

Heroin Addiction: Physical and Social Implication

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Literature concerning the problem of drug addiction revealed a wide range of multifactorial facets to the problem. The purpose of this study is to look for the possible association between the intake of heroin and the extent of the physical and social sequelae in an Arab society.

A selected sample of (n=45) inpatient heroin addicts were assigned to the trial after their detoxification period. Only (n=25) completed the trial after being submitted to the following investigations:- WHO drug dependent evaluation, Eysenck Personality Questionnaire (EPQ), Complete urine screen for drugs of abuse as well as HIV screen and Hepatitis C virus antibody test.

The statistical results suggested significant association between "Marital Status & Employment Stability" with $P < 0.0005$; also between "Heroin recent use and Hepatitis C antibody diagnosis" with $P < 0.05$. Possible association might exist between "Age at first use and psychiatric diagnosis", as anxiety is more prevalent among individuals who start using at older age. No other correlation proved to be of statistical significance.

(Egypt.J.Psychiat., 1996, 19:33-47).

Introduction

Illicit drug use is spreading, especially in the developing world, but has begun to stabilize in most developed countries. The phenomenon of illicit drug use is still poorly understood, with responses in most countries influenced largely by cultural factors (Wodak, 1994).

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A considerable number of people particularly among the young are departing from the traditional sociocultural norms of society and such developments may be associated with the increased abuse of drugs (Okasha, 1995).

The methods used to study the addiction phenomenon should be validated with other techniques as those who come forward for treatment includes only users who are vulnerable to arrest and / or interested in seeking treatment (Larson et al., 1994).

Within the field of addiction, the majority of work regarding "stages and processes of change" has focused on single drug problems. However, the majority of substance abuse treatment population present with more than one substance use disorder (Abellanas, 1993). Abul-Magd (1987) noticed that 63.08% of his

heroin sample were using other addictive drugs concurrently. Also Fahmy (1989) revealed that 63.38% of her heroin sample were concurrently polydrug dependent. In Zimbabwe Acuda et al. (1994) strongly indicated that polydrug use was quite prevalent among secondary school students.

The use of alcohol, as well as illicit and prescribed psychoactive drugs has led to increase in the number of individuals who suffer from complications, for example; the unshaken spread of AIDS through shared needles or sexual contact with infected drug users could greatly increase morbidity and mortality among injecting drug users (Strange, 1995).

Griffiths et al., (1994) indicated in their community study a clear evidence of preferences for specific routes of drug administration with predominant route of injection (54%) followed by chasing the drugs (44%), their results showed a continuing risk of switching from chasing to injecting for those who continued to use.

Again, injecting drug users (IDUS) especially heroin addicts were reported as at high risk for Hepatitis C Virus (HCV) infection. Van-Beek et al. (1994) indicated in his study of risk factors of HCV among IDUS that (59%) had HCV antibodies & the prevalence increased significantly with older age group, longer time since first injecting and in heterosexual male.

Even from the psychopathological point of view, Latkin et al., (1993) indicated high correlation between depression and the frequency of heroin injection. This notation goes in line with Ness et al. (1994) who revealed clinical decline in symptoms of dysphoria, and personality disorder traits in opioid abusers after the course of rapid medical detoxification and that dysphoric symptoms should be considered in researches as psychiatric co-

morbidity of substance abusers. In this respect, Amir (1994) reported that polydrug abusers scored significantly higher than non abusers on the Alineation and Discomfort subscales. Amir explained the later result in term of self medication by distressed and inadequate individuals. However, Gawad (1990) reported no significant correlations between sadness, loneliness, MMPI subscales and heroin addiction.

Finally, characteristic of the health care system of a nation may also influence patterns of drug abuse, particularly where functions of criminal justice and health care systems overlap (Greberman et al. 1994). Brown et al. (1993) indicated that African-Americans had a longer history of drug and alcohol abuse problems than Hispanics. Women reported more medical, psychiatric, family-social and employment problems than men. Men reported more legal and alcohol related problems than women. Gawad (1990) indicated in his heroin sample that 97% self reported drug related offences but only 15% were arrested during the one year time prior to the study.

Subjects and Methods

The sample consisted originally of (45) male, Saudi inpatients, heroin addicts, admitted to a private hospital in Jeddah, Saudi Arabia, for detoxification during the last six months of 1995. Out of the (45) subjects, (9) refused to submit their full consent and (11) were discharged prematurely after submitting their initial consent mainly because of financial reasons. Therefore only (25) heroin addicts completed the research procedures.

The patients were interviewed by the principle researcher pre and post detoxification periods which lasted between 7-10 days according to each separate case. All patients were subjected to daily full urine screen for drugs of abuse, and de-

tailed intensive interview took place after opiate free urine screen. Diagnosis of the patients based on the criteria of the DSM IV and was confirmed by the urine screen results.

Besides the full initial psychobiogram, patients were subjected to:-

(A) Drug dependence treatment evaluation: Baseline record form (WHO, 1987) which include:-

1. Socioeconomic information and Demographic, and Vocational
2. Non-medical drug use: Pattern and History
3. Treatment and rehabilitation
4. Criminality.
5. Diagnostic information (for clinical staff)

(B) Eysenck Personality Questionnaire. (EPQ) Arabic Version.

This was carried out by the same clinical psychologist.

(C) Laboratory Investigations:-

1. Full urine screen for all drug of abuse was carried out in hospital toxic lab. under strict supervision using Elisa technique.
2. Serum-Alcohol level.
3. HIV detection in blood.
4. Liver function tests.
5. Hepatitis C Virus antibody (HCV).

Statistical Procedures

Two main statistical procedures were carried out by the researcher namely:-

1. Descriptive

All the criteria included in the research tools (quantitative variables) were statistically described for their numbers & percentages except those variables where there is no heterogeneity e.g. sex, religion, place of residence, ethnic group. etc....

2. Analytical

The following types of equations were used to look for associations between selected variables that could illuminate the goal of the research namely:

- * Chi-square test (Rosner, 1986).
- * Two sample T. test (Rosner, 1986).
- * Regression Equation. (Daniel, 1978).

Results

Descriptive statistics of the socio-demographic discrete variables of the base line record (table-1) showed that all the sample (100%) were male, Saudi's muslim & living in their own apartment or in family dwellings in their cities. (56%) were singles, (96%) living with their parents. Regarding the educational background (96%) could read & write, but of those (56%) had more than 10 years of education. Almost 83% of the sample received vocational training. Table 1 also indicates that 40% of the sample had durations of jobs in the last 12 months prior to admission of less than one month, while during 6 months prior to admission 56% of the sample were unemployed and 48% of the sample became unemployed during the last month prior to admission.

Table (1)
Summary of Social Discrete Variables

Item	Variables	Count	Percent %
Sex	Male	25	100%
Ethnic Group	Saudi	25	100%
Religion	Muslim	25	100%
Usual Residence	City	25	100%
Living Place	Apart/F. Dwelling	25	100%
Marital Status	Single	14	56%
	Married	11	44%
Living with whom	Parents	24	96%
	Spouse	1	4%
Literacy	Cannot R & W	1	4%
	Can R & W	24	96%
Education (Years)	1y - 6y	3	12%
	7 y - 9 ys	9	32%
	10 y - 12 ys	11	44%
	13 y and aboe	3	12%
Vocational Training	No	20	83.33%
	Yes	5	16.67%
Duration of Employment	0 m	14	56%
"last six months"	1 m	1	4%
	2 m	1	4 %
	4 m	2	8 %
	6 m	5	20 %
	12 m	2	8 %
No. of Jobs	None	11	44%
"last 12 months"	One	13	52%
	Three	1	4%
Duration of Jobs	None	2	8 %
"last 12 months"	less than 1 month	10	40%
	1 - 3 months	1	4%
	4 - 6 months	2	8%
	7 - 12 months	3	12%
	13 - 18 months	1	4%
	more than 18 months	6	24%
Employment Status	No	2	8%
	Yes,	11	44%
	Doesn't work	11	44%
	Dont' know	1	4%
Last 30 Day Employ. Type	Full time	8	32%
	Part time	5	20%
	Unemployed	12	48%
Subi. Economic Status	Less than 2000	2	8%
	200 - 4000	3	12%
	4001 - 8000	11	44%
	8001 - 15000	8	32%
	15000	1	4%
Guardian's Econ. Status	Less than 2000	2	8%
	2000 - 4000	11	44%
	4001 - 8000	11	44%
	8001 - 15000	1	8%
Source of Income	Salary	12	48%
	Spouse of Family	12	48%
	Illegal	1	4%
Dependents	None	14	56%
	2 or less	2	8%
	from 3 to 4	8	32%
	5 or more	1	4%

The socioeconomic status of the sample was described in table 1. 44% of the sample reported to have income ranging between 4001-8000 S.R. (i.e. 1000-2300 US Dollar). 48% of the sample indicated that sources of their income were either through salaries or spouse/family respectively.

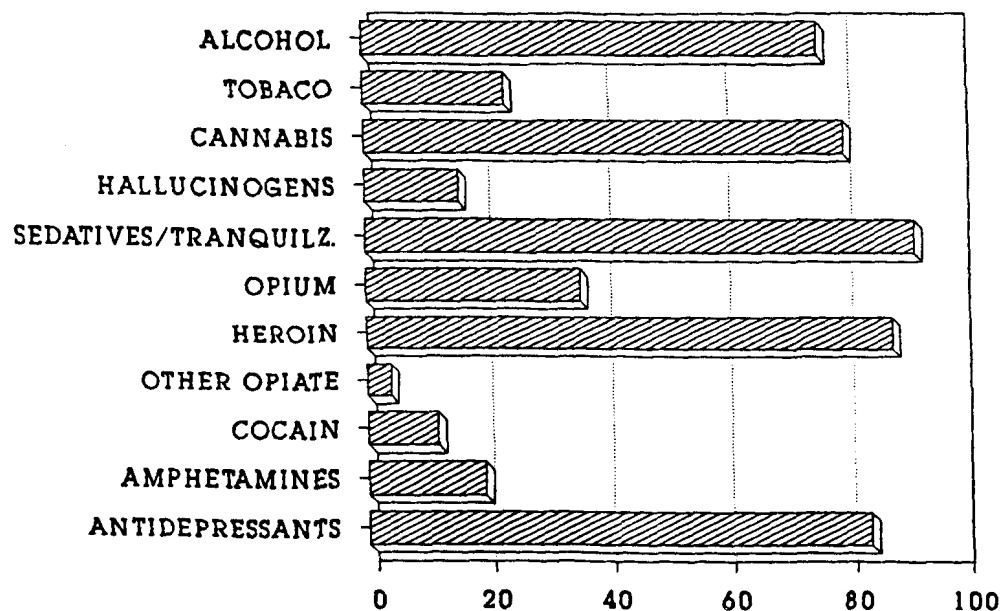
Drug use history is shown in table 2 which indicate that 36% of the sample used heroin from 7 to 14 days and another 36% from 15 to 30 days during the last 30 days. 48% reported spending 200 S.R. (i.e. 54 US. D) to buy heroin daily. 68% indicated that friends were the source of introduction for drugs and the same percentage rationalized their first use of heroin to be sociable and to have fun.

Table (2)
Drug Use History

Item	Variables	Count	Percent %
Drug Use (Last 30 days)	6d or less	7	28%
	from 7 to 14 dy	9	36%
	15dy-30 dy	9	36%
Daily Cost (average)	SR 100	6	24%
	SR 200	12	48%
	SR 300	4	16%
	SR 500	1	4%
	SR 600	1	4%
	SR 1000	1	4%
Last 24 hs. Med. D. Use	None	2	8%
	Yes	23	92%
Source of Introduction	Family	2	8%
	Friends	17	68%
	Doctor	5	20%
	Pharmacist	1	4%
Reason of 1 st Non-Med Use	Curiosity	5	20%
	to be sociable/fun	17	68%
	don't know	3	12%

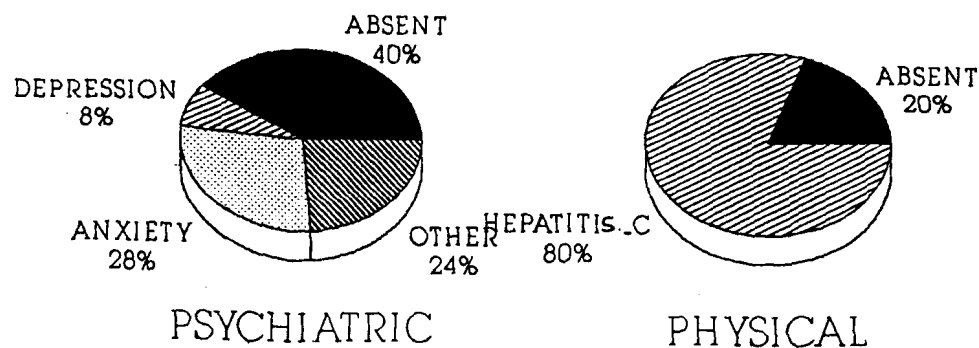
The sample's pattern of recent use for drug of dependence is plotted in table (3). During the last 12 months prior to hospital admission, 95% reported using sedatives / tranquilizers. 90% used heroin. 85% used antidepressants, 80% used tobacco & 75% used alcohol.

Table 3
Drug Dependence Recent Use



Diagnostic information can be elicited from the charts in table 940. regarding physical diagnosis, 805 showed hepatitis c antibody and non proved to be HIV positive. As for psychiatric diagnoses, 28% had anxiety while 8% had depressive manifestations.

Table 4
Diagnosis



Treatment and rehabilitation is shown in table (5). During the last 30 days 56% of the sample recieved inpatient treatment and 52% recieved treatment with minor tranquilizers in the last month prior to hospital admission. 92%

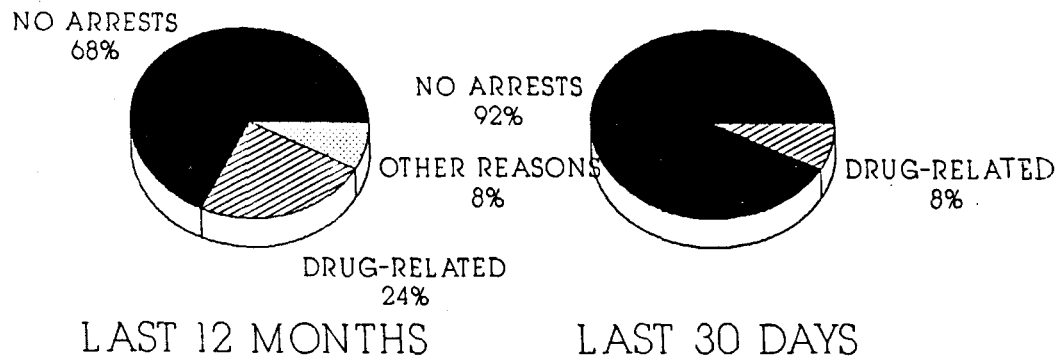
of the sample underwent detoxification during the same period. No changes in life style was indicated by 84% due to their heroin use and 76% were satisfied by their treatment and rehabilitation program.

Table (5)
Treatment Rehabilitation

Item	Variables	Count	Percent%
Place of Therapy "last 30 day"	None	2	8%
	Hosp. In-Patient	14	56%
	Out Patient Clinic	9	36%
Drug Therapy "last 30 day"	Opiate Type	2	8%
	narc. Antag.	1	4%
	Disulfiram	13	8%
	Tranquil. M.	5	52%
	Anti. Dep.	2	20%
	Others		8%
Others III Measures	Detoxificate	23	92%
	Religious Act.	2	8%
Satisfaction wih Programe	Very	3	12%
	Some what	19	76%
	Don't know	3	12%
Other Receied Programes	No	23	92%
	Don't know	2	8%
Change in Life "last 30 day"	No	21	84%
	Yes	3	12%
	Unknown	1	4%

The diagrams in table (6) show the types of criminal activity and drug related arrests. During the last 12 months 24% arrests were drug related while 8% were reported to happen during the last month prior to hospital admission.

Table 6
Drug Related Arrest



Eysenck Personality Questionnaire (E.P.Q.) is presented in table (7). The highest mean score was obtained in criminality scale (19.64) followed by neuroticism (18.08).

Table (7)
E.P.Q

SCALE	COUNT	MEAN	ST.	DEV.
Criminality	25	19.64	10.61	
Neuroticism	25	18.08	2.707	
Introversi	25	11.4	2.858	
Lie	25	9.36	3.04	
Psychoticism	25	3.48	1.584	

Analytical statistics was used to clarify the correlation between specific items and the use of heroin. Table (8) indicates significant correlation between "marital status & employment stability"

Table (8)
Chi Square Test.

ITEM	ST. E. q.	D.F.	SIGNIFICANCE
Marital Status vs Employment stability	15.634	2	P < 0.0005

Chi-Square Test

With P < 0.0005. Table (9) shows no significant correlation between the sample "marital status & the cost of heroin / day.

Table (9)
Two Sample T. Test & Confidence Interval

ITEM	MEAN	ST. E. q.	NO.	SIGNIFICANCE
Marital Status vs	268	235	14	Not
Cost of drug/day	223	144	11	

Two sample T. test & Confidence interval

Also no significant correlation between the "cost of heroin / day & legal income" as shown in table (10).

Table (10)
Regression Equation

ITEM	ST. E. q.	SIGNIFICANCE
Cost of drug/day vs. Legal Income.	5.1%	Not

Regression equation

Heroin use was examined statistically for association with the diagnoses as shown in table (11).

Table (11)
Correlation Data "Use vs Diagnosis"

ITEM	STAT. E. q.	D.F.	SIGNIFICANCE
Heroin Ever Use (control) vs both Psych. & Physical Diag.	3.209	3	Not
Heroin Recent Use (control) vs both Psych. & Physical Diag.	2.606	3	Not.
Heroin Recent Use vs Hepatitis C.	12.862	12	Sig.
Heroin Use "frequency" vs Hepatitis C.	6.298	6	Not.
Heroin Route of Adm. vs Hepatitis C.	28.206	2	Not.
Heroin Age 1 st Use vs Psych. Diag.		7	Possible Association

Chi - square test**Chi- square test**

It was found that only "heroin recent users" - i.e. during the last year before hospitalization - have significant association with "hepatitis C antibody" diagnosed group with $P < 0.05$. Also possible association between "heroin age of first use" and "psychiatric diagnosis" was noticed.

Table (12)
Shows Significant Association Between Number of Relapses

ITEM	P-Value	SIGNIFICANCE
Relapses vs Psychiatric Diagnosis	$P < 0.009$	Significant

Chi-Square Test

And psychiatric diagnoses "with $P < 0.009$. However, table (13) shows no significant association between "number of relapses & physical diagnosis of Herpatitis C - antibody"

Table (13)
Regression Equation

ITEM	Mean of Relapses	ST. DEV.	No.
No Hepatitis	5.8	3.9	5
Hepatitis C	9.0	4.89	20

T= -1.56 P= 0.16 D.F.= 7 Not significant
Finally, no significant association was found between "Criminality and Diagnoses" as found in table (14).

Table (14)
Criminality and diagnoses

ITEM	STAT. E. q.	D.F.	SIGNIFICANCE
Ever arrested vs Psychiat. Diag.	6.835	3	Not 0.05 < P < 0.10
Ever arrested vs Physical Diag.	0.000	1	Not
Reason of arrest (last 12 m) vs Psychiat. Diag.	0.000	6	Not.
Reason of arrest (last 12 m) vs Physical Diag.	1.042	2	Not.

Chi-Square Test.

Discussion

Researches concerning the problem of drug addiction in the Arab societies is very difficult to tackle specially in the domaine of data collection, same as in different parts of the world (Perkins, 1994). This is because of many reasons, e.g. social sense of shame & guilt in predominantly muslim culture hinder the researchers from obtaining valid data. Moreover, the lack of properly organized health services, documented data inspite of acknowledging the existance of addiction problem & the implimentation of services to combat the problem e.g. addiction units in several psychiatric hospitals in Egypt and hope for ad-

dicts in Saudi Arabia.

Despite these previous difficulties, we felt the great need to continue searching the problem despite knowing the limitations of this research e.g. selected sample to generalize its data. We are convinced that clinical researches as this one can be an adding stepping stone to understand the nature of the problem for better future service organization, national & international.

In this research, we tried to grasp informations by self-rating which was documented as much as possible by self-rating which was documented as much as possible by patients' guardians evidence & from the previous patient's files i.e. number of relapses.

The fact that all our sample were males and Saudis might indicate the strong cultural input i.e. socially & religious wise, that might hinder females to abuse heroin or at least to come forward for treatment. This assumption can be supported by the fact that the mean age of our sample was 29 ± 5.6 , whereas Strang (1995) indicated that 20-30% of the teenagers in USA & Scotland are experiencing drugs. The high mean age of our sample can be explained by the suppression of the cultural norms to come forward for treatment, and also because as shown in table (1), 56% were singles i.e. mostly had no dependents 56% were jobless-with statistical significant correlation ($P < 0.005$) in table (8). At the same time about 44% had average income enabling them to support their addiction career.

It was observed that 96% of the sample were living with their parents i.e. depending on them, and 48% of the sample were financially depending on family support (table 1). Therefore, the relative availability of finance, being singles, jobless & dependant, apart from the assumed cultural codes suppression might explain the relatively high mean age of the sample.

As Abul Maged (1987), Fahmy (1989), and Abellanas (1993) indicated that the majority of substance abusers presented with polydrug use disorder; the same can be noticed in our sample in table (3). The concurrent high percentage of sedatives, antidepressants, alcohol and cannabis use can be explained by the already discussed factors affecting the high mean age i.e. singles, jobless & relative high income. However, the concurrent polydrug use can also be explained in the domain of selfmedication as Latkin et al. (1993) & Ness et al. (1994) postulated the high correlation between dysphoric symptoms and the intake of heroin. In our study, 8% expressed depressive main-

festations compared to 28% who expressed anxiety manifestations (table 4). The high incidence of anxiety manifestations is supported by the fact that 52% used minor tranquilizers as drug therapy one month prior to hospital admission (table 5). Still, our findings go along with Latkin and Ness's results and their assumption that anxiety depression is but one continuum that can hardly be separated specially in the presence of other factors e.g. drug abuse. High mean score of neuroticism scale (18.08) of E.P.Q (table 7) supports the existence of anxiety manifestations. Moreover, a significant association existed between numbers of high relapses & the psychiatric diagnosis-mainly anxiety ($P < 0.009$); and the possible correlation between age of first use & diagnosis of anxiety (table 11) support the high incidence of anxiety compared to other psychiatric diagnoses in our study.

Van Beek et al. (1994) stressed that older age group & long injecting time in males increases prevalence of HCV antibodies but not associated with exposure to HIV, unlike Van Ameijden et al. (1994) who confirmed the high risk of HIV infection among new injectors. Our findings (table 1 & 4) support Van Beek's results as 80% of our high mean age group presented with hepatitis C antibodies & non with HIV. Also, significant correlation was elicited between heroin recent use & hepatitis C antibodies with $P < 0.05$ (table 11). The absence of HIV diagnosis can be explained by the firm health measures adopted by the health authority in Saudi Arabia to combat its spread as well as the general fear and awareness of people about HIV dangerousness.

Brown et al. (1993) indicated that men reported more legal & alcohol related problems & 97% of Gawad (1990) sample reported drug related offences, yet

Greberman et al. (1994) indicated that characteristics of health care systems of a nation influence pattern of drug abuse, particularly where the function of criminal justice & health care overlap. This is more obvious in Saudi culture with predominantly muslim society that is governed by Islamic Shariyaa which might hinder our sample to self report drug related offences e.g. only 8% (table 6) in spite of the high mean criminality score (19.64) on E.P.Q (table7). But since the lie scale on E.P.Q was relatively low (9.36) therefore, the low 8% drug related problems can be explained by the fact that the sample families supported them & tolerated their deviant behaviour either out of their shame or because of the strict legislations which is quite evident in admitting them to a private health sector and the non existence of association between their criminal behaviour and either diagnoses.

In conclusion, inspite of the limitation of sampling in this study, the need to clinical & basic data like those presented here is very much essential to build up overall idea about the pattern & sequelae of the addiction problem, hence planning for proper services which hopefully will enable researchers for better chances to obtain reliable and valid data. It was obvious through out the discussion the importance of the simple clinical sociodemographic data e.g. the mean age of the sample and how can other factors intermingle to clarify the age importance and in shaping the sample career and sequelae either physically/or socially. The effect of the culture norms was looked at as a both adding & remitting factor in our sample addiction problem.

The need is for national wide basic data survey guided by such stepping researches to provide reliable data to construct good researches & subsequent services based on the culture codes.

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L'addiction d'Heroïne au point de vue physical et social

**Cete étude discute les effets psychologic et physical en cas
d'addiction de Heroine sur 45 malades Saudien.**

إدمان الهيروين دراسة عوامل عضوية واجتماعية

أجريت هذه الدراسة بهدف استقصاء علاقة إدمان الهيروين بعوامل عضوية واجتماعية في مجتمع عربي. وتم اختيار عينته من مدمني الهيروين بلغ عددهم عند بدء البحث خمسة وأربعين مريضاً بالقسم الداخلي بمستشفى خاص بالملكة العربية السعودية حيث يعمل الباحث طبيب استشاري للأمراض النفسية. وقد أكمل البحث خمسة وعشرون مريضاً فقط حيث رفض تسعة مرضى الموافقة على إعطاء بيانات شخصية، وخرج أحد عشر مريضاً قبل إكمال البحث لأسباب مادية.

وقام الباحث بمناظرة المرضى قبل وبعد فترة علاج إزالة الآثار السمية للهيروين والتي استغرقت ما بين ٧ - ١٠ أيام.

وقد أخذت عينة بول يومياً من كل مريض للكشف عن عقاقير سوء الإستعمال، واستخدم التقسيم الأمريكي الرابع للأمراض النفسية في تشخيص الحالات اكلينيكياً. وأجرى للمرضى اختبار منظمة الصحة العالمية لتقويم الإعتماد على المخدرات، واختبار الشخصية لأيزنك (النسخة العربية) كما أجريت التحاليل البيولوجية والأكلينيكية الكيميائية بما في ذلك تحليل البول للكشف عن مرض نقص المناعة المكتسب عن طريق تحليل في الدم، والأجسام المضادة لفيروس التهاب الكبد الوبائي (س)، وتقويم وظائف الكبد. وتم تقويم النتائج بطريقتين إحداهما وصفية والثانية تحليلية، وعرضت النتائج في أربعة عشر جدولاً.

وتبين من البحث أن المرضى جميعهم كانوا ذكوراً سعوديين ويحتمل أن يكون ذلك راجعاً لعوامل اجتماعية ودينية تحمي الإناث من التردى في الإدمان أو طلب العلاج، كما كان متوسط سن المرضى أكبر من مثيله في المجتمع الغربي والأمريكي، وكانت نسبة كبيرة منهم تعيش مع أسرهما وتعتمد عليها مادياً.