

Comparison of Metacognitive Beliefs and the Amount the Sensation Seeking in Addicted and Normal People

Tayebe Kashefi*¹

1. Torbatehdyariyeh University of Medical Sciences, Torbatehdyariyeh, Iran

Article information	Abstract
<p>Article history: Received: 13 Feb2012 Accepted: 6 June 2012 Available online: 11 Feb 2013 ZJRMS 2014; 16(5): 79-82</p> <p>Keywords: Metacognitive beliefs Sensation seeking Substance abuse</p>	<p>Background: The metacognitive theory refers to beliefs and theories which people experience in according to their familiarities and their excitements, such beliefs can involve other kinds of treatments toward paying attention to specific types of thoughts, about other acquintive events.</p> <p>Materials and Methods: In this correlational descriptive study, the subjects were consisted 264 people. The samples for addicted subjects were chosen amongst those who had registered their names in addiction centers. These people were chosen by simple sample method Torbat-e-Heydariyeh in 2010-11. The witness cluster was also consisted with, socio-individualistic characteristics. To gather the outcoming data properly, the Metacognitive beliefs questionnaire (MCQ-30) and Zuckerman sensation seeking using. SPSS-16 software, descriptive statistical indices used to analyze data.</p> <p>Results: There were significant differences of scores between two group in metacognitive beliefs and sensation seeking ($p<0.01$).</p> <p>Conclusion: The current survey is equivalent with basic hypotheses of metacognitive model and psychological status of addicts.</p> <p>Copyright © 2014 Zahedan University of Medical Sciences. All rights reserved.</p>

Introduction

Substance abuse and addiction to those materials changing temper and behavior are amongst the most obvious psycho-social damages which could easily weaken foundation of peoples' life in a country and endanger humane dynamics therein. Base on unofficial governmental statistics, between 1.5 to 4.5 million people in Iran suffer from substance abuse [1]. According to cognitive visions, addictive behaviors are effected by believes attitudes and thoughts of the individuals. Most of the people think about or believe in failure and incapability, but cognitively they respond differently to those thoughts. According to Spada and Nikcevic [2], activating meta-cognitive belief of danger and uncontrollability makes the people emotionally tension. Experiencing emotional tension in those people having high scores in risk and uncontrollability aspect makes them to be entangled in oppositional conflicting behavior strategies and through these strategies, processing threat and intensification of stress as well as negative emotions become available. Wells [3] argues that, in information analysis process, emotional and meta-cognitive factors have impact on cognition. These emotional changes may bring change to the cognition and evaluations, resulting in emergence of certain behaviors and emotions. However, one of the manifestations of searching for new experiences in sensation seeking people is trying drugs which will turn to addiction after a period of time. Results of studies show that, meta-cognitive beliefs play an important role in addiction to alcohols [4, 5]. Present research aims at making a comparison between meta-

cognitive beliefs and range of sensation seeking in addicted and normal persons.

Materials and Methods

This research is a correlation form of descriptive study. Test cases were selected upon available sampling. Statistical society under study included all addicted persons referring to the "addiction treatment centers" as well as ordinary people of Torbat-e-Heydariyeh county. Addicted people sample were consisting of 132 people (100 male and 12 female), selected from self-referenced persons to "addiction treatment centers" in 2010-11. Evidence group was also a group of 132 people (100 male and 12 female) becoming matched to the addicted group in terms of socio-individual characteristics such as age, gender, education, marital status and residence. There were 264 people taking part in this research, 240 of them (90.9%) male and 24 (9.1%) female, having minimum age of 20 and maximum 62 years, with the mean age of 32.64. The researcher referred to the "addiction treatment center" to execute the search and also collect data as well as making interview with those people interested in participating in the research, and the criteria for this participation was (education at guidance school level or higher, being resident of Torbat-e-Heydariyeh and bearing full criteria as to the drug dependence in terms of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) of USA. The participants were asked to fill out research questionnaire.

In order to collect data, we made use of following instruments:

-Meta-cognition questionnaire (MCQ-30): designed by Wells and Cartwright-Hatton for measuring personal differences in positive and negative beliefs regarding anxiety and intrusive thoughts, revision and meta-cognitive judgment about cognitive efficiency. The said questionnaire is a short form of meta-cognitive questionnaire (MCQ) designed also by Wells and Cartwright-Hatton [6] containing 30 self-reporting statements which evaluates the individuals' beliefs about their thoughts. In this scale, responses are calculated upon Liker scale (1=not agreed to 4=agreed a lot). This scale like MCQ has 5 sub-scales, each of which including 6 items. MCQ₁: positive meta-cognitive beliefs in terms of anxiety, MCQ₂: negative meta-cognitive beliefs about lack of control of thoughts and dangers, MCQ₃: cognitive assurance, MCQ₄: ideas about the need to control thoughts, MCQ₅: cognitive consciousness. Shirinzadeh-Dastgiri [7] has translated and prepared this questionnaire for Iranian population. Cronbakh's alpha coefficient of overall scale for Iranian sample has been reported 91%. Cronbakh's alpha coefficients for subscales of uncontrollability, meta-cognitive beliefs, cognitive assurance and the need to control thoughts in Iranian sample have been respectively reported as 87, 86, 81, 80, and 71%. It should be remembered that, as explained by Shareh [8], because of some differences between the original questionnaire and the translated one, some items went under minor changes and achieved durability of 94% for overall questionnaire using Cronbakh's alpha method. In present project, aforementioned questionnaire has been used for measuring meta-cognitive beliefs.

-Zuckerman Sensation Seeking Scale (SSS-V): [9] In this research, we made use of 5th form of Zuckerman's Sensation Seeking Scale, which has been standardized in our country by Mahvi-Shirazi [10], resulting in 0.781 as total validity of scale and 2.92 as total standard error of the test. This scale contains 40 duple items. Items in this scale are formed of duple questions, each part being specified and separated with (a) and (b). In each item, one of alternatives is valued as one and the other as zero, so, the possible range of the scores will vary between zero

and 40. The scale consists of 6 subscales namely sensation seeking, experience seeking, thrill and adventure seeking, boredom susceptibility, novelty seeking and escape from inhibition. For data analysis, SPSS-16 software as well as descriptive statistical method (Independent *t*-test) was used. Data were interpreted in significant level of $p < 0.05$.

Results

The mean as well as standard deviations in addicted and normal persons in variables under study, are provided in table 1. As you may see in the table 1, the mean for normal people in meta-cognitive beliefs is higher than addicted persons (87.5 versus 78.4), so addicted persons' scores are lower than normal ones. To compare these means and also determine significantly the differences between them, *t*-test was used and comparative result of means between addicted and normal people in each of these 5 variables could be seen in table 1. According to table 1, addictive people have lower scores than ordinary ones in terms of meta-cognitive beliefs ($t=5.56$). So, there is a significant difference between compared means and meta-cognitive beliefs in addicted people and normal ones. Review of the means in research groups as to the 5 subscales of the meta-cognition questionnaire, also helped by independent *t*-test performed upon groups, showed that there are significant differences between following subscales in terms of statistics: uncontrollability and danger, positive beliefs as to the anxiety, cognitive awareness, cognitive assurance and the need to control thoughts. Table 2 shows the scores result of both groups on the basis of their scores from sensation seeking scale. As you may see, the mean for ordinary people is lower than addicted persons (19.2 versus 21.2).

Comparative results of the means of both groups (using independent *t*-test), in every subscale also is observed in table 2. Upon this, there is a significant difference between two groups in terms of sensation seeking and its subscales ($t=1.966$). Thus, there would be a significant difference between sensation seeking in addicted and ordinary people.

Table 1. Comparison made between means of the two groups in all MCQ-30 scales

Variables	Group	Number	Mean± SD	<i>p</i> -Value
Positive beliefs	Normal	132	15.9±4.77	0.004
	Addicted	132	14.3±4.33	
Negative beliefs	Normal	132	17.4±4.00	0.001
	Addicted	132	15.8±3.56	
Cognitive confidence	Normal	132	16.3±5.00	0.001
	Addicted	132	12.2±4.18	
Need to control thoughts	Normal	132	18.8±3.25	0.003
	Addicted	132	17.5±3.63	
Cognitive self- consciousness	Normal	132	18.9±3.74	0.004
	Addicted	132	18.5±3.40	
Total meta-cognition	Normal	132	87.5±14.18	0.001
	Addicted	132	78.4±12.09	

Table 2. Comparison made between scores of two groups in all SSS-V scales

Variables	Group	Number	Mean± SD	p-Value
Sensation seeking	Normal	132	9.03±4.71	0.65
	Addicted	132	7.78±4.51	
Experience seeking	Normal	132	4.52±1.95	0.41
	Addicted	132	4.33±2.02	
Thrill and Adventure seeking	Normal	132	2.62±1.29	0.17
	Addicted	132	2.31±1.34	
Boredom susceptibility	Normal	132	2.68±1.22	0.14
	Addicted	132	2.81±1.08	
Novelty Seeking	Normal	132	1.59±1.15	0.01
	Addicted	132	1.31±0.92	
Escape from inhibition	Normal	132	0.85±0.74	0.33
	Addicted	132	0.75±1.01	
Total sensation seeking	Normal	132	21.2±8.68	0.65
	Addicted	132	19.2±8.33	

Discussion

This research aims at comparative study of meta-cognitive beliefs and sensation seeking in two groups of addicted and ordinary people. The results showed that, meta-cognition holds significant difference between addicted and normal people.

The findings conform to the results of research by Abolghasemi et al. [11]. Declaring that meta-cognition has a significant positive correlation with psychological outcomes in addicted persons and meta-cognition is problematic in addicted persons. Ashuri et al. [12] also came to the result that meta-cognitive beliefs have significant prospecting impact upon substance abuse attitude. Another finding stemmed from this research is that sensation seeking in addicted people is significantly more in addicted persons than ordinary ones. The results are in conformity with research done by Zuckerman [13], in this respect, while he has underlined the role of inhibition elimination as a component to sensation seeking in substance abuse and has defined sensation seeking as a prospecting variable with regard to drug dependence. Upon Fowles [14], also we could mention that those drug abusers are more vulnerable because of stronger behavioral activating system for tendency to drug abuse. Moreover, considering the fact that drugs increase provocation, those of higher sensation seeking are more inclined to use drugs and those having more tendency for drug abuse, show higher sensation seeking behaviors than ordinary people.

These results are in line with Zuckerman findings [13] concerning those with higher scores in sensation seeking in comparison to those of lower scores, to show more severe signs of substance abuse including psychological disorders and misuse of more than one kind of drugs. Those addicted persons with higher scores, have also began to use drugs in younger ages than those with lower scores. The results are indicative of sensation seeking, existing more in addicted person than ordinary ones. The findings of this part of the research, is in line with researches performed by Dom et al. [15] and Tonetti et al. [16]. In explanation of these findings, one may refer to the fact that disturbed meta-cognition beliefs, weaken the opposing skills, cognitive and behavioral interactions become inefficient, and this makes some problems to the psychological health of the person which in order to

remove these unpleasant situations, he looks at the drug abuse positively and as an instrument. Toneatto [17] also had a research on addicted people and came to the result that there is a significant positive relation between unpleasant cognitive events and drug abuse, while this was the opposite with pleasant events. In the same way, he believes that meta-cognition may be the most important intermediary of drug abuse in those people seeking treatment.

This could be explained that, addicted people have no positive method available for controlling sensations and they are trying to increase their provocation through unreasonable methods such as smoking cigarettes, drug abuse and also psychotropic drugs, inconsiderate to their health condition. So, may be meta-cognition makes some sort of adjustment in relation between sensation seeking and drug abuse.

Age range of those under examination, small size of research sample, and limitation of samples referring to the self referenced centers of Torbat-e-Heydariyeh county, makes some problems and restrictions to the interpretation and generalization of the results. More vast sampling and making those people having tendency to drug abuse equipped with appropriate and effective cognitive and meta-cognitive skills and strategies, is recommended by this research.

Acknowledgements

This paper is an outcome to a student thesis in M.A. course under code 6688. The researcher deems it necessary to appreciate all people taking part in this research, especially patients of Dr. Baradaran Addiction Treatment Center.

Authors' Contributions

Author had equal role in design, work, statistical analysis and manuscript writing.

Conflict of Interest

The authors declare no conflict of interest.

Funding/Support

Torbat-e-Heydariyeh University of Medical Sciences.

*Corresponding author at:

MSc of Psychology, Torbat

Heydariyeh University of Medical Sciences, Torbat Heydariyeh, Iran.

E-mail: kashefi88@gmail.com

References

1. Velasques MM. Group therapy in addicts. 1st ed. Tehran: Ravan Press; 2006; 3-5.
2. Spada MM, Nikcevic AV. Metacognitions in problem drinks. *Cogn Ther Res* 2007; 31: 709-716.
3. Wells A. Emotion disorders and metacognition: Innovative cognitive therapy. USA: Wiley; 2000: 520-25.
4. Spada MM, Wells A. Metacognitions, emotion and alcohol use. *Clin Psychol Psychother* 2005; 12(2): 150-155.
5. Spada MM, Wells A. Metacognitions about alcohol use in problem drinkers. *Clin Psychol Psychother* 2006; 13(2): 138-143.
6. Wells A, Certwright-Hatton S. A short form of metacognitions questionnaire. *Behav Res Ther* 2004; 42(40): 385-396.
7. Shirinzadeh-Dastgiry S. [Comparison of meta-cognition beliefs and responsibility in obsessive-compulsive disorder patients, generalized anxiety disorder and normal people] Persian [dissertation]. Shiraz: Shiraz University; 2006: 40-42.
8. Sharreh H. [Comparison of metacognitive therapy (MCT), fluvoxamine and combined treatment in improving metacognitive beliefs and subjective distress of patients with obsessive-compulsive disorder (OCD)] Persian [dissertation]. Tehran: Iran University of Medical Sciences; 2009: 17-25.
9. Zukerman M. Item revisions in the Sensation Seeking Scale. *Pers Individ Dif* 1996; 20(4): 515.
10. Mahvi-Shrazi M. Validity, reliability and standardization of sensation seeking scale Zuckerman with changes to the culture. *Daneshvar Med* 2008; 28(15): 35-48.
11. Abolghasemi A, Ahmadi M, Kiamarsi A. The relationship of metacognition and perfectionism with psychological consequences in the addicts. *J Res Behav Sci* 2007; 5(2): 73-78.
12. Ashory A, Habiby-Askarabad M, Keyvanlo A. Metacognitive beliefs and attitude to addicts in students. *J Fundam Health* 2009; 11(1): 221-222.
13. Zukerman M. Behavioral expressions and biosocial bases of sensation seeking. New York: Cambridge University Press; 1994.
14. Fowles DC. Electrodermal hyporeactivity and antisocial behavior: Does anxiety mediate the relationship? *J Affect Disorder* 2000; 61(3): 177-189.
15. Dom G, Hulstijn W, Sabbe B. Differences in impulsivity and sensation seeking between early- and late- onset alcoholics. *J Addict Behav* 2006; 31(2): 298-308.
16. Tonetti L, Adan A, Caci H, et al. Morningness-eveningness preference and sensation seeking. *Eur Psychiatry* 2010; 25(2): 111-115.
17. Toneatto T. Metacognition and substance use. *Addict Behav* 1999; 24(2): 167-74.