

PREVALENCE OF DRUG ABUSE IN CHILDREN IN DAMIETTA GOVERNORATE FROM THE 1st OF MAY 2015 TO 1st OF JANUARY 2017

By

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ABSTRACT

Background: The direct and indirect effects of substance of abuse on children lead to many adverse health and safety risks for the child, family and community. Patterns of drug abuse in children are determined not only by the availability and cost of different substances, but also by the dynamics and differences within groups, cultures and age groups. There is increasing awareness that the abuse of drugs by parents and other caregivers can have a good impact on the safety, permanence and well-being of children.

Objective: The purpose of this study was to shed light on the prevalence of drug of abuse in children in toxicology unit in Damietta governorate from the 1st of May 2015 to 1st of January 2017.

Subjects and Methods: A total of 100 abused child were detected to estimate the prevalence of drug abuse in children in Toxicology unit Al-Azhar University Hospital (New Damietta) from the 1st of May 2015 to 1st of January 2017, in addition to 20 healthy volunteers as a control group. Within one hour after arrival to emergency room, blood samples were drawn in sodium fluoride (NaF) contained tubes. Then, it was kept at 4-8 °C for subsequent test, using radioimmunoassay strips as a preliminary test, and a high performance liquid chromatography (HPLC) as a confirmatory test. The status of electrolytes, hemoglobin (Hb), liver and renal function tests, and alkaline phosphatase level were evaluated at the same time of screening the substance abuse. Cases and controls were subjected to full medical history with stressing on age, sex, smoking, behaviors, difficult temperament and the psychoactive drugs used during the previous month. This was in addition to clinical examination with special attention to neurological examination and Glasgow Coma Scale (GCS).

Results: The most common drugs abuse in children were tramadol (90.0%) followed by both cannabis and drugs- co-administration (50.0%), anti-psychotic drugs (30.0%), benzodiazepines (26.0%), antihistamines (13.0%), amphetamine (10.0%), then antidepressants and cough suppressants (5.0%). In control group, tramadol was also the most common drugs abuse (35.0%) followed by cough suppressants (30.0%), cannabis (25.0%), anti-psychotic drugs, benzodiazepines and drugs- co-administration (20.0% for each one), then followed by antihistamines and antidepressants (10.0% for each one). There was a significant difference in tramadol, cannabis, cough suppressants, and drugs-co administration in the study group in comparison to control group.

Conclusion: Tramadol is the most common drug abuse in children in Toxicology Unit in Damietta Governorate, followed by both cannabis and drugs- co-administration, anti-psychotic drugs benzodiazepines, antihistamines, amphetamine, then both antidepressants and cough suppressants respectively.

Keywords: Drug abuse, tramadol, cannabis, amphetamine, antidepressants, coughs suppressants.

INTRODUCTION

Substance abuse is a common problem in families involved with the child welfare system. (Ragab et al., 2014).

Substance of abuse in the adolescent population carries a higher risk for school underachievement, delinquency, teenage

pregnancy, and depression (**Heyman et al., 2015**).

The younger a child initiates alcohol and other drug use, the higher is the risk for serious health consequences and adult substance abuse (**Berman et al., 2014**).

Fatalities, accidental and intentional, that are associated with alcohol and other drug use, in the adolescent population represent one of the leading preventable causes of death for the 15- to 24-year-old population (**Spadari et al., 2009**).

Clinical signs of amphetamines toxicity especially in pediatric population include hyperthermia, tachycardia, tachypnea, mydriasis, tremors, and seizures. In addition, amphetamine intoxication has been reported to cause hyperthermia, hypoglycemia and mild thrombocytopenia (**Berman et al., 2014**).

Regarding cannabis intoxication, the main psychoactive metabolite is delta-9-tetrahydrocannabinol (THC) (**Schwartz, 2012**).

In parallel to this high prevalence of cannabis consumption, there has been an increase in the number of cases of accidental poisoning by this substance in the pediatric population (**Spadari et al., 2009**).

Tramadol poisoning can occur at any time from birth to terminal care. The outcome can range from discomfort, such as constipation, to death from respiratory depression (**Ragab et al., 2014**).

Inadvertent passive drug exposure in infants and toddlers has resulted in multiple medical complications including respiratory illnesses, seizures, altered mental status, and death (**Aligne and**

Stoddard 2007; Bateman and Heagarty, 2009 and Chaney et al., 2011).

Illicit drug use is associated with an increased risk of contracting human immunodeficiency virus (HIV). The sharp rise in pediatric HIV infection from 1985 to 1990 paralleled the occurrence of the crack cocaine epidemic. In 1990, 68% of perinatally acquired HIV infection was attributable to intravenous drug abuse in one or both of the child's parents (**Stall et al., 2010**).

Even without a history of intravenous drug use, an alcohol- and drug-abusing lifestyle places the abuser, partners, and unborn children at risk for HIV infection due to impaired judgment, reduction of inhibitions and sex-for-drugs (**Fergusson and Lynskey, 2011**).

The present work targeted to evaluate the prevalence of drug abuse in children in the Toxicology Unit in Damietta Governorate From the 1st of May 2015 to 1st of January 2017.

PATIENTS AND METHODS

A total number of 100 children; suspected for substances abuse toxicity was detected to estimate the prevalence of drug of abuse in children in Toxicology Unit, Al-Azhar University Hospital (New Damietta) from the 1st of May 2015 to 1st of January 2017 in addition to 20 healthy volunteers as a control group.

All the studied subjects were submitted to the following:

I. Full medical history to all the participants regarding age, sex, smoking, behaviors (such as stealing, aggression, and substance abuse used during the previous month), and difficult

temperament such as moodiness, poor compliance, and provocativeness (Smith et al., 2009).

II. Laboratory investigation: Within one hour after arrival to emergency room, blood samples were drawn in sodium fluoride (NaF) contained tubes. Then, it was kept at 4-8 °C for subsequent test, using radioimmunoassay strips as a preliminary test, and a high performance liquid chromatography (HPLC) as a confirmatory test. The status of electrolytes, hemoglobin level (Hb), renal function tests, i.e. blood urea nitrogen and serum creatinine concentration, liver function tests, i.e. serum alanine transaminase “ALT” and aspartate transaminase “AST” levels, and alkaline phosphatase level were evaluated at the same time of screening the substance abuse (Fidler et al., 2015).

III. Clinical examination with special attention to neurological symptoms and Glasgow Coma Scale (Hogstedt et al., 2011).

STATISTICAL ANALYSIS:

The collected data was organized, tabulated and statistically analyzed using SPSS 13.0 software. For quantitative data, all the values were expressed as mean± standard deviation. For comparison between the two groups, the students (t) test was used. For qualitative data, number and percent distribution were calculated and chi square test was used for comparison between two groups. The value of $P < 0.05$ is considered to denote significance.

RESULTS

The studied groups were matched as regard mean age ±SD being 10±5 in study

group, and 9±2 in control group. There was no statistically significant difference in age between different groups.

In the study group, 70% were males, and 30 % were females, and in control group, 50% were males and the other 50% were females. There was no statistically significant difference in sex distribution between the studied and control groups.

The prevalence of smokers was 80.0% in study group and 45.0% in control group. There was a significant difference between the studied groups.

Behavioral changes in the study group; stealing was 40.0%, aggression was 50.0%, and previous exposure to substance of abuse was 90.0%. In control groups, stealing was 5.0%, aggression was 25.0% and previous exposure to substance of abuse was 5.0%. There was a significant difference between the studied and control groups.

As regards difficult temperament in the study group, moodiness was 35.0%, poor compliance was 70.0%, and provocativeness was 95.0%. In control groups, moodiness was 5.0%, poor compliance was 10.0%, and provocativeness was 55.0%. There was no statistically significant difference between the studied and control groups (Table 1).

For neurotoxic symptoms in the studied groups, tiredness was 30.0%, dizziness was 60.0%, troubles in concentration was 80.0%, confusion was 65.0%, troubles in remembering was 70.0%, relatives notice trouble remembering was 70.0%, have to make notes was 50.0%, difficulty on understanding meaning was 70.0%, irritability was 30.0%, palpitations was 39.0%, troubles in sleep was 80.0%,

headache was 40.0% and nausea was 60.0%. In control group, tiredness was 5.0%, dizziness was 10.0%, trouble in remembering was 15.0%, relatives notice trouble remembering was 15.0%, have to make notes was 15.0%, troubles in sleep was 5.0%, headache was 5.0%, nausea was 10.0%.

There was a statistically significant difference between both groups (Table 2).

As regards the neurotoxic symptoms in the studied groups, depression was 30.0%, incoordination was 30.0%, decreased leg strength was 5.0%, decreased arm strength was 3.0%, numbness of fingers was 4.0%, numbness in toes was 6.0%, sweating was 30.0%, rash was 20.0%, dryness of skin was 20.0%, and regularity in school was 60.0%. In control group; depression was 15.0%, rash was 5.0%, dryness of skin was 10.0%, sweat was 5.0%, and regularity in school was 45.0%. There was no statistically significant difference between both groups (Table 2).

There was a highly significant difference between the studied groups as regarding GCS ($P=0.02$) (Table 2).

There was no statistically significant difference between the study and control groups as regards positive results of routine laboratory investigation in disturbed serum electrolyte either (increased or decreased), hemoglobin (Hb) level and elevated renal function tests, while its was statistically significant between both groups as regards liver function tests and elevated serum alkaline phosphatase level (Table 3).

Also, There was no statistically significant difference between the study and control groups as regards comparison of routine laboratory data in study group versus control group in serum potassium, hemoglobin (Hb) level and renal function tests, while its was statistically significant between both groups as regards serum (sodium, chloride and biocarbonate), liver function tests and serum alkaline phosphatase level (Table 4).

As regards positive results of drug abuse in the study group, tramadol was the most common (90.0%), followed by both cannabis and drugs- co-administration (50.0%), anti-psychotic drugs (30.0%), benzodiazepines (26.0%), antihistamines (13.0%), amphetamine (10.0%), then both antidepressants and cough suppressants were (5.0%). In control group, tramadol was also the most common drug abuse (35.0%) followed by cough suppressants (30.0%), cannabis (25.0%), anti-psychotic drugs, benzodiazepines and drugs- co-administration (20.0% for each one), then antihistamines and antidepressants (10.0% for each one).

There was a highly significant difference in tramadol, cannabis, cough suppressants, and drugs-co administration in the studied groups, while anti-psychotic drugs, benzodiazepines, amphetamine, antihistamines and antidepressants were statistically insignificant as a compared with control group (Table 5).

Table (1): Comparison between cases and controls as regards demographic data.

Parameters		Study group 100	Control group 20	<i>P</i> value
Age (mean±SD) in years		10.0±5	9.0±2	> 0.05
Sex	- Male	70 (70.0%)	10 (50.0%)	> 0.05
	- Female	30 (30.0%)	10 (50.0%)	
Smoking (no, %)		80 (80.0%)	9 (45.0%)	0.002
Behaviors	- Stealing.	40 (40.0%)	1 (5.0%)	0.05
	- Aggression	50 (50.0%)	5 (25.0%)	
	- Previous substance abuse	90 (90.0%)	1 (5.0%)	
Difficult temperament	- Moodiness.	35 (35.0%)	1 (5.0%)	> 0.05
	- Poor compliance.	70 (70.0%)	2 (10.0%)	
	- Provocativeness.	95 (95.0%)	11 (55.0%)	

Table (2): Comparison between cases and controls as regards neurotoxic symptom.

Symptoms		Study group (n=100)	Control group (n=20)	<i>P</i> value
Tiredness		30 (30.0%)	1 (5.0%)	< 0.05
Dizziness		60 (60.0%)	2 (10.0%)	
Trouble in concentrating		80 (80.0%)	0 (00.0%)	
Confusion		65 (65.0%)	0 (00.0%)	
Trouble remembering		70 (70.0%)	3 (15.0%)	
Relatives notice trouble remembering		70 (70.0%)	3 (15.0%)	
Have to make notes		50 (50.0%)	3 (15.0%)	
Difficulty understanding meaning		70 (70.0%)	0 (00.0%)	
Irritable		30 (30.0%)	0 (00.0%)	
Palpitations		39 (39.0%)	0 (00.0%)	
Trouble in sleep		80 (80.0%)	1 (5.0%)	
Headache		40 (40.0%)	1 (5.0%)	
Nausea		60 (60.0%)	2 (10.0%)	
Depression		30 (30.0%)	3 (15.0%)	> 0.05
Incoordination		10 (30.0%)	0 (00.0%)	
Decreased leg strength		5 (5.0%)	0 (00.0%)	
Decreased arm strength		3 (3.0%)	0 (00.0%)	
Numbness in fingers		4 (4.0%)	0 (00.0%)	
Numbness in toes		6 (6.0%)	0 (00.0%)	
Sweating		30 (30.0%)	1 (5.0%)	
Rash		20 (20.0%)	1 (5.0%)	
Dryness of skin		20 (20.0%)	2 (10.0%)	
Regularity in school		60 (60.0%)	9 (45.0%)	
(GCS)	Mild	28 (28.0%)	1 (5.0%)	0.02
	Moderate	10 (10.0%)	0 (00.0%)	
	Severe	5 (5.0%)	0 (00.0%)	

16 cases from 100 children in the study did not respond to this question.

Table (3): Comparison of positive results of routine laboratory data between different groups.

Tests		Groups	Study group (n=100)		Control group (n=20)		P value
			No	%	No	%	
Disturbed (elevated and decreased) serum electrolytes levels	Sodium		10	(10.0%)	0	(00.0%)	> 0.05
	Potassium		5	(5.0%)	0	(00.0%)	
	Chloride		2	(2.0%)	0	(00.0%)	
	Bicarbonate		2	(2.0%)	0	(00.0%)	
Abnormal Hb levels			70	(70.0%)	50	(50.0%)	> 0.05
Elevated liver function tests	Serum ALT		50	(50.0%)	1	(5.0%)	< 0.001
	Serum AST		45	(45.0%)	2	(10.0%)	
Elevated serum alkaline phosphatase level			20	(20.0%)	0	(00.0%)	< 0.05
Elevated renal function tests	Blood urea nitrogen (BUN)		6	(6.0%)	0	(00.0%)	> 0.05
	Serum creatinine levels		4	(6.0%)	0	(00.0%)	

Table (4): Comparison of routine laboratory data in study group versus control group.

Tests		Group	Study group (n=100)		Control group (n=20)		P
			M	± SD	M	± SD	
Serum electrolytes	Sodium (mmol/L)		145.2	5.49	135.95	9.91	< 0.001
	Potassium (mmol/L)		4.5.1	2.01	3.5	2.2	> 0.05
	Chloride (mmol/L).		105.5	5.1	100.5	4.1	< 0.01
	Bicarbonate (mmol/L)		22.4	1.01	18.4	4.01	< 0.001
Hb levels (mg/dl)			9.1	3.01	10.1	3.01	> 0.05
liver function tests	AST(U/L)		54.3	10.8	21.1	6.5	< 0.001
	ALT(U/L)		54.7	8.28	21.77	6.27	
Serum alkaline phosphatase level (U/L)			260.3	100.3	150.6	120.1	< 0.01
Renal function tests (mg/dl)			1.5	1.1	1.01	1.1	> 0.05

Table (5): The results of laboratory data (regarding drug abuse).

Drugs	Study group (n=100)	Control group (n=20)	P value
Tramadol	90 (90.0%)	7 (35.0%)	0.05<
Cannabis	50 (50.0%)	5 (25.0%)	
Cough suppressants	5 (5.0%)	6 (30.0%)	
Drugs- co-administration	50 (50.5%)	4 (20.0%)	
Anti-psychotic drugs	30 (30.0%)	4 (20.0%)	> 0.05
Benzodiazepines	26 (26.0%)	4 (20.0%)	
Antihistamines	13 (13.0%)	2 (10.0%)	
Amphetamines	10 (10.0%)	0 (0.0%)	
Antidepressants	5 (5.0%)	2 (10.0%)	

DISCUSSION

Substance of abuse intoxication in children is a rare form of acute poisoning. Increasing number of cases have been reported (**Ragab et al., 2014**).

The mean age in years was 10.0 ± 5 in study group and (9.0 ± 2) in control group. These finds signified an alarming trend in the prevalence of drug use in such age. Similar result was obtained by **Abd EL-Gawad (2014)** and **Harolyn et al. (2016)** who reported that risk factors for the development of an externalized disorder are found in the preschool years.

Sex incidences were males 70%, and 30% females in study group, while 50% were males, and 50% were females in control group. The majority of male cases was due to that males were more likely to report the use of psychoactive substance and still be accepted in the society (**Robinson et al., 2011**). On the other hand, the intense stigma linked to dependent women is attributed to the society view of drug dependence in women as one of moral and sexual degradation, i.e. the behavior that is tolerated in men is considered scandalous for women (**Blume, 2010**). Male dominance in drug dependence was also recorded by **Amin and Ahmad (2010)**.

Smoking was demonstrated in 80.0% of study group, and 45.0% of control group. There was an extremely significant difference in smoking of all study and control groups. This observation was recorded by **Andersson (2009)**.

There was a significant difference between the studied and control groups as regarding behavioral changes. These results were in agreement with **Harolyn et**

al. (2016) who reported that the disorders may initially present with relatively mild behavior problems and progress to severe symptoms such as stealing, aggression, and substance abuse.

There were no significant difference between the studied and control groups in difficult temperament. These results did not in agree with **McMahon (2010)** who reported that the temperament difficulties may exacerbate childhood troublesome behaviors and result in an insecure attachment with the child's primary caregiver.

There was a significant difference between the studied and control groups as comparison some of neurotoxic symptom in tiredness, dizziness, trouble in concentration, confusion, trouble remembering, relatives notice trouble remembering, have to make notes, difficulty understanding meaning, irritability, palpitations, troubles in sleep, headache and nausea. Statistically insignificantly differences was found between the study and control groups as regarding depression, incoordination, decreased leg strength, decreased arm strength, numbness in fingers, numbness in toes, sweating, rash, dryness of skin and regularity in school. These results were not in accordance with **Anne et al. (2012)** who reported that few significant positive associations were found between exposure and the neurobehavioral tests, and each exposure measure was related to a variety of individual symptoms including dizziness, nausea, fatigue and problems associated with arm strength. There was a highly significant difference between the studied and control groups as regards GCS. These results were in agreement

with **Tokdemir et al. (2009)** who reported that the majority of included cases in their study were mild according to Glasgow Coma Scale.

There was no statistically significant difference between the study and control groups as regards positive results of routine laboratory investigation in disturbed serum electrolyte either (increased or decreased), hemoglobin (Hb) level and elevated renal function tests, while its was statistically significant between both groups as regards liver function tests and elevated serum alkaline phosphatase level. These results were reported by **Hepler et al. (2010)** who reported that the toxicology laboratory plays an important role in ensuring optimum and effective patient care and follow up, and still minimal role in diagnosis.

There was a highly significant difference in tramadol, cannabis, cough suppressants, and drugs-co administration between the studied and control groups. Anti-psychotic drugs, benzodiazepines, amphetamine, antihistamines and antidepressants were statistically insignificant as a compared with control group. **Woratanarat et al. (2009)** reported that amphetamine was found in 16% in cases and 2% in controls resulting in 8.9 times increased crash risk. These results are less than those reported in the present study, and this may be attributed to the different pattern of the drug abuse between both countries, and it may be attributed to the small sample size included in the present study.

The cannabis metabolites were found in the study group double the control group. This was in contrary to **Woratanarat et**

al. (2009) who reported that the cannabis was found in the control group more than cases. This may be attributed to the different inclusion criteria.

Benzodiazepine increased in the study group than the control group. This was in agreement with **Engeland et al. (2010)** and **Movig et al. (2015)** who reported that the benzodiazepine increases the crash risk up to 100 times.

Antihistaminic was detected in 13.0% in study group, and 10.0% in the control group. These results were in agreement with **Woratanarat et al. (2009)** who reported that antihistamines is found in 2-4% of the studied subjects. This could be due to intermittent use, short duration of use, avoidance prior to driving, or use in a low dosage.

The prevalence of drugs co-administration were 50.0% in study group, and 20.0% in control group. These results were in agreement with **Carmen del Rio and Alvarez (2010)** and **Movig et al. (2015)**. Multiple drug dependence continued to be markedly observed in clinical practice and documented in research studied, and the majority of cases were dependent on more than one drug either simultaneously within the same week or concurrently within the last year **De Wet et al. (2014)**.

CONCLUSION

The most common drugs abuse in children in Toxicology Unit in Damietta governorate were tramadol followed by both cannabis and drugs- co-administration, anti-psychotic drugs benzodiazepines, antihistamines, amphetamine, then both antidepressants and cough suppressants respectively.

RECOMMENDATION

Poisoning by this various substances of abuse is, in itself, an alarm signal on the attitude of parents in caring for their children, and these families deserve special monitoring by social services for early discovered, diagnosed and treat the abused child to decreased or prevent deleterious effects on healthy of child. Pediatricians must have to detect drug abused-related problems in their patients and their patients' family members and are knowledgeable about the extent of drug abused and availability of drug treatment resources (especially those for tramadol, cannabis, amphetamine, cough suppressants and drugs- co administration) in their community.

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دراسة معدل انتشار أدوية الإدمان لدى الأطفال في محافظة دمياط في الفترة من مايو ٢٠١٥ إلى يناير ٢٠١٧

مصطفى عبد المنعم محمد، محمود حلمي السعيد، وليد عزت أبو بركة، سند فؤاد محروس،
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خلفية البحث: إن الاستخدام المباشر وغير مباشر لأدوية الإدمان لدى الأطفال له آثار سيئة وخطيرة سواءً علي الطفل أو على الأسرة و حتى على المجتمع. إن سبب تناول الأطفال لأدوية الإدمان لا يعتمد فقط إلى توفرها أو إلى تكلفتها المادية، بقدر ما يعتمد على النوااميس الأخلاقية والدينية والثقافية والعمرية لهؤلاء المتعاطين، إن ومع ازدياد الوعي بخطورة أدوية الإدمان وذلك أما عن طريق الآباء أو القائمين على الرعاية الصحية أدى ذلك إلى حمايتهم، وتحسين أدائهم وصحتهم.

الهدف من البحث: إلقاء الضوء على معدل انتشار أدوية الإدمان لدى الأطفال في محافظة دمياط في وحدة السموم الإكلينيكية بكلية الطب جامعة الأزهر (دمياط الجديدة) في الفترة من مايو ٢٠١٥ إلى يناير ٢٠١٧.

الحالات وطريقة البحث: وقد شملت الدراسة مائة طفل لدراسة معدل انتشار أدوية الإدمان لديهم من وحدة السموم الإكلينيكية بمستشفى الأزهر الجامعي بدمياط الجديدة، وتم اختيار ٢٠ طفل أصحاء كمجموعة ضابطة وذلك في الفترة من مايو ٢٠١٥ إلى يناير ٢٠١٧. وبعد وصول الأطفال في خلال ساعة إلى وحدة السموم بالطوارئ، تم سحب عينة الدم في أنبوبة تحتوى على فلوريد الصوديوم. وتم حفظ العينات عند درجة ٤-٨ مئوية تحت الصفر لحين عمل التحاليل المعملية مستخدمين في ذلك جهاز المناعة الإنزيمية بواسطة كواشف جهاز " سيفا سولارز للمناعة الأنزيمية" كاختبار مبدئي، وجهاز الفصل الكروماتوجرافي السائلي عالي الجودة كتأكيد للنتائج. كما تم عمل تحاليل روتينية في نفس الوقت لتقييم حالة الأطفال من معادن، هيموجلوبين، وظائف كبد وكلية والمستوى الفسفاتيلى القلوي. كما تم عمل استبيان لكل الحالات لفحص العوامل الديموغرافية مثل العمر، الجنس، التدخين، وسلوك الطفل والحالة المزاجية أو النفسية للطفل وأي أدوية أو مواد مخدرة تناولها الطفل منذ شهر على الأقل. كما تم الفحص الإكلينيكي الكامل لهم مع التركيز على أعراض الاعتلال العصبي ودرجه الوعي بتقييم جلاسجو لكل الحالات.

نتائج البحث: يعد الترامادول هو الأكثر تناولا بنسبة (٩٠%) تلاها في الترتيب كلا من مشتقات الحشيش وتناول أكثر من عقار في وقت واحد بنسبة (٥٠%) ثم المواد المؤثرة على الحالة النفسية والعصبية بنسبة (٣٠%)، والبنزوديازيبين بنسبة (٢٦%)، ثم مضادات الهيستامين بنسبة (١٣%)، ثم الامفيتامين بنسبة (١٠%)، وكلا من مضادات الاكتئاب والكحة بنسبة (٥,٠%). بينما في المجموعة الضابطة كان أيضاً الترامادول بنسبة (٣٥%)، تلاهما مضادات الكحة بنسبة (٣٠%) و مشتقات الحشيش بنسبة (٢٥%) والمواد المؤثرة على الحالة النفسية والعصبية والبنزوديازيبين وتناول أكثر من عقار في وقت واحد بنسبة (٢٠%) ثم مضادات الهيستامين مضادات الاكتئاب بنسبة (١٠%) وكانت هناك دلالة إحصائية في الترامادول، الحشيش، الامفيتامين، مضادات الكحة وتناول أكثر من عقار في وقت واحد في مجموعة الدراسة مقارنة بالمجموعة الضابطة.

الاستنتاج: يعتبر الترامادول من أكثر عقاقير أدوية الإدمان المتعاطاه لدى الأطفال في وحدة السموم بمحافظة دمياط، يليه مشتقات الحشيش وتناول أكثر من عقار في وقت واحد ثم المواد المؤثرة على الحالة النفسية والعصبية والبنزوديازيبين ثم مضادات الهيستامين ثم الامفيتامين ثم مضادات الاكتئاب والكحة.