

Original Article

Early Maladaptive Schemas in Opiate and Stimulant Users

Zahra Karami

Allameh Tabataba'ei University, Tehran, Iran

Omid Massah* ; Ali Farhoudian

Substance Abuse and Dependence Research Center, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

Ameneh O'jei

Islamic Azad University, Kish International Branch, Kish, Iran

Objectives: Early maladaptive schemas are valid representations of unpleasant childhood experiences that shape a person's viewpoints of the world, and lead to clinical symptoms such as depression, personality disorders, and substance abuse. Given the importance of this matter, we conducted a research on early maladaptive schemas in substance-abusers, to allow more appropriate preventive measures to be taken with a better understanding of the issue.

Methods: For this descriptive-comparative study, 115 patients (91 opiate users and 24 stimulant users) visiting drug addiction treatment centers were selected through convenience sampling from persons who were admitted to substance abuse treatment centers (Methadone Maintenance therapy centers), addiction treatment camps and self-help groups and Narcotics Anonymous (NA) of Yasuj. Data were collected using a Demographic Information Questionnaire and Young's Schema Questionnaire-Short Form (SQ-SF). Data analysis was done with ANOVA and t-tests.

Results: The results showed a significant difference ($P < 0.05$) between users of opiates and stimulants in terms of vulnerability to harm or illness, enmeshment, subjugation, emotional inhibition, entitlement, insufficient self-control/self-discipline, emotional deprivation, social isolation, defectiveness, failure/shame, and dependence. The average score of the stimulant-users was higher than that of opiate-users in all the schemas except for the dimensions of abandonment, mistrust, and unrelenting standards.

Discussion: Stimulant users have more early maladaptive schemas and are at a greater risk of psychological vulnerability. Early maladaptive schemas can be used by clinicians and researchers as a psychopathology and treatment method for substance dependence disorder.

Keywords: Early maladaptive schemas, Opiates, Stimulants, Substance abusers

Submitted: 21 April 2015

Accepted: 18 May 2015

Introduction

Addiction to drugs and stimulants is a physical, psychological, social and moral disease (1). The destructive psychological and physical effects of synthetic drugs are far greater than that of natural drugs. Nowadays, the abuse of stimulants, especially methamphetamine (crystal meth), which is an extremely addictive substance, is on the rise (2). Addiction is the repeated and harmful use of a substance, the deprivation of which causes upsetting signs and symptoms and that is associated with a strong desire to use again. Eventually, this behavior leads to the subject's psychological and physical destruction. A substance is a chemical product that changes mood

or behavior once it is smoked, injected, drunk or taken as a pill, and includes opioids, hallucinogens, stimulants, drinks, inhalers and analgesics. Opioid substances have been used mostly in their raw form in alcoholic opiate tincture for more than 3500 years. This group of substances includes opium, opium sap, burnt opium, heroin, morphine, codeine, methadone and drugs containing opiate derivatives. These represent the most important addictive and most common illegal substances used in Iran. Stimulants such as amphetamines and substances containing amphetamine derivatives such as ecstasy, cocaine and methamphetamine are also highly abused (3-5). These substances are the most dangerous substances abused, and are used because

* All correspondences to: Omid Massah, email: <omchomch@gmail.com>

of the euphoria, the lightheadedness and the reduced pain experienced (6,7). One of the theories that explains the underlying mechanisms and evolution of antisocial behaviors is the early maladaptive schemas theory. The treatment model is focused on Young's scheme, and is an innovative combination of Gestalt cognitive behavioral therapy (CBT) and subject associations of psychological approaches. The central point of this theory is the early maladaptive schemas. It is proposed that a potential mediator between parents and children's pathological behaviors is the inefficient early maladaptive schemas and/or core negative beliefs in children (8).

Early maladaptive schemas (EMS) are basically implicit and unconscious themes stored by individuals that are used as constructs to process future experiences. In this way, they are elaborated throughout life and determine behaviors, thoughts, emotions and relationships with other people. Generally speaking, they are very rigid and valid reflections of unpleasant childhood experiences that are formed early in life, are undeniable, often self-perceived, and represent the individual's viewpoint of the world (9-11). These schemas act as a filter to approve childhood experiences and eventually lead to clinical symptoms such as anxiety, depression, personality disorders, loneliness (due to destructive interpersonal relations), increased appetite or gastric ulcers, alcohol and substance abuse (12).

Different research studies have been conducted on early maladaptive schemas and disorders related to substance abuse. For example, Roper et al. (2010) and Shorey et al. (2012) compared schemas of alcoholic patients with non-alcoholic individuals (13,14). The alcoholics scored higher than the non-alcoholics in all the schemas. This difference was very prominent in the 'Impaired autonomy and performance', mistrust/abuse, self-sacrifice and abandonment domains. Brothie's results showed that alcoholics' scores in the vulnerability to harm or illness and emotional deprivation schemas were higher (15). Moreover, those who had the defectiveness/shame, dependence and impulsive schemas were more inclined toward substance abuse (16). Ball's research results showed that the substance abusers scored higher than the non-addicted in the disconnection/rejection, mistrust/abuse and self-sacrifice schemas (17,18). According to Petrocelli, 76% variance of personality problems and addiction are explained by schemas of emotional deprivation, dependence, entitlement/grandiosity, and enmeshment/undeveloped self (19). Kirsch

conducted a study entitled Early Maladaptive Schemas, Self-esteem, Depression and Anxiety among Young Adolescents During Substance Abuse, and found a significant relationship between self-esteem, the overall maladaptive schemas scores, and the severity of depression and anxiety for the five first months of addiction treatment. These factors are important indicators for addiction treatment (20). Razavi et al.'s study shows that addicts have more maladaptive, disconnection and rejection schemas as compared to non-addicts (21). Moreover, schemas of abandonment and instability, emotional deprivation, punitiveness, social isolation and alienation, insufficient self-control, entitlement and grandiosity are the more pronounced schemas in individuals dependent on substances (22).

Taking into account the theoretical and research background of EMS, and that it had not been systematically and extensively studied in stimulant and opioid users, we thought it would be very valuable to investigate the subject in these groups of addicts. Hence, we took it upon ourselves to study EMS among stimulant and opioid users in the city of Yasuj, as a sample population.

Methods

This descriptive-comparative study was conducted upon acquiring a license from Boyerahmad district's Drug Control Council. Among the men attending Yasuj's drug addiction treatment centers affiliated with the Welfare Organization, addiction treatment camps, substance abuse treatment centers Methadone Maintenance therapy centers (MMT) and self-help groups and Narcotics Anonymous (NA), 115 subjects (91 opiate users and 24 stimulant users) were selected from the statistical population of addicts through convenience sampling. The participants were briefed about the questionnaires before they were handed out. Furthermore, in line with ethical principles, the participants gave written consent and agreed to participate in the study on the condition their information would remain confidential.

The Demographic Information Questionnaire, which contains demographic variables such as age, sex and education, was used. Also used was Young's Schema Questionnaire-Short Form (YSQ-SF), which was designed in 1988 on the basis of Young's clinical observations to assess 15 EMS and contains 75 items (23,24). The 15 schemas include emotional deprivation, abandonment/ instability, mistrust/abuse, social isolation, defectiveness/ shame, failure,

dependence/ incompetence, vulnerability to harm or illness, enmeshment/undeveloped self, subjugation, self-sacrifice, emotional inhibition, unrelenting standards, entitlement and insufficient self-control/self-discipline. Each item is enumerated on a 6-degree scale. In this questionnaire, every five questions evaluate one schema. If the mean score of each sub-scale is above 3 that schema will be considered inefficient (23,25). Cronbach's alpha for the YSQ-SF scale was 0.96, and was 0.80 for the sub-scales (15,23,26). The validity and reliability of the YSQ-SF was evaluated in Iran by Ahi, Mohammadifar and Besharat through a factor analysis on a sample of 387 subjects, where the validity was evaluated as adequate. In Iran this

figure was estimated between 0.69 – 0.90 for all the subscales (27). In our study Cronbach's α for the subscales was computed at 0.92 – 0.93. The data were analyzed by descriptive and inferential methods. At a descriptive level we used frequency, percent and mean, and at the inferential level we applied t-test and Levene's test.

Results

According to Table (1), the highest frequency of opiate and stimulant abuse occurs respectively among high school graduates (42 opiate users and 8 stimulant users), Old-system 6th graders and associate degree-holders.

Table 1. Descriptive results related to opiate and stimulant users' educational status

Education	Opiate user		Stimulant user		Total
	Frequency	Percent	Frequency	Percent	
Primary	6	6.59	1	4	7
Old-system 6th grader	21	23.07	8	32	29
High school graduate	42	46.15	8	32	50
Associate degree	13	14.28	5	20	18
Bachelor degree	8	8.79	2	8	10
Master degree	1	1.09	1	4	2
Total	91	100	25	100	116

Table (2) and (3) show that stimulant users scored higher means on all the schemas as compared to opiate users.

Table 2. Comparison of means, t-test, Levene's test, degree of freedom, and P value of early maladaptive schemas among opiate and stimulant users

Subscales	Type of substance abused	Mean	Levene's test		T test		
			F	P value	T score	Degree of freedom	P value
Emotional deprivation	Opiates	15.36	0.009	0.926	2.275	97	0.025
	Stimulants	20.00			2.118	16.704	0.049
Abandonment	Opiates	18.58	0.387	0.536	1.447	97	0.151
	Stimulants	21.64			1.464	17.722	0.161
Mistrust/abuse	Opiates	17.63	0.734	0.394	0.961	97	0.339
	Stimulants	19.49			1.040	18.748	0.312
Social isolation	Opiates	13.02	1.195	0.277	3.303	97	0.001
	Stimulants	19.48			2.919	16.704	0.01
Defectiveness/shame	Opiates	13.71	0.827	0.365	2.400	97	0.018
	Stimulants	18.42			2.143	16.704	0.048
Failure	Opiates	12.61	2.266	0.136	2.879	97	0.005
	Stimulants	18.57			2.480	15.958	0.025
Dependence/incompetence	Opiates	12.69	0.713	0.400	2.762	97	0.007
	Stimulants	17.92			2.541	16.581	0.021
Vulnerability	Opiates	12.47	1.412	0.238	3.787	97	0.006
	Stimulants	19.75			3.227	15.865	0.005
Enmeshment	Opiates	14.63	0.108	0.743	2.616	97	0.01
	Stimulants	19.59			2.465	16.837	0.025
Subjugation	Opiates	17.33	1.984	0.162	2.435	97	0.017
	Stimulants	21.56			3.231	23.823	0.004
Self-sacrifice	Opiates	17.33	1.984	0.162	2.435	97	0.017
	Stimulants	21.56			3.231	23.823	0.004
Emotional inhibition	Opiates	15.14	0.221	0.639	2.705	97	0.008
	Stimulants	20.42			2.727	17.669	0.014
Unrelenting standards	Opiates	19.3	6.197	0.015	1.295	97	0.198
	Stimulants	21.53			1.810	25.86	0.082
Entitlement	Opiates	17.44	4.883	0.029	2.973	97	0.004
	Stimulants	22.58			4.089	25.192	0.002
Insufficient self-control/self-discipline	Opiates	15.62	0.101	0.752	2.703	97	0.008
	Stimulants	20.3			2.586	17.012	0.019

Table 3. The ANOVA test comparing maladaptive schemas in opiate and stimulant abusers

Variable		Sum of squares	df	Mean of squares	f	P value
Vulnerability to harm and illness	Inter-group	636.144	1	636.144	14.340	0.000
	Intra-group	4303.098	97	44.362		
Enmeshment	Inter-group	295.735	1	295.735	6.845	0.010
	Intra-group	4190.961	97	43.206		
Subjugation	Inter-group	214.961	1	214.961	5.930	0.017
	Intra-group	3516.232	97	36.250		
Self-sacrifice	Inter-group	214.961	1	214.961	5.930	0.017
	Intra-group	3516.232	97	36.250		
Emotional inhibition	Inter-group	334.109	1	334.109	7.317	0.008
	Intra-group	4429.153	97	45.661		
Unrelenting standards	Inter-group	59.943	1	59.943	1.678	0.198
	Intra-group	3465.554	97	35.727		
Entitlement	Inter-group	317.513	1	317.513	8.840	0.004
	Intra-group	3484.027	97	35.918		
Insufficient self-control/self-discipline	Inter-group	263.433	1	263.433	7.305	0.008
	Intra-group	3497.899	97	36.061		
Emotional deprivation	Inter-group	258.265	1	258.265	5.176	0.025
	Intra-group	4839.694	97	49.894		
Abandonment	Inter-group	112.511	1	112.511	2.093	0.151
	Intra-group	5214.011	97	53.753		
Mistrust/abuse	Inter-group	41.270	1	41.270	0.923	0.339
	Intra-group	4335.267	97	44.693		
Social isolation/alienation	Inter-group	502.310	1	502.310	10.913	0.001
	Intra-group	4464.907	97	46.030		
Defectiveness/shame	Inter-group	266.771	1	266.771	5.760	0.018
	Intra-group	4492.120	97	46.311		
Failure	Inter-group	426.929	1	426.929	8.286	0.005
	Intra-group	4997.617	97	51.522		
Dependence/incompetence	Inter-group	328.412	1	328.412	7.627	0.007
	Intra-group	4176.554	97	43.057		

There were significant differences between users of opiates and stimulants in terms of vulnerability to harm or illness, enmeshment, subjugation, emotional inhibition, entitlement, insufficient self-control/self-discipline, emotional deprivation, social isolation/alienation, defectiveness/shame, failure, and dependence/incompetence ($P<0.05$). There were no significant differences between the subscales of self-sacrifice, unrelenting standards, abandonment, and mistrust/abuse ($P>0.05$).

Discussion

The current study was conducted to compare early maladaptive schemas in opiate and stimulant users. Based on our findings, the mean number of individuals abusing stimulants was significantly higher than those using opiates. These differences were pronounced in the following schemas: emotional deprivation, social isolation, defectiveness/ shame, failure, dependence/ incompetence, vulnerability, enmeshment, subjugation, self-sacrifice, emotional inhibition, entitlement/ grandiosity and insufficient self-control/ self-discipline. These schemas are related to the domains of ‘impaired limits’ and ‘over vigilance & inhibition’, and it may be said

that stimulant users are more vulnerable in the EMS. Our results are in concord with Baal’s theory (17,18), which states that substance abuse could be attributed to the direct activation of maladaptive schemas (entitlement/ grandiosity, insufficient self-control/ self-discipline). Zargar et al. also showed that the following schemas were markedly dominant in substance-dependent individuals: abandonment/ instability, emotional deprivation, punitiveness, social isolation/ alienation, insufficient self-control/ self-discipline, and entitlement/ grandiosity (22). According to this study’s findings, neither the opiate users nor stimulant users had significant differences in the abandonment, mistrust/ abuse, and unrelenting standards schemas. These differences were more prominent in the emotional deprivation, self-sacrifice, emotional inhibition, unrelenting standards, entitlement, insufficient self-control/ self-discipline and abandonment schemas, as compared to the other schemas. Our results matched the results obtained by Roper et al., Shorey et al. and Petrocelli et al. They found an association between addiction, psychological and personality disorders and maladaptive schemas in substance abusers; these schemas were present more in these individuals than

the population who had healthier psychological and social performances. Most of these research studies showed that the frequencies of the five schemas falling under the disconnection & rejection domain were higher than the others, and that most psychological and personality disorders such as addiction, depression, anxiety, paranoia and repeated suicidal behavior have the disconnection & rejection schemas (13,14,19).

Based on our results, stimulant users scored higher in the insufficient self-control/ self-discipline schema. Having this schema, they avoid unpleasant emotions and situations, and lack personal integrity, commitment and responsibility. These findings are consistent with Young's comments (28).

In searching for the pathology of substance abuse, cognitive theories recognize a lack of personal integrity, social undesirability, irresponsibility, and eventually a lack of setting rational limits for oneself as predisposing factors. A lack of self-discipline and implementation of rational limits is similar to Verheul's theory on the path of overcompensation of inhibition towards substance abuse, where the lack of essential limits has been explained as a predisposing factor (22, 29). As cognitive infrastructures, early maladaptive schemas lead to the formation of irrational beliefs. Schemata possess cognitive, emotional and behavioral components; in line with the schemata that exist within us, and those that are activated, psychological disorders such as depression, anxiety, work performance disorders, substance abuse, interpersonal and intrapersonal conflicts arise. Schemata do not directly result in disorders, but increase the individual's vulnerability toward the disorder. Maladaptive schemas are not individual traumatizing incidents but are created through continuous existing models, experiences and communications between family members and peers (28).

Moreover, Young believes that addicts who have the mistrust/abuse schema believe that others want to take advantage of them at the smallest possible opportunity. For example, they hurt them, they

degrade them, lie to them, misbehave with them, deceive them or make fun of them. Those who have the emotional deprivation schema do not expect to have fulfilling emotional relationships with others. Those who have the defectiveness/shame schema feel they are defective, bad, low or invaluable individuals, and that they will undoubtedly be abandoned by others if they expose themselves before them. This schema is usually associated with the feeling of shame toward the perceived defects. These defects may be personal (e.g. selfishness, impulsiveness, aggressiveness, sexual desires) or general (e.g. unattractive appearance, social undesirability). Addicts who possess the social isolation/alienation schema feel they are different from others and are social misfits. This schema is actually concerned with feeling different or inappropriate in the society. Usually, patients with this schema don't feel attached to any group or community (23, 28, 30).

Conclusion

Early maladaptive schemas differ between stimulant and opiate users. Taking into account the results of this and other studies, we may conclude that the psychological vulnerability resulting from early maladaptive schemas and its difference in substance abusers, particularly in stimulant and opiate users, can be considered a risk factor for substance abuse. Hence, by identifying the maladaptive schemas particular to these individuals we may prevent addiction and adopt effective therapeutic strategies. Furthermore, physicians and researchers can consider EMS as a psychological pathologic method and apply it in the treatment of associated substance dependence disorders.

Conflict of Interest

None declared. The authors have no conflict of interest.

Acknowledgment

We thank all the individuals who participated in this research.

References

1. Galanter M. Innovations: alcohol & drug abuse: spirituality in Alcoholics Anonymous: a valuable adjunct to psychiatric services. *Psychiatr Serv.* 2006;57(3):307-9.
2. Parsegian A, Glen Jr WB, Lavin A, See RE. Methamphetamine Self-Administration Produces Attentional Set-Shifting Deficits and Alters Prefrontal Cortical Neurophysiology in Rats. *Biological Psychiatry.* 2011;69(3):253-9.
3. Shirinbayan P, Rafiey H, Vejdani Roshan A, Narenjiha H, Farhoudian A. Predictors of retention in methadone maintenance therapy: a prospective multi-center study. *Sci Res Essay.* 2010;5(21):3231-6.
4. Farhoudian A, Sadeghi M, Khoddami Vishteh HR, Moazen B, Fekri M, Rahimi Movaghar A. Component analysis of Iranian crack; a newly abused narcotic substance in Iran. *Iranian journal of pharmaceutical research : IJPR.* 2014;13(1):337-44.

5. Narenjiha H, Rafiey H, Jahani MR, Assari S, Moharamzad Y, Roshanpazoo M. Substance-dependent professional drivers in Iran: a descriptive study. *Traffic injury prevention*. 2009;10(3):227-30.
6. Shorey RC, Stuart GL, Anderson S. The early maladaptive schemas of an opioid-dependent sample of treatment seeking young adults: A descriptive investigation. *Journal of Substance Abuse Treatment*. 2012;42(3):271-8.
7. Veilleux JC, Colvin PJ, Anderson J, York C, Heinz AJ. A review of opioid dependence treatment: pharmacological and psychosocial interventions to treat opioid addiction. *Clinical psychology review*. 2010;30(2):155-66.
8. Sheffield A, Waller G, Emanuelli F, Murray J, Meyer C. Links between parenting and core beliefs: Preliminary psychometric validation of the Young Parenting Inventory. *Cognitive Therapy and Research*. 2005;29(6):787-802.
9. Seligman ME, Schulman P, Tryon AM. Group prevention of depression and anxiety symptoms. *Behaviour Research and Therapy*. 2007;45(6):1111-26.
10. Shirvani MY, Peyvastegar M. The relationship between life satisfaction and early maladaptive schemas in university students. *Knowledge & Research in Applied Psychology*. 2011;12(2):55-65.
11. Judge TA, Locke EA, Durham CC, Kluger AN. Dispositional effects on job and life satisfaction: the role of core evaluations. *Journal of applied psychology*. 1998;83(1):17-34.
12. Simos G. *Cognitive behaviour therapy: a guide for the practicing clinician*. First ed. New York: Psychology Press; 2002.
13. Roper L, Dickson JM, Tinwell C, Booth PG, McGuire J. Maladaptive cognitive schemas in alcohol dependence: Changes associated with a brief residential abstinence program. *Cognitive Therapy and Research*. 2010;34(3):207-15.
14. Shorey RC, Anderson SE, Stuart GL. Gender differences in early maladaptive schemas in a treatment-seeking sample of alcohol-dependent adults. *Substance use & Misuse*. 2012;47(1):108-16.
15. Brothie J, Meyer C, Copello A, Kidney R, Waller G. Cognitive representations in alcohol and opiate abuse: The role of core beliefs. *British Journal of Clinical Psychology*. 2004;43(3):337-42.
16. Brummett BR. Attachment style, early maladaptive schemas, coping self-efficacy, therapy alliance and their influence on addiction severity in methadone-maintenance treatment. New York: ProQuest; 2007.
17. Ball SA, Cecero JJ. Addicted patients with personality disorders: Traits, schemas, and presenting problems. *Journal of Personality Disorders*. 2001;15(1):72-83.
18. Ball SA, Cobb-Richardson P, Connolly AJ, Bujosa CT, O'Neill TW. Substance abuse and personality disorders in homeless drop-in center clients: symptom severity and psychotherapy retention in a randomized clinical trial. *Comprehensive psychiatry*. 2005;46(5):371-9.
19. Petrocelli JV, Glaser BA, Calhoun GB, Campbell LF. Cognitive schemas as mediating variables of the relationship between the self-defeating personality and depression. *Journal of Psychopathology and Behavioral Assessment*. 2001;23(3):183-91.
20. Kirsch J. Early maladaptive schemas self-esteem and changes in depression and anxiety in young adults during residential substance abuse treatment. Pennsylvania: Widener University; 2009.
21. Razavi V, Soltaninezhad A, Rafiee A. Comparing of Early Maladaptive Schemas between Healthy and Addicted Men. *Zahedan Journal of Research in Medical Sciences*. 2012;14(9):60-3.
22. Zargar M, Kakavand A, Jalali M, Salavati M. Comparison of maladaptive early schemas and avoidance behaviors in opioid dependent men and non-dependent men. *Journal of Applied Psychology* 2011;5(1):69-84.
23. Young JE, Klosko JS, Weishaar ME. *Schema therapy: A practitioner's guide*. New York Guilford Press; 2003.
24. Glaser BA, Campbell LF, Calhoun GB, Bates JM, Petrocelli JV. The Early Maladaptive Schema Questionnaire-Short Form: A construct validity study. *Measurement and Evaluation in Counseling and Development*. 2002;35(1):2-13.
25. Lotfi R, Donyavi V, Khosravi Z. Comparison of Early Maladaptive Schemas Between Personality Disorder (cluster B) and Normal Subjects. *Annals of Military and Health Sciences Research*. 2007;5(2):1261-6.
26. Welburn K, Coristine M, Dagg P, Pontefract A, Jordan S. The Schema Questionnaire-Short Form: Factor analysis and relationship between schemas and symptoms. *Cognitive Therapy and Research*. 2002;26(4):519-30.
27. Ahi G, Mohammadifar M, Besharat M. Reliability and Validity of Young's Schema Questionnaire-Short Form. *Journal of psychology & Education* 2007;37(3):5-20.
28. Young JE, Klosko JS, Weishaar ME. *Schema therapy: A practitioner's guide*. United Kingdom: Cambridge Univ Press; 2005.
29. Verheul R. Co-morbidity of personality disorders in individuals with substance use disorders. *European Psychiatry*. 2001;16(5):274-82.
30. Kellogg SH, Young JE. Schema therapy for borderline personality disorder. *Journal of clinical psychology*. 2006;62(4):445-58.