was 2.1 (2.8).

Table 2. Comparison of mean EQ score according to patients' characteristics

Characteristic	No. of subjects	EQ, mean (SD)	P value[*]
Frequency of relapse			
None	70	13.9 (1.6)	
1-3	53	11.7 (1.6)	0.72
4-6	17	9.7 (1.5)	
> 7	20	7.2 (1.8)	
Age group (year)			
22-31	60	11.0 (2.9)	
32-41	49	11.7 (2.4)	0.21
42-51	51	13.1 (2.6)	
Type of abused substance			
Raw opium	94	12.5 (2.5)	
Heroin crystal	56	11.1 (2.6)	0.003
Amphetamine	4	10.5 (4.6)	
Alcohol	6	10.3 (4.9)	

* One-way ANOVA test was used

Data analysis showed that there was a significant inverse correlation between EQ score and the number of relapses (r = -0.82, P = 0.05). In addition, it was found that the EQ score had a direct significant relationship with age (r = 0.33, P = 0.05). The frequency of relapses was categorized into 4 groups including none, 1-3 relapses, 4-6 relapses and over 7 relapses. Through univariate analysis, one-way ANOVA test showed no significant difference of mean EQ score among relapse frequency groups (Table 2). However, post-hoc Scheffe test revealed a significant correlation between number of relapses and EQ score (P < 0.001) (Table 3). Also, the patients' age was categorized into 3 groups including 22-31, 32-41 and 42-51 years old. Accordingly, the mean EQ scores among these age-groups were not significantly different (Table 2), while through post-hoc Scheffe test a significant correlation between age and EQ score was found (P < 0.001) (Table 4).

In addition, it was found that there is a significant difference of mean EQ score among abusers of different

Table 3. Post-hoc Scheffe test on mean EQ score among relapse frequency groups

I	J	Mean difference (I-J)	Standard error	P value
No relapse	1-3 relapses	2.3	0.3	< 0.001
	4-6 relapses	4.3	0.4	
	> 7 relapses	6.8	0.4	
1-3 relapses	No relapse	- 2.3	0.3	< 0.001
	4-6 relapses	1.9	0.4	
	> 7 relapses	4.5	0.4	
4-6 relapses	No relapse	- 4.2	0.4	< 0.001
	1-3 relapses	-1.9	0.4	
	> 7 relapses	2.6	0.5	
> 7 relapses	No relapse	- 6.8	0.4	< 0.001
	1-3 relapses	- 4.5	0.4	
	4-6 relapses	- 2.6	0.5	

Table 4. Post-hoc Scheffe test on mean EQ score among age-groups

I	J	Mean difference (I-J)	Standard error	P value
42-51	22-31	2.9	0.5	< 0.001
	32-41	1.4	0.5	

types of substances (P = 0.003), as alcohol abusers had the lowest (mean (SD) = 10.3 (4.9)) and opioid abusers had the highest (mean (SD) = 12.5 (2.5)) EQ scores (Table 2). Nevertheless, no significant correlation between type of abused substance and the number of relapses was found (P = 0.14).

DISCUSSION

In this study the effect of EQ on the number of addiction relapses after quitting was investigated. We found that higher EQ is correlated to lower number of relapses in the first 6 month post-quitting. Similarly, Trinidad and Johnson showed that adolescents with lower EQ have the higher tendency to early tobacco and alcohol use (16). Correspondingly, Khanmohammadi et al. revealed low EQ as a predictor of tendency towards addiction (10,17). Nadalinezhad and Abbasalipour, concluded that low EQ is related to the inclination towards smoking; besides, acquiring certain skills to promote EQ would positively lead to the decrease in the youth's tendency to abusing drugs (18).

In this study, we also showed that age is positively correlated with EQ, as subjects with older ages had greater EQ scores. Van Rooy et al. found similar results (19). The role of increased self-awareness in older ages on improvement of EQ has been marked in several assumptions.

One of the main reasons of tendency towards drug abuse has been shown to be peer group pressure. A person with

higher EQ can better resist the pressure (20). In addition, Albein-Urios showed that difficulty in emotional management can be a cause of tendency towards addiction (21). In a study, Ruiz-Aranda et al. tried to develop adolescents' EQ by educational program based on the EQ ability model (9). They showed that EQ training can bring about positive stable changes in the emotional performance, as well as controlling the behavior. It can be accordingly inferred that teaching how to handle emotions can be helpful in managing behavior (13). Correspondingly, Stappenbeck and Fromme showed that teaching emotional control results in decrease in alcohol consumption and negative emotions (22). Therefore, through teaching EQ components, people's capacity to resist drug abuse can be enhanced (23).

LIMITATIONS

In this study alcohol and amphetamine abusers were in minority compared to opioid abusers. This can limit the value of analyses between type of abused substance and other variables. The accuracy of the data presented in this study was relied on patients self-report of relapse. The frequency of relapse might be higher as some patients may be afraid of revealing the exact situation. This can expose the study to bias in data collection.

CONCLUSION

EQ has a positive impact on preventing addiction relapse. Increasing EQ through educational programs can be used as

a preventive measure for treating addict persons. These findings can assist psychiatrists and counselors at chemical dependency rehabs to discover more appropriate methods for helping addicts to quit drugs. In addition, they can be applied to primary and secondary preventions of drug abuse.

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