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Socio-demographic, clinical characteristics, and risk factors of crystal meth Use in Baghdad/Iraq

Noor Emad Chachan[1]*, Nesif J. Al-Hemiary[2]

Abstract

The narcotics are called crystal or crystal meth. Amphetamines are used to boost performance and produce euphoria by students preparing for exams, long-distance truck drivers on travels, businesspeople with significant deadlines, athletes in competition, and troops in combat. Little is known regarding Iraqi crystal usage. The aim of study is to find out the sociodemographic and clinical characteristic of patient crystal meth use in Iraq and the risk factors of this use. Method: A cross sectional study conducted among 100 patients who were attending Ibn Rushid Psychiatric Training Hospital and addiction clinic in Baghdad Teaching Hospital. The Arabic version of ASSIST questionnaire that screens for all levels of problem or risky substance use in adult was used. 95% of the research participants were male, 51% were under 25 years old, 80% lived in metropolitan areas, and 50% were unmarried. 81% of participants had a primary or intermediate education, and 43% were jobless. 90% of participants started as children or teenagers. 99% smoke and 77% drink 99% experienced sleep problems, 87% were violent. 72% exhibited persecutory hallucination, 81% had jaw spasms. Half the sample had irregular heartbeats and auditory hallucinations. Low education, a history of violence, negative friends, and peer usage all increased amphetamine risk. Inconclusion, most Iraqi meth users were male, unmarried, jobless, and low-educated. Most of them smoked and drank as kids and adolescents. Crystal meth usage in Iraq related to inadequate education, aggression, terrible buddies, and good peer relationships.

Keywords: Socio-demographic, Clinical Characteristics, Risk factors, Crystal Meth, Baghdad, Iraq

* Correspondence author: Noorjajan89@gmail.com
[1] Psy Holy Karbala Health Department Imam Hassan Al-Mujtaba Teaching Hospital
[2] Chairman of the Scientific Council of Psychiatry, College of Medicine, university of Baghdad
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Introduction

Dextroamphetamine (Dexedrine), methamphetamine (Desoxyn), a combined dextroamphetamine-amphetamine salt (Adderall), and amphetamine-like methylphenidate are commonly utilized in the U.S. (Ritalin). Ice, crystal, crystal meth, and speed are street names. Amphetamines are analeptics, sympathomimetic, stimulants, and psychostimulants. Students preparing for exams, long-distance truck drivers on journeys, businesspeople with deadlines, athletes in competition, and troops in combat take amphetamines to boost performance and generate euphoria.

Amphetamines are addictive, albeit less so than cocaine [1]. Methamphetamine is the second most often used illegal substance after cannabis. Globally, especially in East and South-East Asia, their consumption causes health concerns. UNODC revealed that 37 million people used amphetamines in the last year and that MA was China's most popular drug. Synthetic drug users outnumber heroin users. Synthetic drug users accounted for 60.5% of all drug users at the end of 2016 [2, 3]. MA-associated psychotic symptoms have detrimental effects on the individual's quality of life and increase the burden on their family and society [4, 5]. Increasing usage of MA and accompanying hazards raise issues about psychotic symptoms in MA users.

In various nations, 13 to 46% of MA users suffer psychotic symptoms [6, 7]. In the past decade, drug usage has increased in Iraq, notably in Basra. This may mean more substance abuse and more therapy "Captagon" and crystal methamphetamine are new in Iraq. A plan for monitoring drug usage patterns and alerting Iraqi policymakers is vital for public health planning, including developing measures to detect and treat substance abusers [8]. After prolonged or severe use of MA, withdrawal symptoms may include dysphoria, anhedonia, weariness, increased hunger, sleep disturbances, and slowed or accelerated psychomotor activity. Duration and intensity of recent MA usage affect withdrawal severity.

MA-dependent people report remission of the most severe withdrawal symptoms within days to 3 weeks, while subtler effects (i.e., anhedonia) might continue for months. Apathy is more common than depression, suggesting that anhedonia may be more troublesome than MDD after MA usage [9]. Biopsychosocial variables best explain drug abuse problems. Etiological explanations include genetic and family risk factors, addiction and behavioral models, personality variables (such as chronic dysregulation, impulsivity, and novelty seeking), and environmental factors [10].

Environment, substance qualities, and genetics all impact addiction risk. Prenatal exposure, early exposure (through parental or peer usage), early use, early social deprivation, and psychological stress are other risk factors. Mental disease can cause addiction. Substance features include the drug and administration mechanism (which affects the rate of uptake).

Genetics impact addiction vulnerability, but there's no specific gene for it. Instead, studies imply that genetic contributions to addiction are the product of several genetic variables, like with other mental diseases. Epigenetic processes (changes in gene expression, not genes) may potentially contribute to addiction risk. Early life events (e.g., prenatal or early life stress) might produce gene expression alterations that affect brain circuitry and raise addiction risk. Psychosocial variables are more likely to cause drug use, but neurobiological reasons are more likely to cause addiction [11]. study aims to find out the sociodemographic and clinical characteristics of patients with crystal meth use in Iraq and studying the risk factors associated with crystal meth use.

Method

A cross sectional study was conducted among 100 substance user patients who were attending to Ibn Rushid Psychiatric Training Hospital and addiction clinic in Baghdad Teaching Hospital in the period from the beginning of February 2021 to the end of August 2021. **Inclusion criteria:** Crystal meth users attending outpatient clinic, Age over 18 years, Both genders. **Exclusion criteria:** Patients who had history of psychiatric disorder before the onset of substance use, Patient who had no insight, patients who had clear cognitive impairment. Each participant was assessed clinically by history taking and mental state assessment. Data were collecting by filling out the questioner.

Structured validated questionnaire; Face to face interview with respondents. The questionnaire consisted of:

Part 1: Socio–demographic characteristics including age, gender, residence, occupation and educational level.

Part 2: consisted of; Questions about clinical variables and previous psychiatric history and questions about previous history of violence being into jail physical, sexual abuse, family history. Of substance use family forensic history, effect on use family member conduct problems during history, of smoking during childhood and peer relationship and also there was 13 questions about clinical characteristic, Previous history of violence, previous prison entry. physical/sexual abuse during childhood, family history of drug abuse, crimes/assaults, and violence.

Did bad friends have an effect on drug use? The number of family members, relationship with his parents and how did they treat him? Did he have any problems while studying? Did he smoke as a child or teen? How was his relationship with his peers? Questions related to variables associated with amphetamine abuse side effects such as sleeping disorder, loss of weight and appetite, jaw spasm, headache and muscle pain, jerk, irregular heartbeat, breathing difficulty, violent aggressive behavior, mood swings, panic, obsession,

persecutory delusions, and auditory hallucinations. The Arabic version of ASSIST questionnaire [12], ASSIST is a questionnaire that screens for all levels of problem or risky substance in adult, the ASSIST consists of eight questions covering (tobacco, alcohol, cannabis, cocaine, amphetamine–like stimulants, inhalants, sedatives, hallucinogens, opioids, and other drugs. A risk score is provided for each substance, and scores are grouped low risk, intermediate and high risk.

The risk score determines the level of intervention recommended (no intervention, brief intervention, intensive intervention. Statistical analysis done by Statistical Package for Social Sciences (SPSS version 22) was used for data entry and statistical analysis. The frequency data was expressed in suitable tables and figures. Statistical association was tested using chi-square test of independence and Fisher's exact probability test when needed. P-value equal to or less than 0.05 was considered statistically significant.

Results

Among 100 participants, response rate was 100%. Male represented 95% of the study sample, 51% of them aged less than 25 years and most of the participants (80%) were living in urban area, regarding marital status only 3% of the participants were divorced and about half of them were not married. 81% of the participants had primary or intermediate school educational level and (43%) of them were unemployed.

Table [1].

Distribution of the sample by the Socio-demographic characteristics

Variable		Frequency	Percent
Age	<25 y	51	51%
	25-40 y	49	49%
Gender	Male	95	95%
	Female	5	5%
Residence	Urban	80	80%
	Rural	20	20%
Marital status	Single	54	54%
	Married	43	43%
	Divorce	3	3%
Occupation	unemployed or retired	43	43%
	Self employed	46	46%
	Employed	11	11%
Educational level	Illiterate	3	3%
	Prim + intermediate school	81	81.0%
	Sec. school	10	10%
	College	6	6%

Figure 1 revealed that 99 % were complaining from sleeping disorder, 87% from violent aggressive behavior, 81% Jaw spasm. More than two thirds of the abusers were complaining from headache and muscle pain, Persecutory delusions, and mood swings and about 50% of them suffered from irregular heartbeat and auditory hallucinations, 31% complained from Breathing difficulty and panic while obsession was found in 14% of the patients.

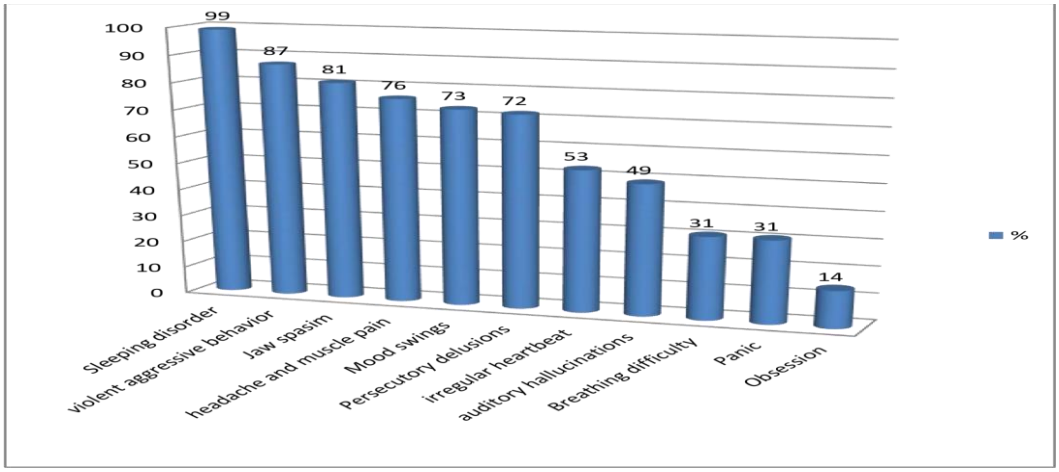
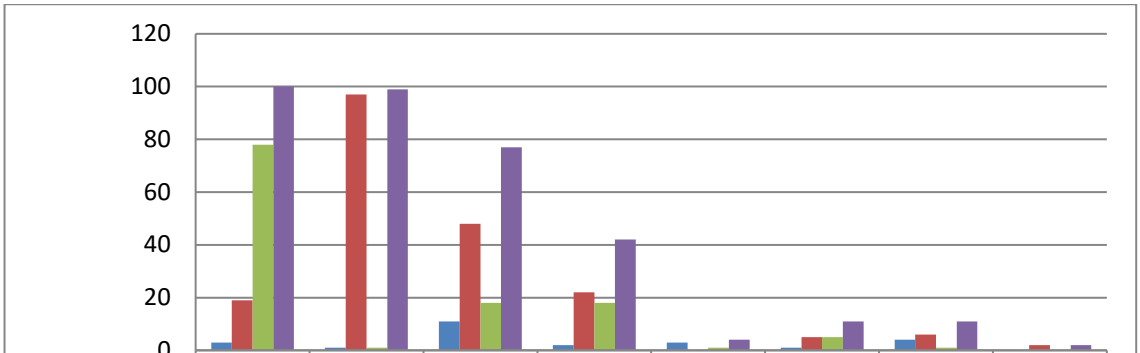


Figure 1.

Distribution of crystal abusers according to side effects.

History of behavioral problems among school and family context According to (WHO ASSIST V3.0) the risk levels (RL), 78 abusers of amphetamines, 1 (tobacco) ,18(alcohol), 1(cocaine), 5 (opioid) and 1 (cannabis) had high RL (>26). Majority (97) of tobacco abuser had moderate R L (4-26) in front of 48 ,22, 0, 5,6, 2 and 19 abusers of alcohol, sedatives, cocaine, opioids, cannabis, inhalants, and amphetamines respectively had the moderate R L. Only 3 abusers of amphetamine, 11 (alcohol),1 (tobacco),2 (sedative) ,3 (cocaine),1 (opioids) and 4 of abusers of cannabis had low RL (0-3).



	Amphetamine	Tobacco	Alcohol	Sedatives	Cocaine	Opiods	Cannabis	Inhalant
Low	3	1	11	2	3	1	4	0
Moderate	19	97	48	22	0	5	6	2
High	78	1	18	18	1	5	1	0
Total	100	99	77	42	4	11	11	2

Figure 2.

Distribution of the study sample by Risk Level of other abused substances.

As shown in table (3) there is a statistically significant association between the amphetamines RL and level of education (P = 0.001), amphetamines Risk Level was found more in less educated patients (primary, intermediate, and secondary school). There was no statistically significant association, between RL and age of the participants (P=0.158), residence (P=0.320), gender (P= 0.799).and occupation (P=0.717).

Table 3.

Association between Amphetamines Risk Level and sociodemographic characteristic.

Variables		Amphetamines Risk Level								P value
		Low No. %		Moderate No. %		High No. %		Total No.(56) %100		
Gender	Female	1	20%	1	20%	3	60.0%	5	100%	0.072
	Male	2	2.1%	18	18.9%	75	78.9%	95	100.%	
Age	<25 y	2	3.9%	6	11.8%	43	84.3%	51	100.0%	0.158
	25-40 y	1	2.0%	13	26.5%	35	71.4%	49	100.0%	
Residence	Urban	3	3.8%	17	21.3%	60	75%	80	100.%	0.320
	Rural	0	0.0%	2	18%	18	90%	20	100.0%	
Occupation	Jobless or retired	2	4.7%	6	14%	35	81.4%	43	100.0%	0.717
	Self employed	1	2.2%	10	21.7%	35	76.1.%	46	100.0%	
	Employed	0	0.0%	3	27.3%	8	72.3%	11	100.0%	
Educational level	illiterate	2	66.7%	0	0.0%	1	33.3%	3	100.0%	0.001
	primary and intermediate school	1	1.2%	15	18.5%	65	80.2%	81	100%	
	sec. school	0	0.0%	2	20.0%	8	80.0%	10	100.0%	
	college	0	0.0%	2	33.3%	4	66.7%	6	100.0%	
Marital status	Single	2	3.7%	9	16.7%	43	79.6%	54	100.0%	0.799
	Married	1	2.3%	10	23.3%	32	74.4%	43	100.0%	
	Divorce	0	0.0%	0	0.0%	3	100%	3	100%	

Table (5) revealed association between socio-demographic characteristic and the consumed substances among amphetamine users. There was no statistically significant association between the age of the abusers and each of alcohol (P= 0.967), tobacco (P= 0.305) sedatives (P= 0.865) and cocaine (P= 0.608) consumption. No significant association was found between the alcohol, tobacco, sedatives and cocaine with the residence, occupation and gender of the abusers and the p values were more than 0.05.

Regarding the educational level there was significant association (P=0.028) between the tobacco consumption among amphetamine users and their educational levels, the low educational level (primary, intermediate, and secondary schools) the more tobacco consumption. No significant association was found between the alcohol, sedatives, and cocaine with educational level (P value > 0.05).

There was a significant association between the cocaine consumption and the marital status of the abusers (P=0.024). As shown in table (6) there was no significant association between Inhalant (p= 0.977), Opioids (p=0.374) and cannabis (p=0.095) with the ages of the abusers of these substances. No significant association was found between gender, level of the education and the consumption of cannabis products, inhalant, opioids (P values > 0.05). There was a significant association between marital status of patients and consumption of opioids (p= 0.003) and Cannabis (p= 0.006) and it was found that more consumption of these two substances among those who were divorced.

No significant association between marital status of patients and consumption of the inhalants. Consumption of cannabis was found more among self-employed or unemployed than those who were governmental employee, and the association was significant (p= 0.038).

Table 5.
Association between socio-demographic variables and consumed substances among amphetamine users.

Variables		Alcohol		Tobacco		Sedatives		Cocaine products	
		No	Yes	No	Yes	No	Yes	No	Yes
Age groups	<25	9 17.6%	42 82.4%	0 0%	51 100%	30 58.8%	21 41.2%	49 93.5%	2
	25-40	13 26.5%	36 73.5%	1 2%	49 98.0%	28 57.1%	21 42.9%	47 95.9%	2 4.1%
P value		P=0.967		P=0.305		P=0.865		P=0.676	
Gender	Male	20 21.1%	75 78.9%	1 1.1%	94 98.9%	55 57.9%	40 42.1%	91 95.8%	4 4.2%
	Female	2 40%	3 60%	0 0%	5 100%	3 60%	2 40%	5 100%	0 0.0%
P value		P=0.319		P=0.818		P=0.926		P=0.640	
Residence	Urban	19 23.8%	61 76.2%	1 1.2%	79 98.8%	45 56.3%	35 43.7%	77 96.3%	3 3.7%
	Rural	3 15%	17 85%	0 0.0%	20 100%	13 65%	7 35%	19 95%	1 5%
P value		P= 0.429		P= 0.768		P= 0.501		P= 0.799	
Marital status	Single	8 14.8%	46 85.2%	0 0.0%	31 100%	31 57.4%	23 42.6%	53 98.1%	1 1.9%
	Married	14 32.6%	29 67.4%	1 2.3%	42 97.7%	26 60.5%	17 59.5%	41 95.3%	2 4.7%
	Divorce	0 0.0%	3 100%	0 0.0%	3 100%	1 33.3%	2 66.7%	2 66.7%	1 33.3%
P value		P=0.072		P=0.512		P=0.649		P=0.024	
Educational level	Illiterate	1 33.3%	2 66.7 %	0 0.0%	3 100%	2 66.7%	1 33.3%	3 100%	0 0.0%
	Prim +intermediate	18 22.2%	63 77.8%	0 10%	81 90%	48 59.3%	33 40.7%	77 95.1%	4 4.9%
	Sec	3 30%	7 70%	1 10%	9 90%	7 70%	3 30%	10 100%	0 0.0%
	College	0 0.0%	6 100%	0 0.0%	6 100%	1 16.7%	5 83.3%	6 100.0%	0 0.0%
P value		P=0.514		P=0.028		P=0.176		P=0.807	
Occupation	jobless	8 18.6%	35 81.4%	0 0.0%	43 100%	26 60.5%	17 39.5%	41 95.3%	2 4.7%
	self employed	12 26.1%	34 73.9%	1 2.2%	45 97.8%	25 54.3%	21 45.7%	44 95.7%	2 4.3%
	employed	2 18.2%	9 81.8%	0 0.0%	11 100%	7 63.6%	4 36.4%	11 100.%	0 0.0%
P value		P= 0.660		P= 0.553		P= 0.778		P=0.771	
Total		22 22%	78 78%	1 1 %	99 99%	58 58%	42 42%	96 96%	4 4%

Table 6.

Association between socio-demographic characteristic of the patients and consumption of opioids, inhalant, cannabis products

Variables		Opioids		Inhalant		Cannabis products	
		No	Yes	No	Yes	No	Yes
Age groups	<25	44 86.3%	7 13.7%	50 98%	1 2%	48 94.1%	3 5.9%
	25-40	45 91.8%	4 8.2%	48 98%	1 2%	41 83.7%	8 16.3%
P value		P= 0.374		P= 0.977		0.095	
Gender	Male	85 89.5%	10 10.5%	93 97.9%	2 2.1%	85 89.5%	10 10.5%
	Female	4 80.0%	1 20%	5 100%	0 0.0%	4 80%	1 20%
P value		P=0.509		P=0.743		P=0.509	
Residence	Urban	71 88.7%	9 11.3%	78 97.5%	2 2.5%	71 88.8%	9 11.2%
	Rural	18 90%	2 10%	20 100%	0 0.0%	18 90%	2 10%
P value		P= 0.873		P= 0.475		P= 0.873	
Marital status	Single	47 87%	7 13%	53 98.1%	1 1.9%	50 92.6%	4 7.4%
	Married	41 95.3%	2 4.7%	42 97.7%	1 2.3%	38 88.4%	5 11.6%
	Divorce or Widow	1 33.3%	2 66.7%	3 100.0%	0 0.0%	1 33.3%	2 66.7%
P value		P=0.003		P=0.956		P=0.006	
Educational level	Illiterate	3 100%	0 0.0%	3 100%	0 0.0%	3 100%	0 0.0%
	Prim +intermediate	72 88.9%	9 11.1%	80 98.8%	71 87.7%	10 12.3%	1 10%
	Sec	8 80%	2 20%	10 100%	0 0.0%	9 90%	1 10%
	College	6 100.0%	0 0.0%	5 83.3.%	1 16.7%	6 100.0%	0 0.0%
P value		P=0.585		P= 0.069		P= 0.736	
Occupation	jobless	39 88.6%	5 11.4%	43 97.7%	1 2.3%	42 95.5%	2 4.5%
	self employed	40 80%	6 20%	45 97.8%	37 2.2%	9 80.4%	5 19.6%
	employed	10 100.0%	0 0.0%	10 100.0%	0 0.0%	10 100.0%	0 0.0%
P value		P= 0.487		P= 0.891		**P= 0.038**	

Discussion:

Regarding socio-demographic characteristics, most participants were 18-40 years old, 51% were younger than 25 years old, and 25-40 was in concordance with 2009 Iraqi research on drug use disorders [13]. Most of the sample was male, comparable with the 2014 Iraqi household survey of substance use, in which no women reported taking illegal drugs. This might be attributable to decreased female drug usage or a less harmful pattern of use.

It may also imply that drug use problems are under-reported among females owing to cultural factors, as females in our culture lack freedom or have trouble accessing substances and medical treatments since substance use is stigmatizing in Iraq. The sample was mostly single, low-educated, and jobless [14]. These findings match research on meth use in China [14]. Being unmarried may be owing to drug use and disregarding other elements of life, early usage which may destroy the user's reputation, and inadequate education due to substance use, weak economic situation, and poor family supervision.

Unemployment in Iraq can be caused by substance abuse. Most of the sample lived in cities, similar with 2008 Iraqi research. Easy availability, peer pressure, and urban stress may explain this. This study divided individuals into two age groups, less than 25 and [25-40], and found no association between age and crystal meth consumption. This was similar with 2008 research regarding methamphetamine use in youth [15], which revealed no significant association between crystal meth usage and age, gender, marital status, occupation, or housing.

This is consistent with 2019 Iraqi research on tramadol usage [16], which revealed no significant connection between these characteristics and methamphetamine intervention needs [16]. This study indicated that less education is a risk factor for crystal meth usage, confirming a 2008 study [15]. Child maltreatment was not substantially related with crystal meth use. This is similar with Miura H, Fujiki M et al's 2006 study on methamphetamine users [17] and a 2008 study on methamphetamine use in adolescents [15]. Peer influence is the biggest crystal meth risk factor, according to the study. Bad and excellent companions enhanced crystal users' danger.

Having a buddy who used drugs was the largest factor influencing drug usage among high school students in Erbil City, Iraq [18]. Peer pressure and social learning may explain this by teaching undesirable conduct through example. Peers provide social support and can impose good or poor conduct. The connection between violent history and high risk was strong. This matched two studies. In this study, crystal meth usage related to family history of drug misuse (other than amphetamines), but in previous studies it was associated with amphetamine use. Poor family relationships and terrible child treatment were not connected with crystal meth usage, although stringent parental surveillance was.

Peer pressure may be more significant on crystal meth usage than parental factors. Regarding associations between socio-demographic variables (age, gender, residence, marital status, educational level, and occupation) and alcohol consumption, while it is difficult to compare data observed in this study with other studies (due to different sampling and population), some results coincide. In this study, socio-demographic characteristics were not associated with alcohol intake, unlike a survey in Turkey, where educational level and marital status were [19].

This study found a substantial link between smoking and poor education. This was consistent with the results of a worldwide adult tobacco survey in Poland (2009-2010), which found that lower educational level, unemployment, age, and urban inhabitants smoked more than rural residents. Cannabis usage was associated with marital status (higher among divorced) and occupation (more among self-employed or jobless than government employees) This was consistent with Nigerian research on psychoactive drug prevalence and socio-demographic risk variables [20]. Iraq and other countries may have different cultures. Opioids and marriage were linked. Divorced people use more opioids, contradicting a 2019 study on the socio-demographic and clinical features of Iraqi tramadol users. Only occupation was relevant [16]. Regarding sedative and inhalant, there was no significant connection with socio-demographic characteristics [16].

Conclusion

Most of crystal meth users were males, unmarried, unemployed with low education. The majority of crystal meth users consume multiple substances, and the most common substances were tobacco alcohol and. Several risk factors were significantly associated with crystal meth use: low educational level, previous history of violence, bad friends and good relationship with user's peers.

Ethical Approval

The study was approved by the Ethical Committee. It was conducted in accordance with the ethical standards of the Helsinki Declaration of 1975, as revised in 2008.

Conflicts of Interest

The authors declare that he have no competing interests.

Funding

None

Study registration

Not required.

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