

Original Article

The Relationship between Childhood Maltreatment and Opiate Dependency in Adolescence and Middle Age

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Abstract

Background: Child maltreatment is a global phenomenon with possible serious long-term consequences. The present study aimed to determine the relationship between childhood maltreatment and opiate dependency in older age.

Methods: In this study, 212 opiate dependent individuals and 216 control subjects were selected consecutively. The data collection instrument was a questionnaire which consisted of background variables, General Health Questionnaire-12 (GHQ-12), and Childhood Trauma Questionnaire (CTQ). The questionnaires were anonymously completed by both groups in a private environment after obtaining informed consents.

Findings: The mean age in the addicts and non-addicts were 31.4 ± 6.7 and 30.8 ± 7.5 , respectively ($P = 0.367$). Moreover, 84.4% of the opiate abusers and 76.9% percent of the control group were male ($P = 0.051$). The mean score of CTQ in the study and control groups were 47.2 ± 1.0 and 35.8 ± 0.6 , respectively ($P < 0.001$). The frequency of all types of abuse and neglect were higher in the addicted group. While 70.3% of the study group reported at least one type of childhood maltreatment, this figure was as low as 33.8% in the control group ($P < 0.001$). After adjusting the two groups for differing background characteristics and the GHQ-12 score, emotional abuse (OR = 5.06), physical neglect (OR = 1.96), and sexual abuse (OR = 1.89) were proved to have significant relationships with addiction to opiates.

Conclusion: The frequency of all types of childhood maltreatment in the group addicted to opiates was higher than the control group. Emotional abuse, physical neglect, and sexual abuse had significant effects after adjusting other variables.

Keywords: Adolescent, Child abuse, Substance dependency.

Addict & Health 2011; 3(3-4): 92-98

Received: 12.10.2010, Accepted: 21.2.2011

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Introduction

Childhood maltreatment is a global problem with a higher prevalence in developing countries in comparison with developed countries.¹ According to the World Health Organization (WHO), 20% of women and 10% of men have a history of sexual abuse while 20-25% of children have reported physical abuse.²

Childhood maltreatment leaves numerous lifelong consequences such as depression, obesity, high risk of sexual misbehaviors, and can, in the large scope, even have a negative impact on economic and social development of the countries.

Several studies have been conducted on the relationship between childhood maltreatment and drug abuse in later life. The majority of such studies have been, however, limited to Western countries.³ The results of these studies, nevertheless, suggest that there exists a relationship between drug abuse and childhood maltreatment.^{3,4} In the relatively few studies on the prevalence of childhood trauma in Iran, the prevalence of physical punishment has been reported as 34.1% for boys and 32.4% for girls.⁵

On the other hand, it has been proved that the frequency of child abuse is higher in lower socioeconomic classes as well as in children with drug abusing parents.⁶ The prevalence of drug abuse (specifically opiate abuse) in Iran is at such an alarming level that this country is one of the highest consumers of narcotics worldwide.⁷ None of the studies that relate drug abuse to the history of childhood maltreatment have so far particularly assessed opiate users.^{3,4,8}

The present study aimed to examine the associations between types of childhood maltreatment and opiate dependency after the age of 18 in Iran, as one of the countries in the Middle East.

Methods

This case-control study was performed in Bardsir, southeastern Iran. Two hundred twelve opiate-dependent subjects who visited four drug treatment centers in the city (study group) were consecutively enrolled in the study. In addition, 216 age-matched subjects who visited the neighborhood clinics for reasons other than addiction treatment were considered as the control group.

Informed verbal consents were obtained from all subjects prior to entry into the study.

Individuals were included in the study group if they were above 18 years of age and were opiate dependent based on the DSM-IV criteria. The participants in the control group were assumed to be opiate addiction free based on the DSM-IV interviews and self-reports.⁹

Procedures:

Questionnaires were delivered to and completed by all the participants in a given private area. Anonymous questionnaires were then placed in a closed box to ensure the confidentiality, having assured that the boxes would not be opened before the end of data collection process.

Instruments:

The data collection instrument consisted of three parts. The first part included demographic information such as age, sex, marital status, and education level. The second and third parts were Childhood Trauma Questionnaire and General Health Questionnaire-12, respectively.

Childhood trauma Questionnaire (CTQ):

The CTQ is a self-report questionnaire containing 28 items with 5 subscales of sexual abuse, physical abuse, emotional abuse, physical neglect, and emotional neglect. Each item is rated on a 5-point scale. In addition to the total score, a *moderate-severe* cutoff score was also determined for each subscale (emotional abuse: 13; physical abuse: 10; sexual abuse: 8; emotional neglect: 10; and physical neglect: 10).

The participants were subsequently divided into two groups of maltreated and non-maltreated.¹⁰ The reliability and validity of the Persian version of CTQ has been well established.¹¹

General Health Questionnaire-12 (GHQ-12):

The GHQ-12 is a self-report questionnaire consisting of 12 questions with an aim to determine the current mental health status. The Persian version of this questionnaire has been proved to be reliable and valid.¹² Each question has four choices graded as 0, 0, 1, and 1. Therefore, participants can score between 0 and 12. Scores higher than 3.7 indicate potential mental health problems.

In addition, background questions about age, gender, education level, marital status, history of psychiatric disease, and other questions about opiate abuse (the age at which consumption

started, names of other drugs consumed, etc.) were also asked.

Statistical Analysis:

The comparison of quantitative variables and the percentages between the two groups was done using t-tests and chi square test. Moreover, to examine the association of different types of childhood maltreatment and adulthood opiate addiction, stepwise logistic regression analysis was used. Multivariate analysis of variance (MANOVA) was utilized in order to compare the subscales of CTQ between the two groups.

Results

This research analyzed 212 questionnaires completed by the experimental group as well as 216 questionnaires by the control group. The mean age of the participants in the experimental and control groups were 31.4 ± 6.7 and 30.8 ± 7.5 years, respectively ($P = 0.367$). Males constituted 84.4% of the experimental group and 76.9% of the control group ($P = 0.050$). Other background variables are described in Table 1.

Opiate abuse was started at a mean age of 20.5 ± 7.5 years. Main opiates used in the

substance dependent group were opium (54.7%), heroin (34.9%), and opium residuals named *Shireh* (opium sap) and *Sookhteh* (10.4%). CTQ scores in all areas of abuse and neglect were significantly higher in the opiate dependent group ($P < 0.001$). The total scores (\pm SE) of CTQ for the abusers and the control group were 47.2 ± 0.1 and 35.8 ± 0.6 , respectively ($P < 0.001$) (Table 2). The mean GHQ-12 score in the drug dependent group was significantly higher than that of the control group (4.8 ± 0.2 vs. 3.0 ± 0.2 ; $P < 0.001$).

According to the GHQ-12 questionnaire, 88 participants in the control group (40.7%) and 124 participants in the experimental group (58.5%) had poor mental health ($P < 0.001$). In a multivariate logistic regression analysis, the comparison between individuals with university education and those with elementary level education showed the latter to be 3.91 times (95% CI, 1.58-9.68) more at risk of drug addiction ($P = 0.004$). A GHQ score over 3.7 with an adjusted odds ratio of 1.51 and $P = 0.006$ would potentially increase the risk of addiction. The relationships of other variables with opiate dependency are presented in Table 3.

Table 1. Baseline characteristics of the opiate dependent and control groups

Variables	Opiate dependent group (n = 212)	Control group (n = 216)	P
Age	31.4 ± 6.7	30.8 ± 7.5	0.367
Sex			0.050
Male	179 (84.4%)	166 (76.9%)	
Female	33 (15.6%)	50 (23.1%)	
Educational level			< 0.001
Elementary School	37 (17.5%)	12 (5.6%)	
Secondary School	79 (37.3%)	47 (21.9%)	
Diploma	76 (35.8%)	108 (50.2%)	
University degree	20 (9.4%)	48 (22.3%)	
Marital status			0.440
Single	65 (30.7%)	72 (33.3%)	
Married	130 (61.3%)	133 (61.6%)	
Other	17 (8%)	11 (5.1%)	
Place of previous residence (during childhood)			0.119
Urban areas	83 (39.26%)	69 (31.9%)	
Rural areas	129 (60.8%)	147 (68.1%)	
Place of current residence			0.504
Urban areas	130 (61.3%)	127 (58.8%)	
Rural areas	81 (38.2%)	89 (41.2%)	
Number of family members	4.8 ± 2.1	4.6 ± 2.1	0.336
History of psychiatric illnesses	11 (5.2%)	2 (0.9%)	0.010

Table 2. The comparison of mean \pm SD scores of CTQ and its subscales, as well as GHQ-12 between the opiate dependent and control groups

Scale	Opiate dependent group (n = 212)	Control group (n = 216)	P
Emotional abuse	11.1 \pm 0.4	7.0 \pm 0.2	< 0.001
Physical abuse	7.1 \pm 0.2	6 \pm 0.2	< 0.001
Sexual abuse	7.3 \pm 0.2	5.8 \pm 0.1	< 0.001
Emotional neglect	11.6 \pm 0.3	8.8 \pm 0.2	< 0.001
Physical neglect	11.1 \pm 0.3	7.9 \pm 0.2	< 0.001
CTQ score	47.2 \pm 1.0	35.8 \pm 0.6	< 0.001
GHQ-12 score	4.8 \pm 0.2	3.0 \pm 0.2	< 0.001

Table 3. The relationship between the selected variables and opiate dependency using stepwise logistic regression model

Variables	Matched odds ratio	Confidence interval 95%	P
Educational level			
Elementary School	3.91	1.58-9.68	0.003
Secondary School	2.54	1.28-5.04	0.008
Diploma	1.41	0.74-2.66	0.296
University degree	Reference	-	-
Emotional abuse			
Yes	5.06	2.30-11.18	< 0.001
No	Reference	-	-
Sexual abuse			
Yes	1.89	1.04-3.43	0.036
No	Reference	-	-
Physical neglect			
Yes	1.96	1.21-3.18	0.006
No	Reference	-	-
GHQ (Mental health)			
Yes	1.51	0.98-2.33	0.061
No	Reference	-	-

* The Multivariate model was only applied to variables having a *P* value less than 0.05 in bivariate analysis.

Discussion

Our findings confirmed childhood maltreatment as a potential risk factor for opiate addiction. These results are of considerable value as they were acquired by standard tools which reduced the possibility of under-reporting.¹³ Moreover, the adjusted effect of childhood trauma with simultaneous measurements of other variables (including age, sex, education level and general mental health) were analyzed.

The two groups did not show significant differences in most of the baseline characteristics. In all forms of childhood maltreatment, the worse situation was seen in the opiate dependent group. Similar results were obtained after the subscales of CTQ were dichotomized into maltreated and non-maltreated groups.¹⁴ Physical neglect (51.7%), emotional abuse (34.0%) and sexual abuse (31.6%) all had the highest prevalence in the opiate addicted group.

Over two thirds of the addicts had reported

at least one type of childhood trauma whereas in the control group, only one third of the participants had reported such experiences. As the prevalence of childhood maltreatment differs from country to country,² the patterns of drug abuse among different cultures is apparently different, too. As an instance, in a study conducted in Haiti with an aim to clarify the relationship between childhood maltreatment and mental health, the most common form of childhood maltreatment was found to be physical neglect.

Moreover, 85.7% of men had been involved in at least one type of childhood maltreatment. Martsolf, in another study using the CTQ, did not show any significant differences in the scores of emotional abuse and sexual abuse between methylenedioxyamphetamine (MDMA) users and non-users.¹⁵

As all forms of childhood maltreatment in the bivariate analysis had significant differences between the two groups, they were entered in

the multivariate logistic regression model simultaneously where significant relationships were seen regarding emotional abuse (OR = 5.06), physical neglect (OR = 1.96) and sexual abuse (OR = 1.89). This relationship has had different figures in different studies. In Rodgers et al. study, the associations between forms of childhood maltreatment and types of unhealthy maltreatment and unhealthy behaviors such as smoking were evaluated and only sexual abuse was found to be associated with smoking.¹⁴

In Moran et al. study, the highest correlations were observed in physical abuse, sexual abuse, and emotional abuse.⁴ Physical punishment scored high in the study of physical abuse in the logistic regression analysis. The reason might have been that both drug addicts and the control group, i.e. the total population, experienced such physical abuse.⁵ Nevertheless, depending on the settings, methodology, and subjects of the study, wide varieties of cultures should be taken into consideration.³

Childhood maltreatment impacts brain architecture,¹ psychological development, and cognitive and social functioning⁴ through various bio-psychosocial mechanisms. These effects result in an increased probability of drug abuse in higher ages. Therefore, preventing or reducing the incidence of childhood maltreatments can reduce the prevalence of

substance abuse. Studies on the etiology of addiction among adolescents have shown that parenting style is one of the main causes of drug abuse.¹⁶ Authoritarian parenting increases the possibility of emotional neglect and abuse which can in turn increase the likelihood of drug abuse in children.¹⁶

The present study, however, had two main limitations. A non-representative convenience sample of respondents limited to local treatment centers may result in over-generalization of the findings. Under-reporting types of childhood maltreatment can also reduce the likelihood of discovering conservative bias and positive results.

In conclusion, the possibility of different types of childhood abuse and neglect in the opium dependent group (in comparison with the non-dependent group) was much higher. Thus, the relationship between emotional abuse, sexual abuse and physical neglect during the childhood and the likelihood of opiate dependence in older age needs more attention.

Conflict of Interest: The Authors have no conflict of interest.

Acknowledgment

This research was submitted to Islamic Azad University, Branch of sciences and researches of Fars as thesis for the degree of Master of Science (no. 1791/90).

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ارتباط بین سوء رفتار دوران کودکی و وابستگی به مشتقات تریاک در دوران جوانی و میانسالی

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چکیده

مقدمه: سوء رفتار دوران کودکی یک پدیده جهانی است که می‌تواند عواقب طولانی مدت و جدی از خود به جای گذارد. هدف از این مطالعه، پی بردن به ارتباط بین سوء رفتار دوران کودکی و وابستگی به مشتقات تریاک در سنین بعد از آن بود.

روش‌ها: در این پژوهش، ۲۱۲ فرد وابسته به مواد و ۲۱۶ فرد شاهد به صورت متوالی وارد مطالعه شدند. ابزار جمع‌آوری داده‌ها شامل متغیرهای زمینه‌ای، پرسش‌نامه سلامت عمومی ۱۲ سؤالی و پرسش‌نامه سوء رفتار دوران کودکی (CTQ) بود. پرسش‌نامه‌ها توسط افراد در هر دو گروه در یک مکان امن و پس از اخذ رضایت آگاهانه به صورت بدون نام تکمیل گردید.

یافته‌ها: میانگین سنی در دو گروه بیمار و شاهد به ترتیب $31/4 \pm 6/7$ و $30/8 \pm 7/5$ سال بود ($P = 0/367$). ۸۴/۴ درصد از گروه بیمار و ۷۶/۹ درصد از گروه شاهد مرد بودند ($P = 0/051$). میانگین نمره CTQ در دو گروه بیمار و شاهد به ترتیب $47/2 \pm 1/0$ و $35/8 \pm 0/6$ محاسبه شد ($P < 0/001$). فراوانی تمام انواع سوء استفاده و مسامحه دوران کودکی در گروه وابسته به مواد بیشتر بود ($P < 0/001$). پس از تطبیق اثر متغیرهای زمینه‌ای، سه عامل سوء استفاده عاطفی، مسامحه فیزیکی و سوء استفاده جنسی ارتباط معنی‌داری با وابستگی به ترکیبات اپیوئیدی نشان داد.

نتیجه‌گیری: فراوانی تمامی انواع سوء رفتار و مسامحه دوران کودکی در گروه وابسته به مواد بیشتر بود و در بین آنان سوء استفاده عاطفی، مسامحه فیزیکی و سوء استفاده جنسی ارتباط قوی‌تری نشان داد.

واژگان کلیدی: جوانی، سوء استفاده دوران کودکی، وابستگی به مواد.

مجله اعتیاد و سلامت، سال سوم، شماره ۳-۴، تابستان و پاییز ۱۳۹۰

تاریخ دریافت: ۸۹/۷/۲۰

تاریخ پذیرش: ۸۹/۱۲/۲

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