

Reliability and Validity of Beliefs about Substance Use (BSU) Questionnaire in Alcohol Dependent Patients.

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Abstract

Objective: In this study, it is aimed to evaluate the validity and reliability of the Beliefs About Substance Use Questionnaire (BSU) which was originally developed by Wright (1993).

Method: Seventy alcohol addicted inpatients, who were admitted to Ankara Dışkapı Yıldırım Beyazıt Education and Research Hospital Psychiatry Clinic, 31 healthy volunteers who had never used alcohol and 33 social drinkers were evaluated. For all groups, BSU and Craving Beliefs Questionnaire (CBQ), for the patient groups, Beck Anxiety Inventory (BAI), Clinical Institute Withdrawal Assessment (CIWA), Dysfunctional Attitudes Questionnaire (DAS) and Automatic Thoughts Questionnaire (ATQ) were used as the assessment tools. The correlations and differences between the questionnaires were studied.

Results: Mean age of the addicted patients, healthy controls and social drinkers were $42,3 \pm 7,0$, $33,5 \pm 9,9$ and $33,2 \pm 8,9$, respectively. In patient group, mean BSU score was $46,4 \pm 21,2$. For alcohol addicts, internal reliability of BSU was found to be adequate (Cronbach alfa=0.91) and item-total score correlations were between 0.33 and 0.69. Basic component analysis showed one basic factor. A positive correlation has been found between BSU and CBQ, and ATQ scores. No correlations have been found between total and subscale scores of DAS and total scores of CIWA, BAI and BSU. In evaluation of validity, BSU mean scores of alcohol addicts were found to be significantly higher than healthy controls and social drinkers.

Conclusion: Our findings support that Turkish version of BSU is an adequate tool that can be used to evaluate alcohol addicted patients' cognitive believes about alcohol use.

Key Words: Drug addiction, substance use disorders, cognitive therapy

Özet

Madde Kullanımı ile İlgili İnançlar Ölçeği (MKİÖ) Türkçe Uyarlamasının Alkol Bağımlılarında Geçerlik ve Güvenilirliği

Amaç: Bu çalışmada özgün formu Wright (1993) tarafından geliştirilen Madde Kullanımı ile İlgili İnançlar Ölçeği (MKİÖ) Türkçe uyarlamasının geçerlik ve güvenilirliğinin değerlendirilmesi amaçlanmıştır.

Yöntem: Ankara Dışkapı Yıldırım Beyazıt Eğitim ve Araştırma Hastanesi kliniğine yatırılarak tedavi edilen 70 alkol bağımlısı hasta, 31 hiç alkol kullanmayan sağlıklı gönüllü ve 33 sosyal alkol kullanıcısı incelenmiştir. Bütün gruplarda Madde Kullanımı ile İlgili İnançlar Ölçeği (MKİÖ) ve Alkol Kullanma İsteği ile İlgili İnançlar Ölçeği (AKİÖ), hasta grubunda Beck Anksiyete Envanteri (BAE), Alkol Çekilme Değerlendirme Skalası (AÇDS), Fonksiyonel Olmayan Tutumlar Ölçeği (FOTÖ) ve Otomatik Düşünce Ölçeği (ODÖ) değerlendirme araçları olarak kullanılmıştır. Ölçekler arasındaki bağıntılar ve farklılıklar incelenmiştir.

Bulgular: Hasta grubunun, sağlıklı kontrol grubunun ve sosyal alkol kullanıcılarının yaş ortalamaları sırasıyla $42,3 \pm 7,0$, $33,5 \pm 9,9$ ve $33,2 \pm 8,9$ idi. Hasta grubunda BSU ortalama puanı $46,4 \pm 21,2$ idi. Alkol bağımlıları için MKİÖ içtutarlılığı yeterli düzeyde bulundu (Cronbach alfa=0.89) ve madde-toplam puan bağıntıları 0.33 ile 0.69 arasındaydı. Temel eleman analizleri tek bir ana faktörü gösterdi. MKİÖ, AKİÖ ve ODÖ arasında pozitif bağıntı bulundu. FOTÖ toplam puanları ya da alt ölçekleri, AÇDS, BAÖ ve MKİÖ toplam puanları arasında bağıntı bulunmadı. Geçerlilik incelemesinde MKİÖ ortalama puanları, alkol bağımlılarında sağlıklı kontrol grubuna ve sosyal alkol kullanıcılarına göre anlamlı olarak yüksek bulundu.

Sonuç: Bulgularımız MKİÖ'nün Türkçe uyarlamasının alkol bağımlısı hastalarda madde kullanımıyla ilgili inançların değerlendirilmesi için yeterli bir araç olduğunu desteklemektedir.

Anahtar Kelimeler: Madde bağımlılığı, madde kullanımı bozuklukları, bilişsel terapi

OBJECTIVE

Alcohol and substance addiction and illicit drug use are major public health problems which affect about 10 percent of the population (Sadock and Sadock 2007). In United States, 22.6 % of the people aged 12 or older report that they used an illicit drug in the last month (Rockville 2011).

In Canada, 11.0 % of the people aged over 15 report that they used an illicit drug in the last year (The Canadian Alcohol and Drug Use Monitoring Survey 2010). It is also estimated that the lifetime prevalence of cannabis, cocaine and ecstasy use is 22.5, 4.1 and 3.3 % respectively in European adults (European Monitoring Center for Drugs and Drug Addiction 2010).

Multiple interacting factors take part in the etiology of substance abuse and addiction. Drug availability, social acceptability, the person's wondering about how the drug's effect on the body is and peer pressures are mostly the leading factors to try the drugs (Sadock and Sadock 2007), in addition, socioeconomic status (Lemstra et al. 2008), genetic vulnerability, having an attention-deficit hyperactivity disorder diagnosis (van Emmerik-van Oortmerssen van de Glind G 2012) and environmental stressors like childhood trauma are also major reported risk factors (Enoch 2006).

Whatever the trigger for the initiation of the substance use shall be, the drug use may turn into a substance dependence with repeated use. During this process, though neurobiological dysregulations in the ventral striatal-pallidal-thalamic loops contribute to the positive reinforcing effects and amygdala contributes to negative reinforcing effects of the drug (Koob 2009), dysfunctional beliefs may also play an important role in the substance use behavior. For example, a person who thinks as 'Drinking makes me more cheerful and more social.' would also believe that drinking would be the way to be accepted by the community. By using drugs, addicts expect positive imprints in their life: They have the expectation that substance use would change their life positively, it would give a social and physical joy, it would improve sexual performance and social gumption and it would help to feel strong and relieve tension (Marlatt and Gordon 2005).

Through this observation, Aaron Beck et al. (1993) defines a cognitive model which described addictive behaviours arising out of the interplay between layers or levels of beliefs. In this model, when an addict faces a high risk situation like seeing friends using a substance or feeling depressed, substance related

beliefs are activated and this in turn, activates the automatic thoughts about using the drug and the addict feels the urge and craving to use the substance. Most addicts find it difficult to resist to the craving and they have facilitative beliefs about substance use which leads to substance use and lapse. The high risk situations followed by substance related beliefs, automatic thoughts, the feeling of urges and cravings, facilitative beliefs and substance use behavior make up the vicious cycle of addiction (Mitcheson et al. 2010).

Beck's cognitive model of addiction forms the basis for the cognitive therapy of substance use, the proofs about the efficiency of which has been increasing (Carroll 2005). Though the behavioral strategies like avoiding high risk situations, finding coping ways with the urges and cravings are fundamental parts of this therapy, working with substance related beliefs is the core to avoid the relapse (Mitcheson et al. 2010, Beck et al. 1993). In order to assess addicts' beliefs about substance use, Wright (1993) developed a self-report questionnaire named "Beliefs About Substance Use – BSU". This form was published in "Cognitive Therapy of Substance Use" (Beck et al 1993). By using this questionnaire, it is aimed to define substance addicts' beliefs about substance use and to rate how much they agree or disagree with each belief statement. The questionnaire is composed of 20 statements which can be rated among 1 to 7. "1" means that the individual totally disagrees with the statement and "7" means that the individual totally agrees with the statement (Wright 1993, Beck et al. 1993).

In this study, we aimed to evaluate the validity and reliability of the Turkish version of the Beliefs About Substance Use Questionnaire which is highly used in cognitive-behavioral therapy studies, and which is helpful in understanding patients' cognitive beliefs about alcohol and substances.

METHOD

Patient sample

Seventy alcohol addicted male patients diagnosed according to DSM-IV (Diagnostic and Statistical Manual of Mental Disorders) criteria with SCID-I (Structured Clinical Interview for DSM Disorders-I), who were admitted to Ankara Yildirim Beyazıt Diskapi Education and Research Hospital inpatient psychiatry clinic and completed physical addiction detoxification treatment, 31 healthy volunteers who had never used

alcohol and 33 healthy volunteers who consumed alcohol regularly but did not have an alcohol addiction or alcohol abuse diagnosis (social drinkers) made up the research group. The aim of the research was told to the patients and a written informed consent was provided. The patients with schizophrenia, bipolar disorder and dementia diagnosis were excluded from the study. The healthy volunteers that had never used alcohol and the ones that consumed alcohol regularly were gathered from the hospital staff by a prepared questionnaire about psychiatric problems and alcohol use properties and a face to face interview.

Measurements

Beliefs About Substance Use Questionnaire (BSU), Craving Beliefs Questionnaire (CBQ), Beck Anxiety Inventory (BAI), Clinical Institute Withdrawal Assessment (CIWA), Automatic Thoughts Questionnaire (ATQ), Dysfunctional Attitudes Questionnaire (DAS) and Brief Symptom Inventory (BSI) were used as the assessment tools.

The Beliefs about Substance Use (BSU) scale is a 20-item self-report measure which is rated on a 7-Point Likert-Scale from 'totally disagree' to 'totally agree'. Higher scores are indicative of greater maladaptive beliefs about substance use. The BSU has been shown to have good internal consistency (Cronbach's alpha 70.86). Higher scores on the BSU have also been associated with less sustained abstinence following substance-focused interventions (Wright 1993, Beck et al. 1993, Crits-Christoph et al. 2007).

Craving Beliefs Questionnaire (CBQ) is a 20 item scale which measures beliefs about substance cravings and responses are given on a 7 point Likert-Scale (Wright 1993, Beck et al. 1993, Chang et al. 2011). It was translated from the English version of CBQ into Turkish and its reliability was shown in a recent study (Turkcapar et al. 2007).

Beck Anxiety Inventory (BAI) is a 21 item scale which measures common symptoms of anxiety (Beck 1988). It was developed by Beck et al. and has been widely used in assessing clinical anxiety situations. The Turkish version of BAI was developed and psychometric properties were studied (Ulusoy et al. 1998).

The CIWA (Clinical Institute Withdrawal Assessment) is a scale developed by Sullivan et al (1989). In order to assess and treat alcohol withdrawal syndrome and alcohol detoxification. This 10 item scale assesses withdrawal signs, giving a cumulative score which indicates treatment necessity. This scale

has been translated to Turkish by Kalyoncu et al and Cronbach inner consistency coefficient was found to be high (Mirsal et al. 2000, Kalyoncu et al. 2007).

Automatic Thoughts Questionnaire is a 30 item scale that measures both the frequency of occurrence and degree of automatic negative thoughts (negative self-statements) (Hollon and Kendall 1980). This scale is reliably used in both adults and children in order to detect negative automatic thoughts related with depression (Kazdin 1990). The Turkish version of ATQ was developed and psychometric properties were studied (Şahin NH and Şahin N 1992).

Dysfunctional Attitude Scale (DAS) is a 40 item scale that measures dysfunctional cognitive distortions related with depression (Weissman and Beck 1978). DAS has four subscales: Performance Evaluation, Need for Approval, Autonomous Attitude, and Perfectionism (Chioqueta and Stiles 2006, Dyck 1992). Turkish version of DAS has been adapted and studied (Şahin NH and Şahin N 1991).

Brief Symptom Inventory (BSI) is the short version of the SCL-R-90 which measures the same dimensions. Items for each dimension of the BSI were selected based on a factor analysis of the SCL-R-90, with the highest loading items on each dimension selected for the BSI (Derogatis LR 1993, Derogatis and Spencer 1982). Turkish version of BSI was studied in Turkish youth and in this study, factor analysis revealed that a 5-factor model "anxiety", "depression", "negative self concept", "somatization" and "hostility" were more suitable for Turkish participants (Sahin and Durak 1994).

Procedures

In order to undertake the linguistic validation Turkish version of BSU questionnaire and to use it in a research, the authors' permission has been taken. The questionnaire were translated to Turkish by two separate psychiatrists. Preliminary applications were carried on patients and agreement on one translation text were maintained. The Turkish version were back translated to English, so as to define the changes that might occur in the meanings of the statements. After applying to patients during preliminary study corrections were made, the final version of the questionnaire were developed and applied for this clinical research.

The tests were given three days after two weeks benzodiazepine treatment for abstinence had been ceased. For evaluating validity, discriminative validity was calculated by comparing the findings

from the BSU and CBQ survey applied to alcohol addicts, social drinkers and the ones that had never used alcohol. For similar test validity, correlations of DAS, BSU and ATQ with CBQ in alcohol addicts were investigated. Withdrawal symptoms of the subjects had been assessed using CIWA-AR.

For evaluating reliability, internal consistency measures of the questionnaire were done. The internal consistency of the resulting components were determined by Cronbach alpha levels which were indicated as item total correlations/ and intra-class correlation (ICC). An ICC above 0.75 indicated excellent internal reliability. To compensate for the increased likelihood of type-1 error caused by multiple comparisons, the alpha level was adjusted so that $p < 0.01$ was required for statistical significance.

RESULTS

Mean age of the addicted patients was $42,3 \pm 7,0$, whereas mean age of the healthy controls was $33,5 \pm 9,9$ and the mean age of the healthy controls accepted as social drinkers was $33,2 \pm 8,9$. In patient group, mean alcohol dependency duration was found to be $15,10 \pm 8,34$ years.

Validity evaluation

Mean BSU and CBQ scores of research groups are given in Table 1. As the assessment of discriminative validity, we found a significant difference among the mean BSU and CBQ scores of the three research groups based on ANOVA test. BSU mean scores of alcohol addicts ($46,4 \pm 21,2$) were found to be significantly higher than healthy controls ($20,0 \pm 0,0$, $p < 0,001$) and social drinkers ($36,7 \pm 18,1$, $p < 0,001$) (Figure 1). ANOVA test pointed to a significant

Table 1. Mean Psychometric Test Scores of Patients with Alcohol Addiction

Scales	Mean Scores
Beck Anxiety Inventory	$19,95 \pm 13,95$
Beck Depresyon Inventory	$19,62 \pm 13,89$
CIWA	$15,45 \pm 7,94$
BSU	$46,43 \pm 21,21$
CBQ	$68,10 \pm 30,30$
ATQ	$75,69 \pm 27,89$
DAS -Perfectionism	$60,33 \pm 20,67$
DAS -Need for Approval	$33,84 \pm 11,95$
DAS -Autonomous Attitude	$18,46 \pm 6,021$
DAS -Performance Evaluation	$19,35 \pm 6,58$

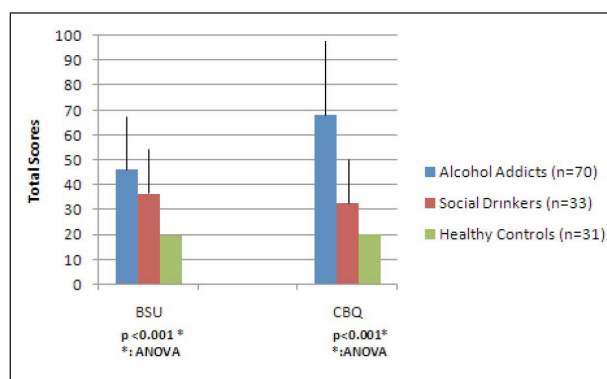


Figure 1. Mean BSU and CBQ Scores of Research Groups

difference between the three groups and Tukey test in post hoc analysis showed that mean BSU score of alcohol addicts was significantly lower than healthy controls and social drinkers (Table 2) ($p < 0,001$). On the other hand, mean CBQ scores of the healthy group were similar to social drinkers and their scores were significantly lower than alcohol addicts. This findings support that for all subgroup analysis, both BSU and CBQ are able to distinguish alcohol addicts significantly from social drinkers and healthy controls.

The assessment of similar test validity has shown a positive correlation between ATQ–BSU scores and BAI–BSU scores (Table 3). This finding tells us that the belief about providing a positive relief after substance use has a positive relationship with anxiety level and higher depressive automatic thoughts. No correlations were found between total and subscale scores of DAS and total scores of CIWA, BAI and BSU (Table 3).

Reliability Evaluation

Mean BSU score was $46,4 \pm 21,2$ in alcohol addicted group. Internal reliability of BSU was found to be adequate for alcohol addicts (Cronbach alfa=0.91). For alcohol addicts, item-total score correlations were between 0.33 and 0.69. Basic component analysis showed 1 basic factor. A positive correlation has been found between BSU and CBQ ($r = 0,53$, $p = 0,0001$) scores, and ATQ ($r = 0,47$, $p = 0,0001$) scores.

When the data from 131 individuals was analysed together and the correlation of each item with the total score was investigated with the reliability analysis, Cronbach alpha level that is a measure of reliability coefficients was equal to 0.91; which pointed out adequately high internal consistency.

Table 2. Post Hoc Multiple Comparisons of three groups BSU and CBQ scores. Tukey HSD

Dependent Variable			Mean Difference			95 % Confidence Interval	
	(I)	(J)	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
CBQ	0	1	-12,57	5,91	0,088	-26,58	1,43
		2	-48,10*	5,09	0,000	-60,18	-36,02
	1	0	12,57	5,91	0,088	-1,43	26,58
		2	-35,52*	4,98	0,000	-47,35	-23,69
	2	0	48,10*	5,09	0,000	36,01	60,18
		1	35,52*	4,98	0,000	23,69	47,35
BSU	0	1	-16,54*	4,44	0,001	-27,04	-5,96
		2	-26,23*	3,85	0,000	-35,36	-17,10
	1	0	16,50*	4,44	0,001	5,9625	27,044
		2	-9,72*	3,77	0,029	-18,67	-0,7887
	2	0	26,23*	3,85	0,000	17,10	35,36
		1	9,72*	3,77	0,029	0,7887	18,67

* The mean difference is significant at the 0.05 level.

1 Social Drinkers

2 Alcohol Addicts

0 Healthy Controls

Table 3. Correlations of CBQ, BSU and ATQ Total Scores.

Total Score		CBQ	BSU	ATQ
CBQ	P.C.	1	0,675**	0,441**
	Sig. (2-tailed)	.	0,000	0,000
	N	134	132	68
BSU	P.C.	0,675**	1	0,473**
	Sig. (2-tailed)	0,000	.	0,000
	N	132	132	66
ATQ	P.C.	0,441**	0,473**	1
	Sig. (2-tailed)	0,000	0,000	.
	N	68	66	68
DAS-Perfectionism	P.C.	-0,100	-0,164	-0,028
	Sig. (2-tailed)	0,512	0,289	0,859
	N	45	44	44
DAS-Need for Approval	P.C.	0,157	0,190	0,223
	Sig. (2-tailed)	0,303	0,216	0,146
	N	45	44	44
DAS-Autonomous Attitude	P.C.	-0,059	0,027	0,075
	Sig. (2-tailed)	0,699	0,863	0,630
	N	45	44	44
DAS- Performance Evaluation	P.C.	0,096	0,147	0,092
	Sig. (2-tailed)	0,531	0,342	0,551
	N	45	44	44

P.C.: Pearson Correlation

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4. Correlations of CBQ, BSU and BSI Subdimensions

		CBQ	BSU
CBQ	P.C.	1	0,675**
	Sig. (2-tailed)	.	0,000
	N	134	132
BSU	P.C.	0,675**	1
	Sig. (2-tailed)	0,000	.
	N	132	132
BSI-Somatization	P.C.	0,377**	0,406**
	Sig. (2-tailed)	0,010	0,006
	N	46	45
BSI-Anxiety	P.C.	0,289	0,333*
	Sig. (2-tailed)	0,052	0,025
	N	46	45
BSI-Depression	P.C.	0,245	0,468**
	Sig. (2-tailed)	0,101	0,001
	N	46	45
BSI- Negative self concept	P.C.	0,360*	0,362*
	Sig. (2-tailed)	0,014	0,015
	N	46	45
BSI-Hostility	P.C.	0,151	0,521**
	Sig. (2-tailed)	0,315	0,000
	N	46	45

P.C.: Pearson Correlation

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 5. Internal Reliability Test Scores and Correlations of BSU Items in Part I and Part II.

Total 131 case	Part I	Part II
	Consisted of 10 items	Consisted of 10 items
Alpha	0,88	0,83
Correlation Between Forms	0,79	
Equal-Length Spearman-Brown	0,8840	
Guttman Split-Half	0,8840	
Unequal-Length Spearman-Brown	0,8840	

“Split half“ method were used as another measure of reliability. When the 20 items were divided to two 10-item sections and each was compared with each other and the total score, achieved correlation and alfa scores were found to be adequate (Table 5).

Correlations

All 5 subscale of Turkish version of Brief Symptom Inventory (BSI) (Somatization, Anxiety, Depression, Negative self concept, and Hostility) have shown positive correlations with BSU total scores (Table

4). When patients and control groups test score correlations were evaluated, both ATQ total score and BSI somatic, and negative self concept subscales were found positively correlated with BSU and CBQ (Table 4). CIWA scores were positively correlated with BSU and Beck Anxiety Inventory. BSU and CBQ were also positively correlated with Beck Anxiety Inventory (Table 6).

Discussion

Our findings show that Turkish version of BSU has adequate internal consistency and reliability,

Table 6. Correlation of Psychometric Test Scales in Patient Group

Total Score		CBQ	BSU	BAI	CIWA
CIWA	P.C.	1,00**	0,67**	0,39**	1
	Sig. (2-tailed)	.	0,000	0,001	.
	N	134	132	70	134
BSU	P.C.	0,68**	1,000**	0,28*	0,66**
	Sig. (2-tailed)	0,000	.	0,022	0,000
	N	132	132	68	132
CBQ	P.C.	1	0,675**	0,393**	1,00**
	Sig. (2-tailed)	.	0,000	0,001	.
	N	134	132	70	134
BSU	P.C.	0,67**	1	0,28*	0,68**
	Sig. (2-tailed)	0,000	.	0,022	0,000
	N	132	132	68	132
BAI	P.C.	0,39**	0,28*	1	0,39**
	Sig. (2-tailed)	0,001	0,022	.	0,001
	N	70	68	70	70

P.C.: Pearson Correlation

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

it has adequate discriminative validity, that it can significantly distinguish alcohol addicts from healthy controls and social drinkers and that it can be used to evaluate cognitive believes of alcohol addicted patients about alcohol use. Another significant finding of this study is that alcohol addicts' beliefs about substance/alcohol use are positively correlated with higher anxiety and depression related automatic thoughts.

Turkish version of BSU can not only distinguish alcohol addicts from healthy subjects but also it can distinguish alcohol addicts from social drinkers. In addition to this, BSU scores were also correlated with anxiety, depression and withdrawal scores. This finding is a good indicator of that BSU may be used as a marker to define the etiology of anxiety and depression in addicted patients. On the other hand, it is a limitation of this study that the patient group consisted of alcohol addicted patients only. In further studies reliability and validity of BSU should be tested in substance addicted patient group.

Though the role of beliefs in the vicious cycle of addiction is very well known (Mitcheson et al. 2010), there is a lack of studies that emphasize the act of beliefs about substance use in patients with different age, gender, sociocultural status and number of relapses. Until now, only one study examined the relationship between attitudes regarding substance use and the attribution of blame for a criminal offence in

a sample of male mentally disordered offenders with a history of substance misuse. There was a significant correlation between substance-related beliefs and the attribution of blame for offending. Results indicated that greater maladaptive substance-related beliefs were correlated with higher externalization of blame (Tolfrey et al. 2011).

The Beck's cognitive model of substance addictions claimed that "expectancies of substances" is a key difference between those who use substances problematically and those who do not. (Beck, et al. 1993, Liese and Franz 1996). Beliefs and expectancies about substance use may play a role in both the development and maintenance of the disorder. These beliefs may either be in relation with the perception about oneself about worthlessness, and deficiencies or it may be related to facilitative beliefs about substances such as "I'm not ready to stop using", "I will feel better if I use". This model has been adapted for use with dually diagnosed clients and it has been suggested that the beliefs that an individual holds about substances can be linked to their beliefs about their mental health problems (Gregg et al. 2007).

In the field of alcohol and drug abuse, importance of disorder-related cognitions are well established. There are clinical indications that alcohol and drug abuse are associated with dysfunctional assumptions and unhealthy core beliefs. Brotchie et al. (2004) examined levels of such cognitions among four groups:

Alcohol abusers, opiate abusers, combined alcohol and opiate abusers and a non-clinical group and found that these schema-level cognitions were less healthy in the clinical groups than in the non-clinical group, particularly among individuals who abused alcohol. In several studies cognitive-behavioural treatment is shown to be effective in treatment of alcohol and substance use disorders.

In one study, Chang et al. (2011) studied psychometric properties of the Chinese craving beliefs questionnaire for heroin abusers. They found that Chinese version of Craving Beliefs Questionnaire (CCBQ) is an easy-to-administer assessment instrument of measurement of craving beliefs for heroin abusers. According to results, the psychometric properties of the CCBQ seem promising for both research and clinical purposes, and the scale deserves further refinement and validation with heroin abusers. On the other hand, in literature we could not find studies completed with BSU in other languages.

As mentioned in the introduction, having difficulty in coping skills with stress and problem solving, and problems in socialization may lead to the use of substances in connection with maladaptive substance and illness related beliefs. These dysfunctional beliefs occurs in the absence of effective coping strategies. Addicted patient have tendency to remember positive outcomes of using substance on mental and emotional state instead of the negative consequences.

Studies supported importance of beliefs about substance use and craving related cognitive beliefs about substance or alcohol. In one study beliefs about craving and the severity of physical dependence may play an important role in relapse of male alcoholic patients. These factors could have a direct clinical application for predicting relapse to drinking in male alcohol-dependent patients (Turkcapar et al. 2005).

The original form of BSU can be found in Beck's major book in the field "Cognitive therapy of substance use". We have not found any studies in the English literature which uses BSU. This study fills an important gap in the literature.

We hope that Turkish version of BSU will be used in new research studies in Turkey and findings of these studies will provide more knowledge about different thought characteristics of addicted patients. By knowing these specific thoughts, therapists can focus on finding alternative thoughts and may help their patients in clinical improvement in the time of remission.

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