

PSYCHIATRIC MANIFESTATIONS IN PATIENTS ADDICTED TO A NEW SYNTHETIC PSYCHOACTIVE SUBSTANCE (STROCKS)

By

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ABSTRACT

Background: Substance abuse is a growing problem in the world. In Egypt, as in many developing countries, substance abuse is a growing problem that worries both people and government.

Objective: To investigate whether there are any psychiatric manifestations in patient using new synthetic psychoactive substance (strock) or not.

Patients and Methods: Cross-sectional observational study conducted in Psychiatry Hospital, The Armed Forces Medical Complex in Maadi and National Center for Addiction Treatment in Ismailia starting from September 2019 till December 2020. one hundred and seventy five patients were examined and confirmed to be strock abusers with urine toxicology test (-ve) and confirmed by K2 one step synthetic cannabinoids test Device. Patients were interviewed, Full general psychiatric history taking and mental state examinations regarding DSM-V criteria.

Results: Mean age was (22.9 ± 3.2) and 80% of patients were males. Regarding psychiatric disorder among 175 strock abusers, 15 patients with no psychiatric disorders, maladjustment disorder was in 30 patients, mixed anxiety and depression was 70 patients, schizophrenia was 35 patients, mixed personality trait was 5 patients, while border personality disorder in 20 patients

Conclusion: Most of strock abusers have psychiatric disorders like maladjustment, mixed anxiety & depression, schizophrenia, mixed personality trait and border personality disorder.

Keywords: Strock, psychiatric disorder and DSM-V.

INTRODUCTION

Substance abuse is a growing problem in the world as the estimated number of people who use drugs in 2006 was around 200 million and in 2017 it was around 300 million with annual prevalence about 6% (UNODC, 2019). New psychoactive substance (NPS) is a more acceptable term

for the new marked recreational substance as strock, vodo, etc. as several definitions of the term novel/new psychoactive substances (NPS) are in use, with the term new not necessarily referring to new inventions but to substances that have recently been made available (UNODC, 2013). Hence, new can include a failed pharmaceutical or an old patent which has

been rediscovered and marketed for its potential use as a recreational substance. Conversely, the term novel can also express something newly created or a compound that has come back into fashion after a period of absence from the recreational drug scene or indeed a known NPS molecule being used in an innovative or unusual way, hence presenting with a novelty appeal (*Corkery et al., 2018*).

This study investigates the symptom profile of psychiatric disorders in patients using the new synthetic psychoactive substance (stroads).

PATIENTS AND METHODS

Setting:

1. Psychiatry Hospital, the Armed Forces Medical Complex in Maadi.
2. National Center for Addiction Treatment in Ismailia.

Study duration:

Cross sectional study started from September 2019 till December 2020.

Patients:

A total of 175 patients were included in the study.

Inclusion criteria: The patients age of 18 years old or older, both genders will be included and Patients known to be addicted on local synthetic new substance only (Stroads) for at least 3 months.

Exclusion criteria: Any patient known to have past history of psychiatric disorder before starting substance abuse and the patients who are currently addicted to any known types of substances besides New synthetic psychoactive substance.

Methodology:

All patients were subjected to:

1. Urine samples were screened by dipstick test, which is one step screening test panel (used for qualitative detection of drugs of misuse which includes tramadol, opiate, tetrahydrocannabinol, amphetamine, Cocaine, barbiturate, and benzodiazepines). All the patients (523 patients) subjected to the two hospitals in from September 2019 till December 2020 were subjected to urine toxicology tests. 247 patients were with positive tests.
2. Only negative cases (276 patients) were confirmed by K2 one step synthetic cannabinoids test Device, which is an immunochromatography based one test in vitro test designed for qualitative determination of synthetic cannabis. 205 patients were tested positive for stroads.
3. 30 patients had psychiatric disorder before stroads abuser and they were excluded from the study.
4. 175 patients were Interviewed and Full general psychiatric history taking; mental state examinations regarding DSM-V criteria (American Psychiatric Association, 2013). Full medical history taking and general physical examinations were done.

Ethical considerations:

The nature of the present study and laboratory or radiological procedures was explained to all participants. Consent was obtained from all participants. At the end of the study, all patients were informed about the results of the examinations

performed and received appropriate recommendations, and treatment.

Statistical Methodology:

Data entry, processing and statistical analysis was carried out using MedCalc

ver. 18.11.3 (MedCalc, Ostend, Belgium). Data were presented as mean SD for quantitative data and frequency and percentage for qualitative data.

RESULTS

Out of 175 strokes abusers, 160 patients were with psychiatric disorders.

The mean age of all patients was 22.9 ± 3.2 years. Male patients to female patients were 80%, 20% retrospectively, 52% of patients lived in rural areas, while 48% lived in urban areas, 78.9% of

patients were unemployed, while 21.1% were employed, 33.1% of patients were illiterates, 23.4% had low education (low education refer to those who didn't finish secondary school), and 43.4% were educated, 93.7% of patients were singles, while 6.3% were married (**Table 1**).

Table (1): Age and gender among 175 Strokes abusers

Variables		Frequency (%) / Mean ± SD
Age (years)		22.9 ± 3.2
Gender	Female	35 (20%)
	Male	140 (80%)
Residency	Rural	91 (52%)
	Urban	84 (48%)
Employment	Employed	37 (21.1%)
	Unemployed	138 (78.9%)
Educational level	Illiterate	58 (33.1%)
	Low Ed	41 (23.4%)
	educated	76 (43.4%)
Marital status	Married	11 (6.3%)
	Single	164 (93.7%)

Regarding psychiatric disorder among 175 strokes abusers 15 patients with no psychiatric disorders, maladjustment disorders were in 30 patients, mixed

anxiety and depression 70, schizophrenia in 35, mixed personality trait in 5, while border personality disorder in 20 patients (**Table 2**).

Table (2): Diagnosis of psychiatric disorders among 175 Strokes abusers

Variables	Frequency
None	15(8.6%)
Maladjustment disorder	30(17.1%)
Mixed anxiety & depression	70(40%)
Schizophrenia	35 (20%)
Border Personality Disorder (BPD)	20 (11.4%)
Mixed personality trait	5(2.9%)

DISCUSSION

Over the past few years, the availability of new psychoactive substances has rapidly increased. The emergence of those new psychoactive drugs has challenged the traditional approaches to drug monitoring, surveillance, control, and public health responses to reduce drug-related harm. Challenges include the growing number of those substances; the speed with which they enter and exit drug markets; misinformation and lack of awareness of the contents of substances; and the diverse (and often unknown) potency, effects, and risk profile (Peacock, *et al.* 2019).

Substance abuse rates in Egypt have hit 10%, or double the global average. The new era has witnessed the introduction of new psychoactive drugs was aiming to escape drugs of abuse detection and provision of euphoria looked for by drug abusers. The speed at which Strock's use is spreading has posed a new challenge; this is due to its cheap price comparing to hashish beside powerful effect which is up to 100 times than natural marijuana (Abdelregal and Gabrah, 2020).

The use of NPSs, also called legal Spice, is an alarming global problem that has become more marked in the last few decades (Lamy *et al.*, 2017). Despite the great efforts that have been made to diminish their skyrocketing use, the number of NPSs is still increasing together with the number of users (Castaneto *et al.*, 2015).

In the present study 175 patients were reported to be strock's abusers out of 500 abuser patients (35%) who were examined from September 2019 till December 2020 and it is a large number compared to the

number of strock's abusers in undergraduate students in Ain Shams University which were only 6.8% reported in (Allam *et al.*, 2020) but, may be this difference is due to the sample was college students and the sample in our study was hospital patients.

The prevalence of strock's in Egypt was reported to be in 12-month prevalence 1.2% (Rabie *et al.*, 2020).

Social tolerance and acceptability to natural cannabis in Egypt encourage abuse of its synthetic potent analogues. Besides, strock's is easily to be synthesized that led to its availability with cheap prices in comparison with cannabis. Furthermore, the standard toxicology screens could not identify strock's users whereas natural cannabis would be traced (Sobh and Sobh, 2020).

The mean age of the current study was 22.9 ± 3.2 years that was in agreement with Yassa and Badea (2019) who reported that the most critical age of abuse was between 21 to 30 year old.

The mean age reported by El-Masry and Abdelkader (2021) was 25 ± 9.8 years and also a study that was conducted in the Poison Control Center of Ain Shams University Hospitals reported by Hashemet *et al.* (2021) supporting the same result regarding age that was 25.8 ± 7.38 years.

The possible reasons for increased incidence of drug abuse in this age may be attributed to psychological family problems, studying, marriage, life costs and unemployment which make them stressed with probable involvement in drug abuse (Jesslin *et al.*, 2010).

In the present study, 80% of strock abusers reported to be males and only 20% females. This agreed with *Winstock & Barratt (2013)* and *Jones (2020)* where males were more affected than females in United Kingdom. Also this was in agreement with *Yassa and Badea (2019)* found that male abuse was significant when compared with the female abuse. Males generally show aggressive (externalizing) behaviors during personal problems compared to females who often show auto-aggressive (internalizing) symptomatology. So, self-poisoning is the main manner of intoxication in females; whereas drug abuse and addiction are more common in males (*Foto-Özdemir et al., 2016*). On the other hand, *Maxwell et al. (2017)* observed the reverse who found that females were highly represented in their American study.

In the present study, regarding sociodemographic data regarding residency, 52% of patients live in rural areas, while 48% live in urban areas. Regarding employment, 78.9% of patients were unemployed, while 21.1% were employed. Regarding educational level, 33.1% of patients were illiterates, 23.4% had low education (low education refer to those who didn't finish secondary school), and 43.4% were educated. Regarding marital status, 93.7% of patients were singles, while 6.3% were married. *Serdar et al. (2015)* reported that the mean duration of education was shorter for strock abusers and also singles were with great significance than married in strock abusers.

In the present study, it was reported that there was a strong relation between strock and psychiatric disorders.

BassirNia et al. (2016) supports this in their study as they reported that the association between psychosis and strock use remained strong.

In the present study, 91.4% of patients reported psychiatric disorders like maladjustment disorder (17.2%), mixed anxiety and depression (40%), schizophrenia (20%), border personality disorder (BPD) (11.4%) and mixed personality trait (2.8%).

The psychotic symptoms rapidly resolved after discontinuing the use of Spice. Therefore, a causal effect seems likely, although not definitive. An observational study of a relatively large cohort of Synthetic cannabinoids users found that they were more severely psychotic than cannabis users. In particular, the synthetic cannabinoids users were more often diagnosed with psychotic disorders, were treated with higher doses of antipsychotic medications, and required longer hospitalizations (*BassirNia et al., 2016*). This study showed that the psychotic presentations and agitation were independent of patients' sociodemographic factors or their history of exposure to other substances, although no established causal relationship could be determined due to the retrospective nature of the study. Another difficulty of clarifying the relationship between SCs and psychosis is that most SC users also use other psychoactive drugs (*Barratt et al., 2013* and *Gunderson et al., 2014*).

An internet-survey of anonymous adults with histories of Spice use found that 65% endorsed concurrent use of other psychoactive drugs, including alcohol (54%), cannabis (40%), and tobacco

(38%) (Vandrey *et al.*, 2012). Another online-survey study reported that 96% had lifetime use of cannabis, with 61% reporting last-month use and 15% reporting daily use, and that the other drugs most commonly used in the last month were alcohol (77%) and tobacco (58%) (Barratt *et al.*, 2013). Collectively, these studies suggest that concurrent use of other psychoactive drugs by SC users confounds the analysis of SCs and psychosis.

In another studies, many strock users report experiencing anxiety and paranoia after strock use, so it does not appear to alleviate, but instead to exacerbate, such symptoms (Winstock & Barratt, 2013 and Gage *et al.*, 2016).

Peglow and Colleagues (2012) argued that all three psychotic episodes of the patient were preceded by Spice consumption, and had never previously experienced any psychotic symptoms, in spite of using cannabis in the past.

Case reports and retrospective studies of acute SC intoxication indicate that they can produce a wide range of physiological and psychiatric adverse effects, which vary in duration and severity (Hermanns *et al.*, 2013).

A study done by BassirNia *et al.* (2016) compared between psychiatric comorbidities between (strock) and cannabis and found that the psychiatric presentation of inpatient strock users is characterized by greater psychotic symptoms as determined specifically by objective signs of psychosis, diagnosis of psychotic disorders, and prescription of antipsychotic medications, which were all significantly more frequent than in cannabis users.

Another study by Lev-Ran *et al.* (2013) stated that strock users had fewer depression indications (only 17.5%), with psychosis being the prominent clinical presentation.

Several reports document psychotic presentations after strock use, including acute psychosis, persistent psychotic disorder, and relapse/worsening of a pre-existing psychosis (Glue *et al.*, 2013; Papanti *et al.*, 2013; Spaderna *et al.*, 2013 and Castaneto *et al.*, 2014). An online survey reported more paranoia in strock users than in cannabis users (Winstock and Barratt, 2013) which was also reflected in a retrospective review, which reported five times greater percentage of psychotic symptoms in strock compared to cannabis users (Forrester *et al.*, 2012). Moreover, the psychotic presentations following strock use appears to have more agitation and aggressive behaviors compared to cannabis use (HermannsClausen *et al.*, 2013 and Papanti *et al.*, 2013). BassirNia *et al.* (2016) find that in the post-acute intoxication phase extend the previously published acute observations, emphasizing that the symptoms of psychosis, agitation, and irritability persist for many days and contribute to the need for longer hospital care. And also stated that it will be important to monitor (strock) users years after their final drug consumption to determine whether psychiatric impairments may persist and incur long-term mental health, medical, and social burdens.

One of the major roles of the endocannabinoid system is in stress response, and multiple lines of evidence have also suggested that psychosis is

associated with impaired stress reactivity (Holtzman *et al.*, 2013 and Mizrahi, 2016). The endocannabinoid system has a prominent stress-inhibitory role (Morena *et al.*, 2016). However, chronic repeated cannabis exposure results in down regulation of the endocannabinoid system and induces abnormalities in stress response, which may influence psychosis risk in vulnerable individuals (Appia-Kusi *et al.*, 2016).

Preclinical studies have clearly demonstrated that tetrahydrocannabinol increases dopamine levels in the prefrontal cortex, ventral striatum (nucleus accumbens), and dorsal striatum (Sami *et al.*, 2015). However, such findings are more controversial in human studies, with modest THC effects reported for the dopaminergic system in the human brain (Sami *et al.*, 2015). The highly potent agonist actions of SC compounds would thus be expected to induce robust effects on these convergent neurotransmitter systems regulated by the CB1R and contribute to the strong association of SCs with psychosis.

In the current study, inhalation was the only route for strocks. Bonar *et al.* (2014) and Law *et al.* (2015) reported that inhalation via smoking was the commonest route of synthetic cannabinoids administration, representing 91% and 80.3% of all routes respectively, using cigarettes, vaporizers, water pipes or bongs while SCs ingestion occurred in only 3% and 19.5% respectively. Synthetic cannabinoid users mostly prefer inhalational products than oral ones as oral consumption has delayed onset of action. In addition, oral forms are easily

ingested without any pleasure during preparation (Huestis and Smith, 2018).

According to our study, strocks abusers were increasing due to multiple causes, most of strocks abusers reported psychiatric disorders. There are a few studies regarding strocks and psychiatric disorders. A lot of studies are needed in the upcoming time. Most of studies are about cannabis and clinical intoxication.

Limitation in this study was the small sample (only 175 patients) examined, and also no follow up were done for patients with psychiatric disorders and evaluation of antipsychotic drug and withdrawal effect on patients.

CONCLUSION

Most of strocks abusers have psychiatric disorders like maladjustment, mixed anxiety & depression, schizophrenia, mixed personality trait and border personality disorder.

REFERENCES

1. **American Psychiatric Association, A. P. (2013):** Diagnostic and statistical manual of mental disorders: DSM-5.
2. **Appiah-Kusi, E., Leyden, E., Parmar, S., Mondelli, V., McGuire, P. and Bhattacharyya, S. (2016):** Abnormalities in neuroendocrine stress response in psychosis: the role of endocannabinoids. *Psychological Medicine*, 46(1); 27-45.
3. **Barratt M, Caki V and Lenton S (2013):** Patterns of synthetic cannabinoid use in Australia. *Drug and Alcohol Review*, 32(2): 141-146.
4. **BassirNia A, Medrano B, Perkel C, Galynker I and Hurd YL (2016):** Psychiatric comorbidity associated with synthetic cannabinoid use compared to cannabis. *Journal of Psychopharmacology*, 30(12); 1321-1330.

5. **Bonar E, Ashrafioun L and Ilgen M (2014):** Synthetic cannabinoid use among patients in residential substance use disorder treatment: prevalence, motives, and correlates. *Drug and Alcohol Dependence*, 143: 268–271.
6. **Castaneto MS, Gorelick DA, Desrosiers NA, Hartman RL, Pirard SandHuestis MA (2014):** Synthetic cannabinoids: epidemiology, pharmacodynamics, and clinical implications. *Drug Alcohol Depend*, 144: 12-41.
7. **Corkery JM, Orsolini L, Papanti D and Schifano F (2018):** Novel psychoactive substances (NPS) and recent scenarios: epidemiological, anthropological and clinical pharmacological issues. In Miolo G, Stair JL and Zloh M (eds), *Light in Forensic Science: Issues and Applications*. London: Royal Society of Chemistry, 8: 207–256.
8. **El-Masry M and Abdelkader S (2021):** Clinical profile of designer drug “Strocks” intoxicated cases presented to Poison control center Ain Shams University, Egypt from first of January 2017 to end of January 2018. *Ain Shams Journal of Forensic Medicine and Clinical Toxicology*, 36(1): 98-105.
9. **Forrester, M. B., Kleinschmidt, K., Schwarz, E. and Young, A. (2012):** Synthetic cannabinoid and marijuana exposures reported to poison centers. *Human & Experimental Toxicology*, 31(10): 1006-1011.
10. **Gage SH, Hickman M and Zammit S (2016):** Association between cannabis and psychosis: Epidemiologic evidence. *BiolPsychiat*, 79: 549–556
11. **Glue, P., Al-Shaqsi, S., Hancock, D., Gale, C., Strong, B. and Schep, L. (2013):** Hospitalisation associated with use of the synthetic cannabinoid K2. *The New Zealand Medical Journal (Online)*, 126(1377).
12. **Hashem A, Mahmoud S, Abou Anza R and Abdel Hamid W (2021):** Pattern of Acute Synthetic Cannabinoids Toxicity in Patients Presented to the Poison Control Center of Ain Shams University Hospitals. *Ain Shams Journal of Forensic Medicine and Clinical Toxicology*, 36(1): 1-12.
13. **Hermanns-Clausen M, Kneisel S, Szabo B and Auwärter V (2013):** Acute toxicity due to the confirmed consumption of synthetic cannabinoids: clinical and laboratory findings. *Addiction*, 108:534–44.
14. **Holtzman, C. W., Trotman, H. D., Goulding, S. M., Ryan, A. T., Macdonald, A. N., Shapiro, D. I., ... & Walker, E. F. (2013):** Stress and neurodevelopmental processes in the emergence of psychosis. *Neuroscience*, 249; 172-191.
15. **Huestis M and Smith M (2018):** Cannabinoid markers in biological fluids and tissues: revealing intake. *Trends in Molecular Medicine*, 24(2): 156-172.
16. **Jesslin J, Adepu R and Churi S (2010):** Assessment of prevalence and mortality incidences due to poisoning in a South Indian tertiary care teaching hospital. *Indian Journal of Pharmaceutical Sciences*, 72(5): 587.
17. **Jones S (2020):** Notes from the Field: Syndromic Surveillance used to monitor emergency department visits during a synthetic cannabinoid overdose outbreak—connecticut, August 2018. *MMWR morbidity and mortality weekly report*, P 69
18. **Lamy FR, Daniulaityte R and Nahhas RW (2017):** Increases in synthetic cannabinoids-related harms: Results from a longitudinal web-based content analysis. *Int J Drug Policy*, 44: 121-9.
19. **Law, R., Schier, J., Martin, C., Chang, A. and Wolkin, A. (2015):** Increase in reported adverse health effects related to synthetic cannabinoid use—United States, January–May 2015. *MMWR. Morbidity and Mortality Weekly Report*, 64(22); 618.
20. **Lev-Ran, S., Roerecke, M., Le Foll, B., George, T. P., McKenzie, K. and Rehm, J. (2014):** The association between cannabis use and depression: a systematic review and meta-analysis of longitudinal studies. *Psychological Medicine*, 44(4), 797.
21. **Maxwell S, Delaney H and Kelley K (2017):** Designing experiments and analyzing data: A model comparison perspective. In: *Theory Construction and Model-Building Skills*,

- James J, Jacob J (eds.), 2nd ed., pbi Guilford press, New York, ch. 1: 22-52.
22. **Mizrahi R (2016):** Social stress and psychosis risk: common neurochemical substrates? *Neuropsychopharmacology*, 41(3); 666-674.
 23. **Morena, M., Patel, S., Bains, J. S., and Hill, M. N. (2016):** Neurobiological interactions between stress and the endocannabinoid system. *Neuropsychopharmacology*, 41(1); 80-102.
 24. **Papanti, D., Schifano, F., Botteon, G., Bertossi, F., Mannix, J., Vidoni, D., ... and Bonavigo, T. (2013):** "Spicephrenia": a systematic overview of "Spice"-related psychopathological issues and a case report. *Human Psychopharmacology: Clinical and Experimental*, 28(4); 379-389.
 25. **Peacock, A., Bruno, R., Gisev, N., Degenhardt, L., Hall, W., Sedefov, R. and Griffiths, P. (2019):** New psychoactive substances: challenges for drug surveillance, control, and public health responses. *The Lancet*, 394(10209); 1668-1684.
 26. **Sami MB, Rabiner EA and Bhattacharyya S (2015):** Does cannabis affect dopaminergic signaling in human brain? A systematic review of evidence to date. *EurNeuropsychopharmacol.*, 25: 1201-122
 27. **Schifano F, Chiappini S, Corkery JM and Guirguis A (2018):** Abuse of prescription drugs in the context of novel psychoactive substances (NPS): a systematic review. *Brain sciences*, 8(4): 73.
 28. **Serdar N, Onat Y, Asli ED, Onur CN and Nesrin D (2015):** Frequency of Synthetic Cannabinoid Use and Its Relationship with Socio-Demographic Characteristics and Treatment Outcomes in Alcohol-and SubstanceDependent Inpatients: A retrospective study, *KlinikPsikofarmakolojiBülteni-Bulletin of Clinical Psychopharmacology*, 25(4): 348-354.
 29. **Sobh, Z. K. and Sobh, H. K. (2020):** Strox (Novel Synthetic Cannabinoids) in Egypt: Medical and Legal Challenges.
 30. **Spaderna M, Addy PH and D'Souza DC (2013):** Spicing things up: synthetic cannabinoids. *Psychopharmacol (Berl)*, 228: 525-540.
 31. **United Nations Office on Drugs and Crime (UNODC) (2019):** The Challenge of New Psychoactive Substances. Global SMART Programme 2013. <http://www.unodc.org/documents/scientific>
 32. **Vandrey R, Dunn KE, Fry JA and Girling ER (2012):** A survey study to characterize use of Spice products (synthetic cannabinoids). *Drug Alcohol Depend*; 120: 238-241.
 33. **Winstock AR and Barratt MJ (2013):** Synthetic cannabis: a comparison of patterns of use and effect profile with natural cannabis in a large global sample. *Drug Alcohol Depend*; 131: 106-111.
 34. **Yassa, H. A. and Badea, S. T. (2019):** Patterns of drug abuse in Upper Egypt: cause or result of violence?. *Egyptian Journal of Forensic Sciences*, 9(1), 1-9.

الأعراض النفسية لدى المرضى المدمنين للمادة المخدرة المصنعة حديثاً (استروكس)

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خلفيه البحث: يعتبر سوء استخدام العقاقير مشكلة متنامية في العالم، وتعتبر ايضاً في مصر كما في العديد من الدول النامية مشكلة متزايدة.

الهدف من الدراسة: التحقق من وجود اي أعراض نفسية في المرضى المستخدمين للمادة التخليقية الجديدة ذات التأثير النفسي.

المرضى وطرق البحث: تم إجراء هذه الدراسة بمستشفى الطب النفسي بالمجمع الطبي للقوات المسلحة بالمعادي والمركز الوطني للأدمان بالإسماعيلية علي 175 مريض من مدمني المادة التخليقية الجديدة فقط. وذلك في الفترة من سبتمبر 2019 وحتى ديسمبر 2020، حيث تم إجراء المقابلات مع جميع المرضى المدمنين المحجوزين بقسم الأدمان في المجمع الطبي للقوات المسلحة بالمعادي وبالمركز الوطني لعلاج الأدمان بالإسماعيلية خلال فترة الدراسة. وأخذ تاريخ مرضي نفسي كامل، وفحص الحالة العقلية طبقاً للدليل التشخيصي والإحصائي للاضطرابات النفسية. ثم يتم التحليل للبيانات والتحليل الإحصائي للحصول علي البيانات.

نتائج البحث: تبين أن المادة المخدرة المصنعة حديثاً (استروكس) تجعل المتعاطي يصاب بالأعراض النفسية، فكانت النتائج ان 15 مريض من واقع 175 مريض لم يصابوا بأعراض نفسية، اضطراب عدم التوافق بواقع 30 مريض، قلق مختلط واكتئاب بواقع 70 مريضاً، انفصام الشخصية بواقع 35 مريض، اضطراب الشخصية الحدية بواقع 20 مريضاً. و 5 مرضي سمة شخصية مختلطة.

الاستنتاج: إدمان المادة التخليقية الجديدة (استروكس) له آثار نفسية علي معظم المدمنين.

الكلمات الدالة: إدمان، المادة التخليقية.