

## Psychological Understanding of Egyptian Heroin Users

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### ABSTRACT

The most recent evidence of drug abuse in Egypt shows a sharp upswing in heroin use since 1983, this remarkable change in the addict population directs our attention to study the psychological aspects of the problem.

We studied 78 male Egyptian Heroin users admitted to two private mental hospitals at great Cairo, and we compared them regarding different variables with a controlled matched group with no history of narcotic abuse.

They were subjected to semistructured psychiatric interview and assessment of psychological functions using a battery of psychometric tests. Results revealed that the mean score of users was higher than controls in psychoticism, neuroticism, and criminality on applying the Eysenck personality questionnaire.

Users had moderate degree of anxiety and depression and they showed significant cognitive deficits which were more pronounced during early detoxification period. According to the DSM-III it was found that there is no specific personality type or disorder for heroin users.

### INTRODUCTION

The recent trend of drug abuse in Egypt, based on national and international documents, shows a sharp rise in heroin use in the last decade.

Heroin alone should be considered as a national disaster; especially if we remember that users annually finance their heroin consumption by about 400 million Egyptian pounds.

Rapid economic superficial growth in Egypt is possibly a major precursor of expanding substance use through disruption of the established social system, the economic value of increased consumption, the creation of social uncertainty and the availability of the substance.

Therefore, the problem is a reflection

of a social disruptive image and it should be dealt with from psycho-sociobiological views.

Unlike traditional drug consumption (e. g. hashish) confined to a small number of people from certain population groups, heroin use involves young people from all socio-economic strata of society (Okasha, 1985).

This remarkable change in the addict population has to direct us to determine the magnitude and size of the problem as an unavoidable step to plan for prevention and management.

The current work was designed to search for specific personality traits of heroin users, to identify the association between abuse and other mental disor-

ders and to investigate any cognitive impairment of heroin abuse.

## PATIENTS & METHODS

The sample comprised 78 patients. It included all male inpatient heroin users, at two private mental hospitals in Cairo, admitted during 1987. Therefore, were all admitted seeking detoxification from heroin dependence and might have a history of any other substance use prior to heroin. They had to meet the diagnostic criteria of DSM III of opiod abuse and dependence. They were all continuously abusing heroin over the past 6 months before hospital admission. The average stay in hospital was 21 days.

Although it constituted a selection bias, we could not apply the research to any user at a state hospital because most heroin users were able financially to support their treatment and preferred to be admitted in a private hospital where privacy and good care were available.

The sample was compared to a control group of 78 male Egyptian subjects matched for age, residential environment and socio-economic standard. They were chosen amongst relatives and friends students of patients. They should never experience the intake of hashish or other narcotic substances. Also they should not show any psychiatric morbidity.

Both users and controls have been subjected to:

1- Modified Ain Shams University case sheet.

2- Complete psychiatric, physical and neurological examinations.

3-Assessment of psychological function by using the arabic version of the following psychometric tests; Eysenck personality questionnaire, (Eysenck, and Eysenck, 1975). Beck Depression Inventory (BDI) (Beck *et al.*, 1961).

4-Assessment of cognitive functions through the application of the following

tests. Symbol Digit Modalities Test (SDMT), Memory Span for digits and test for similarities (both are subscales of the Wechsler Bellevue test) (Melika, 1976\*)

On the other hand, two tests were applied only to heroin users. Hamilton Anxiety Scale (Hamilton, 1959). Test of time estimation at 1,3 and 5 minutes (Frith, 1973).

It is to be mentioned that controls have been tested only once while the whole test battery was applied twice for the heroin users: in the first 3 days of hospital admission (i. e. withdrawal period) and just before discharge and after complete detoxification.

## RESULTS

The mean age of heroin abusers was  $28.69 \pm 6.94$  while that of controls was  $28.59 \pm 5.43$  ( $t=4.22$  and  $p>0.05$ ).

The age of initiation of heroin abuse was between 20 and 24 years old and completed for most users by the age of 29. The involvement in heroin was decreased with progression of age.

The mean duration of heroin abuse was  $2.4 \pm 1.4$  years. The main source of the first heroin dose was from friends (87.2% of cases), relatives (9%) and pushers (3.8%).

Reasons for intake of heroin for the first time were curiosity (96.2%), sense of emptiness (69.2%), availability of excessive money (51.3%), sex power (44.9%) imitation (35.9%) and escape (35.6%).

Motivation for continuous heroin use were: The sense of psychic and physical energy (43.6%) the enjoyable sense of good mood (43.6%), a continuous escape (6.4%) and a sort of treatment (6.4%).

Most users referred to heroin the experience of "high" (75.6%) the increased sense of power and confidence (78.2%), the feeling of peace and tranquility (78.2%) although most of them

(73.2%) did experience nausea and/or vomiting.

The mean average monthly costs of heroin was 2021.8 ± 1347.02 Egyptian pounds. The variability in the costs reflected differences in socio-economic standards as well as the differences in doses.

The means of financing included work (43.6%); parents (34.7%) inherited wealth (10.3%), illegal sources (5.1%) and friends (6.4%). So the majority of users supported their heroin use through legal means.

Nearly almost all users (97.4%) had long histories of substance abuse before; heroin while only very small percent (2.6%) began directly with heroin.

Before heroin intake, out of 78 cases, 74 (94.87%) were cigarette smokers; 75 (96.1%) were hashish smokers; 53 (67.9%) were alcohol drinkers; 61 (78.2%) used to take pills; 30 (38.46%) used to take any available addictive substance; while 51 (65.38%) may use other substances besides heroin. The adjunct drug of choice for most users (65.38%) was Rohypnol (Flunitrazepam).

Users are highly significantly younger than controls at beginning of smoking ( $p < 0.001$ ) with progression of age the probability to be a smoker is markedly decreased in both groups.

The results of Hamilton Anxiety Scale showed that users suffering from mild to moderate degree of abstinence anxiety. They got a mean score of 14.38 ± 5.63.

On the Beck depression Inventory, heroin abusers differed from controls in the depth of depression (Table I) Five items of the Beck scale carried significant importance in differentiating between users and controls (Table II) They were.

- a) lack of satisfaction.
- b) guilt feelings.
- c) Social withdrawal.
- d) work inhibition.
- and e) fatigability.

Date shown in Table (3) clarified that all heroin users (78) met the diagnostic criteria of the DSM-III of: Opioid Organic Mental Disorders; Opioid withdrawal during the first interview (first three days of detoxification).

## DISCUSSION

The concept of the natural history of drug alone has been proposed by Robins (1980). This means that the use of psycho-active drugs up to the point of addiction follows a sufficiently clear and universal course. Drug use typically progress along clear times, commences with cigarettes and alcohol, followed by marijuana. Frequent and heavy marijuana users are most likely to progress to other drugs while still continuing its use.

The current study supported this view. The sample progressed from cigarettes to hashish and/or alcohol or pills to heroin while only a very small percent (2.6%) began directly with heroin. Soueif *et al.* (1985) found that smokers outnumbered non smokers in being exposed to various kinds of drugs use stimuli.

The early involvement in substance use is a major correlates of risk to heroin abuse. The age of initiation is between 20 and 24 years old and completed for most of the users by the age 29. Following the investigations of the patterns of drug use from adolescence to young adulthood; Kandle and Logan (1984) concluded that those who have not experienced with any of these substances by that age are unlikely to do so thereafter.

Many factors interact together to provide suitable circumstances for the first heroin dose. But the most prominent factor was curiosity or the desire to experience new feelings and to get the "high" experience mentioned by their friends.

Gold (1980) reported that a primary pharmacogenic effect of Heroin is anxie-

TABLE I

*Comparing the Results of Psychological Tests and Cognitive Functions in Heroin Users and Controls*

Test	Users N=78	Controls N=78	t value.
1) EPQ			
a-Psychoticism	6.92±3.01	3.97±1.75	7.46**
b-Neuroticism	14.15±4.4	11.41±4.17	3.9**
c-Criminality	16.21±5.00	10.61±3.6	8.02**
d-Extroversion	13.76±13.88	13.73±4.58	0.06
e-Lie scale	12.47±4.11	10.96±4.25	2.26*
2) Beck Depression Inventory	20.29±8.63	8.26±7.21	9.44**
3) SDMT	31.69 ±8.06	38.07 ±6.76	5.39**
4)a-Digit span forward.	5.94 ±0.92	6.42 ±1.06	2.97*
b-Digit span backward.	5 ±1.03	5.35 ±0.88	2.25*
c-Total digit span.	10.94 ±1.81	11.76±1.78	2.86*
5) Similarities	14.87±3.35	14.98 ±3.9	0.2

\* = Significant (P<0,05)

\*\* = Highly Significant (P<0,001)

**TABLE II**

*Comparing the Results of Tests of Cognitive Functions in Heroin Users at Admission and at Retest*

Test	At admission	At retest	t Valua
1) SDMT	28.19±8.95	31.69±8.06	8.82**
2) Digit span			
a-forwards	5.82±1.00	5.94±0.92	2.3*
b-Backwards	4.52 ±1.19	5 ±1.03	5.58**
c-Total	10.35 ±1.99	10.95±1.81	5.72**
3)Similarities	13.38 ±3.64	14.87±3.35	9.49**
4)Estimation of time			
a-1 min	1.68 ±1.08	1.52±0.71	1.07
b-3 min	3.68 ±1.7	3.72±1.49	0.21
c-5 min	5.97 ±2.48	5.93±2.17	0.21

\* = Significant (P<0,05)

\*\* = Highly Significant (P<0,001)

TABLE III

*Clinical Diagnosis of Heroin Users*

Axis	Diagnosis	No	%
Axis I	Opioid Organic Mental Disorders; Opioid withdrawal	78	100
Axis II	*Antisocial Personality Disorder	22	28.20
	*Borderline Personality Disorder	15	19.23
	*Narcissistic Personality Disorder	3	3.846
	*Avoidant Personality Disorder	2	2.564
	*Dependent Personality Disorder	2	2.564
	*Mixed Personality Disorder	7	8.974
	*No Personality Disorder "Premorbidly"	27	34.61
Axis III	*None	54	69.23
	*Local abscesses	6	7.69
	*Sequelae of car accident	7	8.97
	*Pulmonary problems	5	6.41
	*Late effects of viral hepatitis	3	3.84
	*Diabetes M. and impotence	1	1.28
	*Mitral stenosis	1	1.28
	*Gonorrhea	1	1.28
Axis IV	Psychosocial stressors: Severity		
	*None	72	92.3
	*Mild (change in residence)	1	1.28
	*Moderate(illness of close relative)	1	1.28
	*Severe (major financial loss)	2	2.56
	*Extreme (Divorce)	2	2.56
Axis V	Highest level adaptive functioning past year:		
	*Fair-4	11	14.1
	*Poor-5	42	53.84
	*Very poor-6	21	26.92
	*Grossly impaired	4	5.12

ty reduction. Heroin make users believe, they were competent and able to master their environment.

The sense of high, sometimes, called pharmacogenic orgasm, is an abnormal state of elation and is quite different from the usual sense of well being (Goldberg *et al.*, 1982).

The nausea that often accompanies the intake (in our sample it occurred in 78.2% of cases) may become "a good sick" because it has attained secondary reinforcing properties by signaling the onset of euphoria (Goldberg *et al.*, 1982). Ritson and Chick (1983) reported that opiates produce a detached dream-like state of mind in which physical and psychological pains are diminished and the user becomes unconcerned about the cares of this world.

In his proposed self-medication hypothesis of addictive disorders, khantzian (1985) postulated that addicts preferred the claiming and dampening effects of opiates and seemed to use this action of the drug to show up strenuous defenses and reinforce a tendency toward withdrawal and isolation.

Hence, we agree that the motive for continuous use must be multifactorial. It is largely a product of social, psychological and environmental factors.

Robins' (1980) believed that drug involvement was influenced more by social factors in the early stages and by psychological factors in later stages.

Our finding about the role of friends in supplying Heroin for addicts is in agreement with many investigations. Addicts are susceptible to pressure from peers to begin and continue taking crugs (Dohnen, 1972). Gordon, (1985) suggested some factors that would predict adolescent problem behaviour: stronger peer influence than parental influences; more friends who model problem behaviour and more support for problem behaviour from friends.

In spite of the high monthly costs of financing heroin use (about 3000 Egyptian pounds) the majority of users in

our sample followed legal means. Many authors, like Jaffe (1985) reported that users may resort to crime and illegal activities. Adolescents, very commonly, may resort to tricks and stealing from homes, parents often are suspicious for a long time before they put two and two together (Macdonald, 1984).

This contrast could be explained by the selection bias of our sample (most came from high socio-economic standards), the non-reliability of answers in general, of heroin users and the conceptual difference held in the user's mind between what is legal and illegal.

Attempts to relate personality constructs to the risk of addictive disorder is still a point of controversy (Allen and Frances, 1986).

The large number of different kind of people who have become drug dependent make it unlikely that they share specific personality type or trait (Winick, 1974).

Collectively, the mean scores of users, in our sample, using the Eysenck personality questionnaire (EPQ) was higher than controls and Egyptian norms in psychoticism (p), neuroticism (N), criminality (c) and lie scale (L).

In term of scale validation, Eysenck and Eysenck (1975) found that drug addicts and alcoholics had high (N) score while drug addicts, patients with personality disorders, patients with sex problems and alcoholics, all showed high (P) scores.

However, the results differ from many investigators, findings who reported that no single personality type, group of traits or disorder is thought to be specific for addiction (Allen and Frances, 1986).

It is important to take into consideration that most investigators utilized the Minnesota Multiphasic Personality Inventory (MMPI) which is a pathological scale, attempting to identify personality characteristics of alcoholics and not of heroin users or polydrug users.

Also, EPQ test is dealing with nor-

mal behaviour and not with symptoms.

It is concerned with personality variables underlying behaviour, which becomes pathological only in extreme cases (Eysenck, 1973).

Some investigations like Gossop (1978) used EPQ and found that both convicted heroin users scored higher on extroversion than non-convicted addicts but neither group scored above general population norms for this trait.

On the other hand, neither users nor controls of our sample scored above average mean of extroversion.

More recently Okasha (1988) assessed 100 heroin users by EPQ.

He found that some traits are overlapping but it is evident that extroversion, impulsivity, neuroticism and introversion are important in this order of frequency.

However, it is impossible to determine whether these traits comprise the "addictive personality" and predated substance use, or whether they are the result of drug addiction; or only a matter of correlation.

According to the rule of conditioning, many authors like Philips *et al.* (1986) postulated that the prognostic outcome of a heroin user who is introvert and neurotic is poor and the rate of his relapse is high if compared to that of an extrovert and neurotic.

The image of the users described by controls of this study was that of a liar, odd, person irresponsible, superficially thinks of problems and lives in a world of fantasy and never forgives.

This negative image reflects the social general concept about heroin users.

On the other hand, users tended to over-evaluate themselves.

This grandiose self-image could be explained by the users tendency to resort to denial (Khantzian, 1980) and self deception to defend their prestige and to maintain a costly psychological equilibrium.

The incidence of antisocial personali-

ty disorder is variable in different studies.

It was 28.2% in our study compared to the 73% in Allen and Frances foundation in 1986 using DSM-III criteria. Those who used criteria for RDC\* Pointed out smaller incidence "15% (Woody *et al.*, 1983) and 20% (Rounsaville *et al.*, 1950).

The association between antisocial personality disorder and addictive behaviour will appear strongest in DSM-III criteria of antisocial disorder (Allen and Frances, 1986).

Meyer (1986) reported also the relatedness between psychopathology and addictive disorders that certain psychiatric disorders, as affective illness and anti-social personality occur more frequently in alcoholics and addicts than their occurrence in the general population.

Also he concluded that the antisocial personality may be either one of psychological correlates of risk for substance abuse, or a consequence of substance use disorder.

The users affective states that of moderate depression mainly of a retarded type. Their chief symptoms were social withdrawal, work inhibition, fatigue-inertia and self-unsatisfaction. We agree with the concept of Woody *et al.* (1984) about the "self medication" of painful affective states: and we can add that users rely on a drug to relieve tension and feel good about themselves and the environment.

Steer *et al.* (1985) used BDI (Beck Depression Inventory) for differentiating between heroin addicts and alcoholics regarding the depressive symptoms.

They found that heroin addicts reported more weight loss and loss of libido than alcoholics.

The problem of abstinence anxiety (anxiety about becoming drug free) has been investigated in the current study.

This result parallels that of Phillips *et al.* (1986) who described clinical reports of increased anxiety in almost

every report of heroin detoxification process.

The cognitive impairment of substance use is always a point of controversy. Field and Fullerton (1975) compared heroin addicts to both healthy non drug controls and patients with known cerebral damage by using extensive neuropsychological battery.

They found that the performance of heroin addicts and non drug controls were almost identical.

Contrary to them, our results proved that heroin users showed significant cognitive deficits that were more pronounced during the first 3 days of hospital admission than at times of discharge.

They had psychomotor retardation, inaccuracy, disorder for immediate memory for numbers impairment of the capacity for mental holding, internal visual scanning in addition to a persistent slight tendency to overestimate the time.

Okasha and Raafat (1988) offered a plausible explanation for these cognitive deficits. They described a diffuse cerebral dysfunction and hyperactive foci in heroin abusers by the use of BEAM, in the first 3 days of admission.

This disappeared in about 3 weeks in the majority of cases.

Miller (1985) demonstrated the presence of neuropsychological impairment in chronic abusers of CNS depressants, including alcohol as well as opiates, especially when such substances were combined a polydrug pattern of abuse.

He reported that drug-induced neuropathology proceeds (with continued drug usage) over time through a subclinical and reversible stage, a latent or occult stage finally to a permanent and irreversible stage.

It is better to conclude lastly that, as drug abuse increases world-wide, this is likely to suggest a universal increase in psychological pathologies, as it seems that drug dependency is a life-style disorder, with its different social, political and economic determinants in each society. So, it seems that drug explosion will

increase in Egypt and every where, unless alienation materialistic concepts, and disruptive attitude of living are ended.

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### المراجع العربية

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## ABSTRAIT

### Une Compréhension Psychologique sur les Égyptiens Utilisant le Héroïne

La plus récente evidence de l'abus des drogues en Égypte a démontré une élévation aigue dans l'utilisation d'Héroïne dès 1983. Ce changement remarquable qui a eu lieu à la population des toxicomanes, nous oriente vers l'étude des aspects psychologiques du problème. Nous avons étudié 78 mâles, Égyptiens, utilisant le Héroïne, qui sont admis à deux hôpitaux mentaux privés au grand Caire. Nous les avons comparés du point de vue des différentes variables avec un groupe contrôlé et harmonisé qui n'ont pas une histoire d'utilisation de narcotique.

Ils ont été le sujet d'un interview psychiatrique semi structuré et d'une évaluation des fonctions psychologiques usant une batterie de tests psychométriques. Les résultats ont montré que leur points moyens ont été élevés en psychoticism, neuroticism et criminalité chez les drogués, plus que celle des contrôlés en utilisant "Eysenck personality questionnaire".

Ceux qui utilisent le Héroïne ont un degré modéré d'anxiété et de depression et ils montrent des déficits cognitifs significatifs qui se voient plus remarquables au début de la période de détoxification.

Selon le D.S.M.III, on a trouvé qu'il n'y a pas un genre de personnalité ou de maladie pour ceux qui utilisent le Héroïne.

## الموجز

### فهم الجوانب النفسية لمتعاطي الهيروين في مصر

تشير الدلائل الحديثة على ان هناك تغيرات طرأت على موقف تعاطي المخدرات في مصر منذ عام ١٩٨٣ تمثل في ازدياد حاد في استعمال الهيروين، هذا التغيير الواضح وجه النظر الى الاهتمام بدراسة الجوانب النفسية للمشكلة، تناولت الدراسة ٧٨ شخصا مصرياً من متعاطي الهيروين في مصحتين خاصتين للعلاج النفسي بالقاهرة، وكان تشخيص حالاتهم جميعاً طبقاً للتقسيم الأمريكي الثالث للأمراض النفسية هو سوء استخدام الهيروين والتعود عليه. وقد طبق البحث على مجموعة ضابطة من المصريين عددهم ٧٨ ايضاً، ولم يسبق لهم تعاطي الخشيش او اى مواد مخدرة اخرى وذلك للمقارنة وحسن استبيان النتائج. وقد تم اختيارهم على اساس التشابه من حيث العمر والسكن والظروف الاجتماعية والاقتصادية.

وبتطبيق اختبار ايزنك (١٩٧٥) لسّمات الشخصية ، وجد ان متعاطى الهيروين حصلوا على متوسطات اعلى من العينة الضابطة ومعايير الاسوياء فى الميل الى الذهانية ، والعصابية ، النزعة الاجرامية ، كما ان العينة الضابطة حصلت على متوسط اعلى من ومعايير الاسوياء فى الميل الى العصابية . وفى اختبار بيك للاكتئاب (١٩٦١) ، وجد ان معظم متعاطى الهيروين يعانون من درجة متوسطة من الاكتئاب . وتطبيق مقياس هاملتون للقلق (١٩٥٩) ، اوضح ان معظم متعاطى الهيروين يعانون من درجة بسيطة من القلق المصاحب لانسحاب الهيروين . كما وجدنا قصورا فى القدرات المعرفية للمتعاطين ، خاصة فى بداية مرحلة الانسحاب . وطبقا للدليل الامريكى الثالث للامراض النفسية ، لم نجد شخصية معينة تميز متعاطى الهيروين من حيث النوع او الاضطراب .