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AWARENESS AND USE OF METHAMPHETAMINE (ICE) AMONG THE PEOPLE OF KARACHI, PAKISTAN

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ABSTRACT

Introduction: Methamphetamine, a synthetic psychostimulant drug belongs to the family of amphetamine that significantly boost up the activity of central nervous system. In Asia, methamphetamine is a common psycho stimulant present in three main forms i.e. base, powder and crystal. In some Asian countries base form of methamphetamine is recrystallized into crystal meth or crystal which is known as "ICE". However, this method of recrystallization is slightly difficult and need specialized skills and equipments. Methamphetamine can be smoked, swallowed, injected or snorted whereas, ICE can be smoked with or without water in a glass pipe **Methods:** Questionnaire type survey was conducted from April 2018 to July 2018 which consist of 22 (twenty-two) questions that were divided into three sections i.e. five questions from demographic, seven questions from awareness section and ten questions were related to the use of ICE. In this research study, we followed electronic mean of online survey technique **Result:** A total 142 respondents were assessed in this study out of which 78 (54.93%) were male and 64 (45.07%) were female. 60 (42.25%) male and 45 (31.68%) female were aware of ICE. However, 54 (38.03%) male and 20 (14.08%) female use it. **Conclusion:** We conclude that the epidemic of smokable methamphetamine (ICE) is increasing among the youngsters of Pakistan which can cause a severe public health and safety threat on to the Government of Pakistan in near future. Therefore, it will be utmost important to monitor usage patterns of methamphetamine (ICE) in overall Pakistan in order to develop effective public health and law enforcement policies.

KEYWORDS: Methamphetamine, ICE, Psychostimulant, awareness, use.

INTRODUCTION

Methamphetamine, a synthetic psychostimulant drug belongs to the family of amphetamine that significantly boost up the activity of central nervous system.[1] During the early 19th century, amphetamine was initially synthesized by using Ma Haung- a Chinese herb to reduce fatigue in soldiers during World War II. In Asia, methamphetamine is a common psycho stimulant present in three main forms i.e. base, powder and crystal. Usually, pseudoephedrine is used in synthetic processes to yield volatile free base of methamphetamine, because of volatile nature the free base form is converted into base form by adding hydrochloric acid which gives a crystal or damp powder. Powder methamphetamine is much expensive thus it is sometimes converted into pills or tablets by adding adulterants into it. In some Asian countries base form of methamphetamine is recrystallized into crystal meth or crystal which is known as "ICE". However, this method of recrystallization is slightly difficult and need specialized skills and equipments. Methamphetamine can be smoked, swallowed, injected or snorted whereas ICE can be smoked with or without water in a glass pipe.[2]

When compared with other stimulants, methamphetamine is found to be more addictive stimulant if used constantly. Moreover, it has been observed that methamphetamine users are risky, violent, short-tempered and hostile.[3] At higher doses of this powerful stimulant can cause a decrease in the level of fatigue and appetite, increase sex drive and induce euphoria.[4]

For the treatment of the symptoms of ADHD especially in children, methamphetamine is found to be effective.[5] Moreover, the use of prescribed and non-prescribed stimulants is increased in the patients of ADHD as awareness of clinicians of ADHD treatment is increasing day by day in United States and in other countries.[6] Stimulant medications are considered as drug abuse but the form of stimulant is changed from opiates to opioids.[7] These newer or artificial substances such as methamphetamine are used in the pharmacological treatment of depressive mood disorders.[6]

A patient with a toxicity of methamphetamine should be referred to a psychiatrist immediately and it should be known that the patient with emotional instability can be dangerous to treat but it can be treated by the emergency department by treating the symptoms of overdose and through certain therapies. Moreover, it is important to treat the addiction of the user or patient as dependence can lead to the life-threatening condition.[8]

AIMS AND OBJECTIVE

This study was designed to assess the awareness and use of methamphetamine (ICE) among the peoples of Karachi, Pakistan.

MATERIAL AND METHODS

Questionnaire type survey was conducted from April 2018 to July 2018.which consist of 22 (twenty-two) questions that were divided into three sections i.e. five questions from demographic, seven questions from awareness section and ten questions were asked related to the use of ICE. In this research study, we followed electronic mean of online survey technique in which form was designed through Google forms and link of the respected form was circulated via Facebook, messenger and what's app to more than 200 people.

Sample selection

Out of 200 respondents, 142 respondents including both males and females aged 20 years and above were randomly selected in this survey research study.

Inclusion criteria

Respondents aware of ICE and those who use it were included in this research.

Exclusion criteria

Those respondents who were not aware of ICE and didn't use it were excluded.

Statistical analysis

Analysis of data was carried out using SPSS Version 20.0. The data were presented in both graphical and tabular form with a simple measure of frequency and percentage.

RESULTS

Demographic factors in comparison with the awareness and use of ICE

A total of 142 respondents were assessed in this study out of which 78 (54.93%) were male and 64 (45.07%) were female as shown in the Fig. 1.

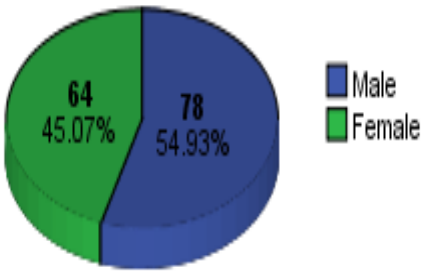

Fig 1: Frequency and percentage of respondents with respect to gender.

Results in this section are showed in the graphical representation in comparison with the association of awareness and use of ICE. Fig. 2 show that 60 (42.25%) male and 45 (31.68%) female were aware of ICE. However, 54 (38.03%) male and 20 (14.08%) female use it in Fig. 3.

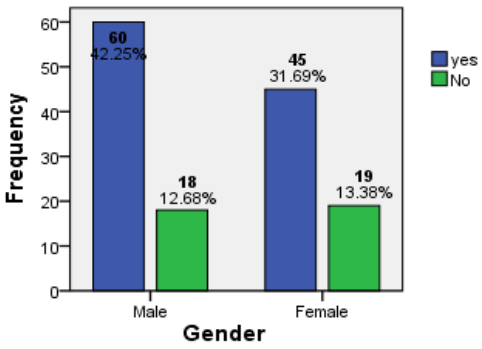

Fig 2. Association of ICE awareness with gender.

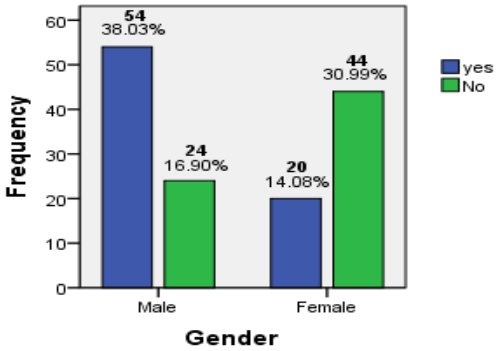

Fig 3. Association of ICE use with gender.

Respondents in this study are divided into different age groups starting from 18 years to 55 years. Among them, 51 (35.92%) were aware of ICE and 34 (23.94%) who uses it are fall in the same age group of 15 to 25 years shown in Fig. 4 and Fig. 5.

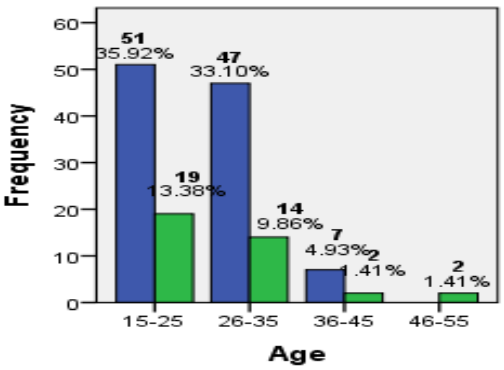

Fig 4. Association of ICE awareness with age

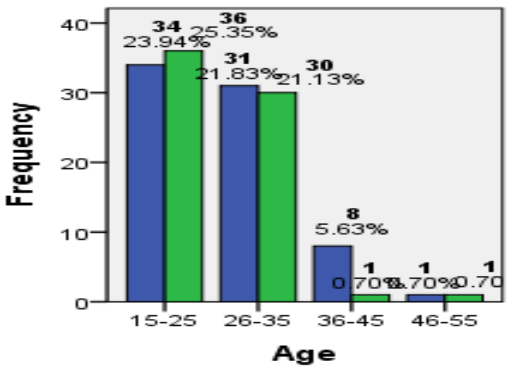

Fig 5. Association of ICE use with age

Different occupations of respondents were grouped in this study. Among these groups, 39 (27.46%) professionals and 35 (24.65%) unemployed were highly aware of ICE. Whereas, the higher number of ICE users were noted in both these groups as shown in the Fig. 6 and Fig. 7.

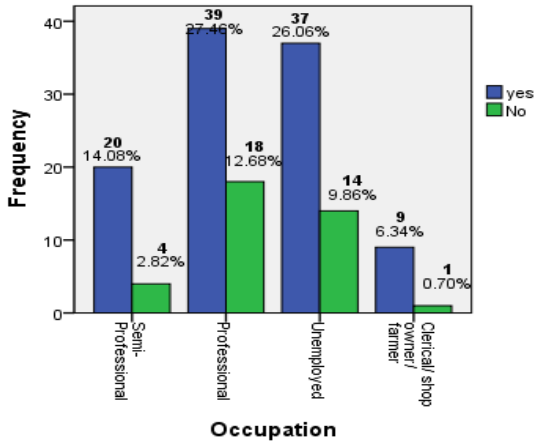

Fig 5. Association of ICE awareness with occupation

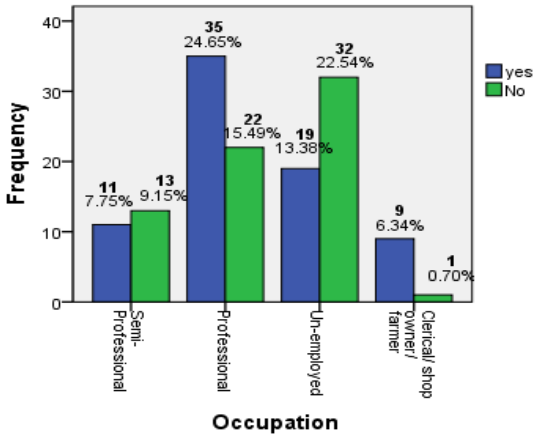

Fig 6. Association of ICE use with occupation

Awareness and use of ICE

The frequency and percentage of awareness and use of ICE with respect to the responses from the respondents are mentioned in table I and II.

Table I: Frequency and percentage of responses regarding awareness of ICE.

AWARENESS OF ICE	
QUESTIONS	**[n (%)]**
1: Do you know about ICE (methamphetamine)? **(N=142)**	
Yes	105 (73.9)
No	37 (26.1)
2: From where you get to know about ICE? **(N=105)**	
Friends	29 (27.6)
Internet	54 (51.4)
Society	22 (20.9)
3: Which name of ICE you are familiar with? **(N=105)**	
Crystal Meth	19 (18.1)
D-meth	11 (10.5)
Crystal	61 (58.1)
Shabu	14 (13.3)
4: Do you know others using ICE in the society? **(N=105)**	
Yes	72 (68.5)
No	33 (31.4)
5: Is it safe to use ICE? **(N=105)**	
Yes	10 (9.5)
No	95 (90.4)
6: Do you think ICE can cause addiction / dependence? **(N=105)**	
Yes	88 (83.8)
No	17 (16.1)
7: What do you think regarding the reason of taking ICE? **(N=105)**	
To increase alertness	27 (25.7)
To increase working ability	8 (7.6)
To gain pleasure	16 (15.2)
Reduce stress	37 (35.2)
To increase the sex drive	3 (2.8)
To treat neurological disorders	14 (13.3)

Table II: Frequency and percentage of responses regarding use of ICE.

USE OF ICE	
N=142	
QUESTIONS	**[n (%)]**
Q # 1: Have you ever used ICE? **(N=142)**	
Yes	74 (52.1)
No	68 (47.8)
Q # 2: How much you use ICE in a day? **(N=74)**	
1 time	55 (74.3)
2 times	12 (16.2)
3 times	2 (2.7)
4 times	-
5 times	5 (6.75)
Q # 3: In which form you take ICE? **(N=74)**	
Smoked	57 (77.0)
Snorted	10 (13.5)
Injected	7 (9.4)
Q # 4: What psychological change you feel after taking ICE? **(N=74)**	
Energetic	39 (52.7)
Euphoric	9 (12.1)
Pleasure	25 (33.7)
Felicity	1 (1.3)
Q # 5: When you feel change in your mood and body physiology after taking ICE? **(N=74)**	
After 20 minutes	54 (72.9)
After 30 minutes	8 (10.8)
After 1 hour	7 (9.4)
After 1.5 hours	5 (6.7)
Q # 6: Alteration in your mood and body physiology continues till. **(N=74)**	
1-2 hours	33 (44.5)
3-5 hours	20 (27.0)
12-24 hours	5 (6.7)
24-48 hours	11 (14.8)
More than 48 hours	5 (6.7)
Q # 7: Are you dependent of ICE? **(N=74)**	
Yes	24 (32.4)
No	50 (67.5)
Q # 8: What you feel if you don't take ICE for more than two days? **(N=74)**	
Aggression	18 (24.3)
Depression	29 (39.1)
Anxiety	8 (10.8)
Anhedonia	19 (25.6)
Q # 9: Do you take anything else in	

combination with ICE? **(N=74)**	
Yes	59 (79.7)
No	15 (20.2)
Q # 10: You take ICE in combination with? **(N=59)**	
Alcohol	11 (18.6)
Water	39 (66.1)
Cigarette	9 (15.2)

DISCUSSION

The results of this study report the knowledge and use of methamphetamine (ICE) among the peoples of Karachi, Pakistan. Nowadays, drugs abuse is the most common dilemma among the young generation of Pakistan that causes serious physical and mental health-related issues.[9] Numerous research studies show that the abusive use of psychoactive stimulant drugs has also been increasing among students and professional workers day by day all over the world.[10,11] This increased in the ratio are most commonly in males aged in between 16-25 years.[12] In this study, the same result was observed which shows that males have the higher number in both the viz. i.e. out of 74 respondents 54 (38.03%) were male users having age in between 15-25 years. However, the higher number of ICE users observed were professional workers.

Methamphetamine, a potent psychostimulant has long-lasting physical effects that significantly affects the dopamine receptors in the brain thus creating a chemical rush as the secretion of dopamine increases 600 times, whereas dopamine is very similar to epinephrine. Use of methamphetamine and its effect on the part of the brain is responsible for the specific symptom. Methamphetamine in the form of ICE affects the brain i.e. the limbic system which is responsible for the feelings like euphoria, hallucination, obsession, delusion, depression, anxiety and sleeplessness.[8] In our study, similar results were observed from the respondents which show that out of 74 users, 39 (52.7%) respondents feel more energetic after taking the ICE and this may be due to the direct effect drug on brain reported in previous studies. Whereas, 25 (33.7%) use ICE to gain pleasure. It has also been noted that 57 (77.0%) respondents out of 74 use ICE in a smoked form which can cause a direct effect on the brain via transfer of smoke particle through an inhalation route to blood circulation and finally to the brain.[13] If methamphetamine affects the hippocampus (part of brain) than memorizing new things can be observed in the user.[8]

In our study, we noted that the high rate of methamphetamine (ICE) use among the young generation of Karachi, Pakistan which can leads to the hazardous effects on the brain according to the different research studies.

CONCLUSION

We conclude that the epidemic of smokable methamphetamine (ICE) are increasing among the youngsters of Pakistan which can cause a severe public health and safety threat on to the Government of Pakistan in near future. Therefore, it will be utmost important to monitor usage patterns of methamphetamine (ICE) in overall Pakistan in order to develop effective public health and law enforcement policies.

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