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ORIGINAL ARTICLE

Medicine Science International Medical Journal

Medicine Science 2018;7(2):260-4

Body image, self-esteem and social anxiety levels in individuals with alcohol and substance abuse

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Received 09 November 2017; Accepted 28 November 2017
Available online 11.02.2018 with doi: 10.5455/medscience.2017.06.8740

Abstract

Alcohol and substance addiction is a growing problem all over the world. Also, studies on understanding the causes of addiction as well as the treatment continue. Alcohol and substance addiction have genetic, environmental and psychological causes. The leading psychological cause is anxiety disorders. There are only a few studies in the literature regarding the body images, self-esteem and social anxiety levels in individuals diagnosed with alcohol and substance abuse. The rates obtained from these studies vary. This research is designed to determine the ratio in Turkish society. Thirty-five individuals hospitalized in NPİstanbul Brain Hospital with the diagnosis of alcohol and substance addiction and thirty-five healthy subjects without any addiction were compared in terms of body image, self-esteem and social anxiety levels. Self-esteem and social anxiety levels were found to be statistically significantly high in the alcohol and substance addiction group. There was no statistically significant difference between the addiction and control groups in terms of body image level. These results support that low self-esteem and high social anxiety may be among the factors predisposing to alcohol and substance addiction.

Keywords: Alcohol addiction, substance addiction, body Image, self-esteem, social anxiety

Introduction

Alcohol and substance addiction is a major health problem all over the world. The number of addicts is increasing day by day. However, there are differences in frequency among different societies [1]. Genetic, environmental and psychological factors underlie these differences [2]. Alcohol-substance use rate is high among males, those who do not work, those who have poor success, those who have no religious beliefs, those who have divorced parents, those who have suicide attempt history [3].

The comorbidity of alcohol and substance abuse disorders and anxiety disorders is very high [4-7]. The cause-effect relationship between anxiety disorders and addiction is not clearly distinguishable. Anxiety disorders and social anxiety are shown as one of the factors that facilitates and initiates alcohol and substance use [1,8]. Both issues need to be taken into consideration in treatment [9].

In alcohol and substance addicts, self-esteem is low [10]. In a study conducted in our country, a strong correlation was found between self-esteem and healthy lifestyle behavior. Self-esteem and healthy lifestyle behavior levels were measured as average [11]. Efforts to raise self-esteem increase success rates in the rehabilitation process [12].

There is a two-way relationship between body image disorders and alcohol-substance abuse. Alcohol and substance addicts have lower body image scores [13]. Alcohol and substance use may emerge in order to alleviate the anxiety arising from impairment of body image [14]. Also, anabolic steroids and psychostimulants abused to achieve an athletic appearance have the potential for addiction [15,16].

Anxiety disorder, low body image and low self-esteem may play a role in directing people to alcohol and substance use. In the sample of alcohol and substance addiction, the ratio of anxiety, body image and self-esteem level to normal population can be guiding. However, some methodological problems in previous studies on this subject make the results obtained controversial. There is no study showing the situation in Turkish society. The purpose of this study is to determine the levels of body image, self-esteem and social anxiety of alcohol and substance addicts.

Material and Method

Our work was carried out at NPIstanbul Brain Hospital between March 01, 2015 and June 30, 2015. Prior to the study, necessary

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permissions were obtained from the local ethics committee and the hospital's head physician. Participants who constituted the case group were patients who were consecutively treated at the NP Istanbul Psychiatric Hospital and who were diagnosed with alcohol/substance abuse and volunteered to participate in the study. The control group consisted of people who did not have any psychiatric diagnosis and who had similar sociodemographic characteristics with the case group. Inclusion criteria are being diagnosed with alcohol/substance addiction, and being between the ages of 20-50. And exclusion criteria are having a comorbid neuropsychiatric disorder to alcohol-substance addiction, being under the age of 20 and over the age of 50. At the beginning, the study included 52 individuals diagnosed with alcohol and substance addiction and 48 healthy individuals. As it was understood that they did not mark the tests according to the instruction, 17 individuals diagnosed with alcohol and substance addiction and 13 healthy individuals were excluded from the study. The study was completed with 35 individuals diagnosed with alcohol and substance addiction and 35 healthy individuals. Of the individuals in the case group, 11 were alcohol, 7 were cocaine, 8 were heroin, 6 were synthetic cannabinoid, 2 were cannabinoid, and 1 was amphetamine addict.

Individuals constituting the case group were examined by the psychiatrist of the hospital they were treated in, and the diagnosis was clarified. The individuals of the control group are from the social environment of the study team. These individuals were examined by a psychiatrist from the study team. Those without any neuropsychiatric diagnosis were included in the study. A single interview was performed with the participants by the psychologist. During this interview, participants were applied the sociodemographic information form, Leibowitz Social Phobia Scale, Body Image Scale and Rosenberg Self-Esteem Scale. Participants were informed about the study and written consent was obtained. Our study complies with the Helsinki Declaration.

Liebowitz Social Phobia Scale developed in 1987 consists of a total of 24 items: 13 measuring performance situation and 11 measuring social interaction [17]. Items of the scale measure performance anxiety, performance avoidance, social anxiety, and social avoidance. The validity and reliability study of the scale's Turkish version has been performed and the Cronbach's alpha reliability coefficient has been found to be 0.96 [18]. It is a reliable and valid scale that can be used to measure the severity of social anxiety disorder symptoms.

The Body Image Scale, originally named Body-Cathexis Scale, has been developed by Secord and Jourand in 1953 [19]. The first part of the original scale consists of 46 items that include body parts and their functions. The second part of the scale deals with the self and includes 55 items that assess the various aspects of self (personality, self-confidence, morality, etc.). The version of the scale used in our country is a 40-item likert type scale (1: I like it very much, 5: I don't like it at all). The score of the scale ranges from 40 to 200. The high score indicates that the person has an unhealthy perception of body image. The cut-off score is 135, and the participants who score above are considered to have a "low" body image. The reliability and validity study of the scale has been performed in our country and the Cronbach's alpha reliability coefficient has been found to be 0,91 [20].

T*he Rosenberg Self-Esteem Scale* has been developed as a result of examinations made on 5024 high school students by Morris Rosenberg in 1963 [21]. It is a self-report scale with 4 steps (1: very true, 4: very wrong) likert type responses consisting of 12 sections and 63 items. In our study, the first 10-item part that measures self-esteem was used. Participants were divided into three groups as "low", "sufficient" and "high" according to their designated self-esteem cut-off points. The reliability and validity study of the scale has been conducted in our country and the Cronbach's alpha reliability coefficient has been found to be 0.85 [15].

Statistical analyzes were performed with the IBM SPSS version 21.0 package program (IBM Corp. released 2012. Armonk, NY, USA). Sociodemographic characteristics of the case and control groups were given in frequency and percentage. Chi square test was used in the comparison of the social anxiety, self-esteem and body image levels of the case and control groups. The linear association between social anxiety, body image and self-esteem scale scores of the case group and the control group was assessed by Pearson correlation test. For statistical significance, $p < 0.05$ was considered.

Results

The sociodemographic characteristics of the participants are presented in Table 1. Three of the participants diagnosed with alcohol and substance addiction and healthy participants were female (8.6%), and 32 were male (91.4%). 40.0% of the subjects with alcohol and drug addiction were between the ages of 17-24, 31.4% is 25-32, and 28.6% were over the age of 33. 20.0% of the control group was between the ages of 17-24, 48.6% between the ages of 25-32, and 31.4% was over the age of 33. 31,4% of the addicts were married, 62,9% were single and 5,7% were widowed/divorced. 51.4% of the participants who were diagnosed with alcohol and substance addiction were university graduates. In the control group, this rate was 65.7%. While 60% of the individuals in the case group spent most of their lives in the big city, 80% of the individuals in the control group spent most of their lives in the big city. The case and control group were not significantly different in terms of these socio-demographic characteristics (p>0,05).

Comparison of social anxiety, self-esteem and body image levels of the case and control groups are presented in Table 2. There was a statistically significant difference between the social anxiety levels of the case and control groups ($p = 0.035$). Significant social anxiety was found in 9 subjects with addiction (25,7%), severe social anxiety in 5 subjects (14,3%), and very severe social anxiety in 18 subjects (51,4%). In control group, 7 individuals (20.0%) had significant social anxiety, 5 (%14,3) severe social anxiety, and 9 (%25,7) had very severe social anxiety.

When the alcohol and substance addiction group and the healthy control group were compared in terms of self-esteem levels, a statistically significant difference was found between the two groups (p=0,018). In the addiction group, 6 subjects (17.1%) had low self-esteem, 27 subjects (77.2%) had sufficient self-esteem, and 2 subjects (5.7%) had high self-esteem. In the control group, 3 subjects (8.6%) had low self-esteem, 21 subjects (60.0%) had adequate self-esteem, and 11 subjects (31.4%) had high self-esteem. Those with addiction seem to have lower self-esteem than those without addiction. No statistically significant difference was found between the body image levels of the case group and control group (p=0,382).

The results of the correlation between the social anxiety, body image and self-esteem scores of the case group are presented in Table 3. In the case group; a positive, weak-moderate, statistically significant linear correlation was found between the body image and self-esteem (r=0,372, p=0,028). There is a positive, weak, statistically insignificant linear association between social anxiety levels and body image (r=0,136, p=0,436). There is also a negative, weak, statistically insignificant linear association between social anxiety and self-esteem (r= -0,122, p=0,484).

Table1. Sociodemographic characteristics of the case and control groups

Sociodemographic characteristics	Case (n=35)		Control (n=35)		
	Number	%	Number	%	P
Gender					
Male	32	91,4	32	91,4	1,000
Female	3	8,6	3	8,6	
Age					
17-24		14	40,0	7	20,0
25-32	11	31,4	17	48,6	0,160
33 and over	10	28,6	11	31,4	
Marital Status					
Married	11	31,4	11	31,4	
Single	22	62,9	24	68,6	0,352
Widow/divorced	2	5,7	0	0,0	
Education					
Primary school	2	5,7	1	2,9	
Middle school	3	8,6	0	0,0	
High school	10	28,6	5	14,3	0,107
University	18	51,4	23	65,7	
Master's degree	2	5,7	6	17,1	
Living in					
Metropolis	21	60,0	28	80,0	
City	12	34,3	5	14,3	0,144
Town-village	2	5,7	2	5,7	

p : Chi square test
* : p<0,05

Table 2. Social anxiety, self-esteem and body image levels of the case and control groups

	Case (n=35)		Control (n=35)		
	Number	%	Number	%	P
Social anxiety					
Low	1	2,9	5	14,3	
Moderate	2	5,7	9	25,7	
Significant	9	25,7	7	20,0	0,035*
Severe	5	14,3	5	14,3	
Very severe	18	51,4	9	25,7	
Self-esteem					
Low	6	17,1	3	8,6	
Sufficient	27	77,2	21	60,0	0,018*
High	2	5,7	11	31,4	
Body Image					
Low	9	25,7	6	17,1	0,382
Normal	26	74,3	29	82,9	

p : Chi square test
* : p<0,05

Table 3. The results of the correlation between the social anxiety, body image and self-esteem scores of the case group

Scales	Statistical Analysis	Scales		
		Social Anxiety	Body Image	Self-esteem
Social Anxiety	r		0,136	-0,122
	p		0,436	0,484
Body Image	r	0,136		0,372
	p	0,436		**0,028***
Self-esteem	r	-0,122	0,372	
	p	0,484	**0,028***	

r : Pearson correlation coefficient
* : p<0,05

The correlations between the social anxiety, body image and self-esteem scores of the control group are given in Table 4. In the control group, there is a negative, moderate, statistically significant linear association between social anxiety score and self-esteem (r=-0,492, p=0,003). There is also a positive, moderate-good, statistically significant linear association between the body image and the self-esteem (r=0,665, p=0,001). There is a negative, weak-moderate, statistically insignificant linear association between social anxiety levels and body image (r=0,331, p=0,052).

Table 4. The results of the correlation between the social anxiety, body image and self-esteem scores of the control group

Scales	Statistical Analysis	Scales		
		Social Anxiety	Body Image	Self-esteem
Social Anxiety	r		-0,331	-0,492
	p		0,052	**0,003***
Body Image	r	-0,331		0,665
	p	0,052		**0,001***
Self-esteem	r	-0,492	0,665	
	p	**0,003***	**0,001***	

r : Pearson correlation coefficient
* : p<0,05

Discussion

The case group sample of our study consists of patients with the diagnosis of alcohol and substance addiction consecutively hospitalized in an addiction clinic of a private hospital in Istanbul. In our study, 91.4% of the sample consists of male subjects. In a study on 300 inpatients with alcohol addiction inpatient in Brazil, 91.7% of the cases were male and 8.3% were female [1]. In a study on high school students with substance abuse in Iran, 53.8% of the sample was male [10]. In another study on a sample of 150 drug addicts who were followed up half as inpatient and half as outpatient, the rate of male outpatients were 69.3% and of male inpatients were 77.3% [8]. In a study performed on 2040 students of Dicle University, it has been found that the rate of men who used at least one substance (9,2%) is statistically significantly higher than women (0,9%) [3]. These rates are compatible with our study. The reason why the male ratio is high may be that the use of alcohol and drugs in the society is more common in male population than in female.

In terms of sociodemographic characteristics, our case and control group are similar. However, there was a statistically significant

difference in social anxiety levels between the two groups. In the case group, 32 subjects (91.4%) had a high level of social anxiety (significant, severe and very severe), whereas in the control group this number was 21 (60.0%). These ratios were found to be consistent with other studies' samples with alcohol and substance addiction. In a study of Terra and colleagues on inpatients having treatment for alcoholism; specific phobia in 30.6%, social phobia in 24.7%, generalized anxiety disorder in 19.3%, obsessive compulsive disorder in 5% and post-traumatic stress disorder in 4.6% was found. The researchers stated that 90.2% of the cases had social anxiety before alcohol addiction [1]. In a study on 153 patients with social phobia, alcohol abuse was reported in the last 1 year in 22.2% of the cases [4].

If we look at the sample of substance dependency in a similar way; a meta-analysis study covering the years 1990-2014 found that anxiety disorder increased the risk of substance addiction by 2.9 times [6]. In the study of Zimmerman et al., the rate of social anxiety disorder in substance addicts was found to be 62.6% [8]. Social anxiety disorder and substance abuse have high comorbidity rates. Patients seeking treatment either for social anxiety or for substance addiction was found to have very high social anxiety levels and equal anxiety levels [5].

In a study on 176 male alcohol addicts who were hospitalized for treatment, there was a significant relationship between social anxiety and alexithymia levels [23]. As demonstrated in previous studies, our study supports the high comorbidity level between alcohol and substance abuse and social anxiety. In all of the anxiety disorders, especially social anxiety, alcohol and substance abuse are considered to have the purpose of relieving oneself. This is called the "self-medication hypothesis" [1,24]. We also found in our study that social anxiety was high before and during alcohol and substance use. Alcohol and substance abuse processes begin when these cases meet with alcohol and substance in the society and they become aware that their social worries are diminishing by using e substance [24]. The risk of alcohol/substance abuse and addiction can be reduced if individuals with high social anxiety take psychiatric treatment before they meet alcohol and substance.

One of the factors that set the stage for alcohol and substance use is the low self-esteem [12]. Depression is one of the leading causes of self-esteem [25]. In our study, there was a statistically significant difference in the level of self-esteem between the case group and the control group (p=0,018). Low self-esteem was found in 17.1% of the subjects in the case group, and this rate was found as 8.6% in the control group. In the case group, only 5.7% had high self-esteem, while this rate was found to be 31.4% in the control group. Self-esteem levels were measured very low on a study of 51 teenagers who had escaped from home and had a substance abuse story [26]. Low self-esteem scores in substance abuse rise with treatment [12]. In the light of these results, those who applied to psychiatric outpatient clinics and have low self-esteem may be considered to be at risk group for alcohol and substance addiction. Drug therapies and psychotherapies related to increase the self-esteem can reduce the potential for addiction.

In our study, no statistically significant difference was found between the body image levels of the control group and the case group (p=0,382). However, the rate of low body image level in the case group was found to be 25.7%, whereas in the control group this rate was found as 17.1%. This difference may not be statistically significant because of the small sample of our study. In a study on 175 male and 246 female alcoholics, higher alcohol abuse rates were found in women with low body image scores than men [13]. It can be said that the relationship between substance dependence and body perception is bidirectional. Also drugs that increase sport performance ("body image drugs"), especially anabolic steroids, which are used to help bring the body image to a more athletic and attractive state have a potential for addiction [15,16].

Another important finding of our study is that there is a positive, weak-moderate, statistically significant correlation between body image and self-esteem in the case group (r=0,372, p=0,028). Impaired body image is one of the causes that lead to the decrease of self-esteem [27]. Once this balance is broken, a ground that facilitates the use of alcohol and substances may arise. Alcohol and substance abuse can also affect self-esteem and body image negatively. In this case, the process can go through a vicious cycle.

The smallness of the sample is the limitation of our study. In the light of these results, there cannot be a causal link between high social anxiety, low self-esteem and low body image levels and increased risk of alcohol/substance abuse. Large sample cohort studies are needed to determine if there is a cause-effect relationship.

In short; higher social anxiety, lower body image and lower self-esteem levels were found in the case group when compared to the control group.

Conclusion

Alcohol and substance addiction is one of the most important health problems today and its frequency is increasing day by day. There is a need for better understanding of the causes of addiction and for successful treatment approaches. High social anxiety, low self-esteem and low body image may be among the causes that facilitate addiction. Identification and elimination of these conditions before addiction may make an important contribution to the prevention of addiction. Further research is needed to determine the causality relationship.

Competing interests
The authors declare that they have no competing interest.

Financial Disclosure
The financial support for this study was provided by the investigators themselves.

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