A study on the relationship between metacognitive beliefs and tendency to drugs among students of Medical Sciences University of Behbahan city

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Abstract
The aim of this study was to investigate the relationship between coping responses and tendency to drugs among students of Medical Sciences University of Behbahan city in Academic year 1392-93. The statistical society of this research was included all students of Medical Sciences university of Behbahan, which were chosen by available sampling method as statistical sample. The research design was correlational. Tools used in this study are: metacognition questionnaire (MCQ) and tendency to use drugs questionnaire (APS). For data analysis, Pearson correlation coefficient and multivariable regression were used. The results showed that there is an inverse and significant relationship between metacognitive beliefs and tendency to drugs among students of medical sciences university of Behbahan city. In other words, by increasing the amount of metacognitive beliefs, the tendency to drugs among students of Medical Science University of Behbahan will be decreased.

Keywords: metacognition beliefs, tendency to drugs, students.
1. Introduction

Each year many students leave home to enter university. This factor brings new opportunities for an individual, and equally encounters him with challenges and stressful factors that is somehow inevitable. Spreading the scope of psychology science and its influence in various fields of social, economic and industrial, has changed the panel of communities to a new form in terms of relationships people have with each other since it can be said without paying attention psychological issues aspect, cannot be successful in their logical and correct solving. Accordingly, leaving the house leads to the imbalance between individual resources and demands of the new situation, then the individual concerns with the evaluation of the balance (problem in accommodation), and if he deems threats try to resist. Studies have shown that people who equipped themselves to a set of coping skills and capabilities are more successful in dealing with problems, because the use of effective coping responses help them overcome physical and mental problems, interpersonal and social relationships, and conflicts, so that such peoples take advantage quality of life and mental health (Garnovfsky, Keraij, 2003).

Today, addiction is a public health problem in all around the world (Batuin, 2001). It is rare to find a country that does not involve issues of drugs abuse changing morals (United Nations, 1997). In Iran also with regard to the geographical situation and having around 2000 kilometers common borders with tow country Afghanistan and Pakistan which are known as Golden Crescent and each year produce more than 35000 drugs and also due to that our country is a young we see the growing addiction among teens and youth and students. The statistics also show that about 16% of addicts in Iran are less than 19 years and 28% of them are between 20 and 24 years turn to addiction (Barghi, 1381).

Therefore, youth and teens and students with regard to the biological and psychological conditions and changes, venture to do the self-destructive and damaging behaviors that imposes irreparable harms to the health of their body and soul and they are more at risk. There are many factors can predispose a person to such self-destructive behaviors that their most important one is drug addiction, and in contrast, there are also some preventable factors that protects an individual from getting caught in their trap most notably the self-destructive behaviors. Various researches have expressed the most important factors motivating individuals to use drugs as shyness, inability of rejecting others’ request and friends pressure, a sense of growing, reducing depression, increasing the emotional tendencies, underestimating the risk and adventure (Tanty; 2010). Some researches consider the low frustration tolerance level at the beginning, maintenance and lack of important drugs abuse (Lindgren, 2010). Actually tendency to use drugs is more common in youth and students and has straight relationship with cognitive domains and individuals’ attitudes such as their understanding from legality and the extent of community accepting of drugs, harms of drugs use and moods and pleasant consequences of drug use (Sarula and McClendon 1988). Addiction to use drugs is growing day to day as a compact density of unpleasant consequences and the word is facing with amazing static of drug use prevalence in
last decades, usually in community and especially among youth and teens (Surizaei, Khalatbari, Keikhani, Farzaneh and Raisi fard, 2011). There are several factors involved in drugs use and to design effective programs for drug use prevention, understanding the etiology of this phenomenon and its related factors is needed (Springer et al., 2004). Over the last several decades, various theories have tried to provide the clear explanation of the reasons of people tendency to the drugs. These theories have investigated the wide range of predisposing factors such as genetic, psychological, social and family factors (Poolimni, Moore and Grunt, 2010).

Based on the cognitive views, addictive behaviors are influenced by beliefs and attitudes of people (Wells & Matthews, 1996). But modern cognitive theories emphasis on the role of metacognition in the etiology of mental disorders, including addiction (Wells & Matthews, 1996).

1 Garnefski & Kraaij
1 Botvin
1 Nationals U.S
1 Substance Dependence
1 Tonetti L
1 Lindgren
1 Wells A & Matthews G

From the metacognitive perspective, drugs abuse creates significant rapid changes in cognitive events such as feelings, thoughts or memories (Espada Volz, 2005) and drugs and psychotropic drugs may influence on the cognitive events directly (for example, making peace, create avoiding, avoid painful recognition and creating awareness and attention) or indirectly (for example, a sense of attachment, shocking and evaluation suppressed) by changing beliefs and attitudes about avoiding cognitive events. These cognitive changes may be the result of a powerful amplifier that can be obtained from drug use. In addition, the use of drugs not only may create positive beliefs and expectations about drugs impacts, but also leads to gain knowledge and awareness about the cognitive consequences (Espada and Nikovich, 2007). According to Flavell, metacognition is knowledge or cognitive process which contributes in the assessment, review and cognitive control and regulates the cognitive function. Most theorists distinguish between two aspects of metacognition: cognitive knowledge that is the information which people have about the self-cognition about factors and learning strategies related to assignment; and metacognitive regulation that refers to a variety of executive actions including review, scheduling and the errors identification in performance and impact on cognitive activities (Wells, 2004). Metacognition is consisted of variables that is impaired in the flow of drug abuse and particularly may make contact with individuals’ cognitive analyses related to the drugs. According to Wells (Espada and Wells, 2006) in the process of analyzing the information, knowledge is influenced by emotional and metacognitive factors. So emotional changes may make a difference in assessments and understanding. Metacognitive perspective introduces any slips in supervision from the objective recognition level to the Meta level as mental disorder (Espada and Wells, 2006). However, today stresses and social presses threaten human mental health more than any other period and leads him toward the mental disorders and doing self-destructive behaviors such as drug abuse. Of course human reaction is not always as severe as
this level, but the psychological imbalance and damage to community relations are unpleasant consequences of such behaviors. Because these behaviors committed by some of the popularization causes expanding and developing these behaviors to the other segments of society and the subject evilly will be vanished, also if there is no correct and logical clash and preventable actions in the proper time, these behaviors will be increased and there will be irreparable damages to physical and mental health of the individual and society, therefore, to avoid such a situation we should concern with identifying the quantity and quality of such self-destructive behaviors among adolescents (Shirinzadeh, 2006). In a research "the relationship between metacognition beliefs and self-destructive behaviors was performed on people addicted to drugs" by Kashefi (1392). Information obtained through research tools was analyzed using Pearson correlation coefficient. In this descriptive correlational study, 132 patients (120 males and 12 females) with an average age of 21/33 years, from addicts referring to addiction centers in Torbat Heidarye County in 1391 were selected by available sampling method and from the psychiatrist of the center and on the basis of revised fourth edition of the Diagnostic and Statistical Manual of Mental Disorders of America Psychiatric Association (DSM-IV), has diagnostic criteria for drugs abuse dependence disorder and in order to collect data metacognitive beliefs questionnaire (-MCQ30) and self-destructive behaviors evaluation questionnaire was used (Aghamohammadian 1388). To analyze data, Pearson correlation coefficient was used. The findings of the research indicated that most self-destructive behaviors in participants was permanent drugs use, recreational different drugs use, and smoking. Among individuals’ scores there is significant negative correlation in the aspects of metacognitive beliefs and self-destructive behaviors. There was also a significant relationship between the aspects of positive beliefs about worry, uncontrollability and danger, cognitive confidence, necessity to control thoughts and cognitive self-awareness (p < %1). Also, another study by Dragon (2015) showed that there is a significant relationship between the positive metacognition role and drinking alcohol and among young people considering their emotional regulation, metacognitive beliefs affect drinking alcohol.  

1 Spada MM & wells  
1 Spada MM & Nikcevic AV  
1 Flowel  
1 Shirinzadeh-Dastgiry S-

2. Research methodology, the research society, sample and sampling method  
The studied statistical society included all medical science students of Behbahan which are at second semester 92-93, will be selected by available sampling.

3. Research tools  
3-1: metacognition questionnaire (MCQ):  
MCQ has been designed by Certwright-Hatton & Wells (2004) to measure individual differences in positive and useful beliefs about worry and intrusive thoughts, review and judgment on the cognitive efficiency. Metacognition questionnaire (MCQ_30) is the short form of metacognition questionnaire (MCQ) which is made by Wells and Certwright-Hatton (2004) and includes 30 self-report questions that measures the people's beliefs about their thoughts. Response in this

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scale is calculated based on four point Likert (1 _ I’m disagree, I’m so agree _ 1). The scale similar to MCQ has five subscales, each of which are included 6 materials, MCQ1: positive metacognitive beliefs about worry, MCQ2: negative cognitive beliefs about lack of controlling the thoughts and risks, MCQ3: cognitive confidence, MCQ4: beliefs about the need to control thoughts, MCQ5: cognitive self-awareness.

Shirinzadeh (2006) has provided and translated this questionnaire for the Iranian population. Cronbach's alpha coefficient of the whole scale in Iranian sample have been reported 91%. Cronbach's alpha coefficients for subscales of the uncontrollability, metacognition beliefs, cognitive confidence and the need to control thoughts in Iranian sample has been reported 87%, 86%, 81%, 80% and 71% respectively. It should be noted that the number (2009) suggested that given the translated form of the questionnaire had differences with the original form, there was some partial changes and reliability for whole questionnaire with Cronbach's alpha method which was obtained 94%. In the present study, the so-called questionnaire will be used to measure metacognitive beliefs.

3-2: attitudes to use Drugs questionnaire (APS):
Which has been designed by Wade et al. (1992), consists of three subscales of tendency to drug use, addiction acceptance scale, and alcoholism talent scale is designed. Wade et al (1992) have obtained reliability 69% and 77% respectively. Reliability scale was obtained by Cronbach's alpha scale method 53% and split method 53% respectively (Minooei and Salehi, 1382)

<table>
<thead>
<tr>
<th>Research components</th>
<th>Index</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Minimum amount</th>
<th>Maximum amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>tendency to drugs</td>
<td></td>
<td>31/26</td>
<td>2/80</td>
<td>26</td>
<td>37</td>
</tr>
<tr>
<td>Metacognitive beliefs</td>
<td></td>
<td>81/42</td>
<td>9/79</td>
<td>60</td>
<td>106</td>
</tr>
</tbody>
</table>

4. Findings
According to the results, we see that the mean and standard deviation of tendency to drugs is equal to 31.26 and 2.80 respectively. Also, the minimum score of tendency to drugs is equal to 26 and its maximum score is 37. The mean and standard deviation of metacognition beliefs is equal to 81.42 and 9.79 respectively. Also, the minimum score of metacognitive beliefs is equal to 60 and its maximum score is 106.

**Hypothesis:** there is a significant relationship between metacognitive beliefs and tendency to drugs among students of Behbahan University of Medical Sciences.

### Table (2) Correlation coefficient between metacognitive beliefs and tendency to drugs

<table>
<thead>
<tr>
<th>Variables</th>
<th>Correlation coefficient (r)</th>
<th>Significance level (p)</th>
<th>number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metacognitive beliefs—tendency to drugs</td>
<td>-0.605</td>
<td>0.000</td>
<td>300</td>
</tr>
</tbody>
</table>

As seen in table 2, there is a significant and diverse relationship between metacognitive beliefs and tendency to drugs among students of medical sciences university of Behbahan (p<0.05, r - 0.605). In other words, by increasing the amount of metacognitive beliefs, the tendency to drug use among students of Medical Science University of Behbahan will be reduced.

### 5. Discussion and conclusion

The aim of the present study was to investigate the relationship between metacognitive beliefs and tendency to drugs among students of Medical Sciences university of Behbahan. As can be seen in table 2, there is a diverse and significant relationship between metacognitive beliefs and tendency to drugs among students of medical sciences university of Behbahan (p<0.05, r - 0.605). In other words, by increasing the amount of metacognitive beliefs, the tendency to drugs among students of Medical Science University of Behbahan will be decreased, that these findings is consistent with the research results of Kashefi (1392); Noshary et al. (1391) and Reza-Khani Moghaddam et al. (1391).

To discover these findings, it is said that there is various factors predisposing a person such self-destructive behaviors that their most important is addiction to drugs, and in contrast, there are some preventable factors protecting a person not to get in their traps. Various researches has shown that the most important factors motivating individuals to use drug is shyness, inability of rejecting others’ request and friends’ pressure, a sense of growing, reducing depression, increasing emotional tendencies, underestimating the risk and adventure. Some studies consider low frustration tolerance level at the bingeing, maintenance and lack of drugs abuse as important factors. Actually, tendency to use drugs is more prevalent among adolescents and students and has direct relationship with individuals’ cognitive and attitude domains such as their understanding from legacy and drugs social acceptance amount, damages caused by drugs use.
and or pleasant moods and results of drugs use. Metacognition is knowledge or a cognitive process that is accompanied with evaluation, review and cognition control and regulates the cognitive function. Most theorists distinguish two aspects of metacognition: metacognitive knowledge that is the information that people have about their cognition about learning factors and strategies related to the assignment; and metacognitive regulation that refer to a variety of executive actions including attention, review, scheduling and errors identification in function and effects on cognitive activities. Metacognition is consisted of variables that is disturbed during drugs abuse and may have contact with individuals’ cognitive analysis related to drugs. According to wells (Espada and Wells, 2006), during the analysis of information, cognition is influenced by emotional and metacognitive factors. Therefore, emotional changes may make change in assessments and cognition. Metacognitive perspective introduces any lapse in monitoring from objective cognition level to Meta level as a mental disorder. On the other hand, today social stresses and pressures put the human’s mental health at risk more than any other time and lead him to mental disorders and doing self-destructive behaviors such as drug abuse. Of course, human reaction is not always as severe as this level; but the psychological imbalance and damage to community relationships are the unpleasant consequence of such behaviors. Since committing such behaviors by some people expanding and developing these morals to other society segments and the obscenity of subject will be vanished, also if there is no correct and logical clash and preventable actions in the proper time, these behaviors will be increased and there will be irreparable damages to physical and mental health of the individual and society, therefore, to avoid such situations we should identify the quantity and quality of such self-destructive behaviors among adolescents.
6. References:


Dragan, Malgorzata ; ((Difficulties in emotion regulation and problem drinking in young women : The mediating effect of metacognitions about alcohol use )). Addictive Behaviors ; September 2015 , Vol .48:30-35 .


