RESEARCH ARTICLE

PERSONALITY DISORDERS IN PATIENTS ON HEROIN SUBSTITUTION THERAPY

Adil EL Ammouri[1,3], Yassine Rassame[1,3], Hana Abrebak[1,3], Fatima Zahra Chamsi[1,3], Ouissal Radouane[1,3], Imane Agdai[1,3], Farah Nsabi[1,3], Mohamed Mozariahi[4], Fadela Bousgheiri[2,3] and Adil Najdi[2,3]

1. Research Team for Mental Health, University Psychiatric Hospital, Tangier, Morocco (CHU-TTA).
2. Laboratory of Epidemiology and Public Health.
3. Faculty of Medicine and Pharmacy of Tangier (FMPT), Abdelmalek Essaadi University (UAE), Tangier, Morocco.
4. Tangier Addictology Center "Hay El Jadid".

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Manuscript Info

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Abstract

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Introduction: The prevalence of heroin use in Morocco was 0.02%. These figures were higher in the northern region of Morocco. The personality disorder represented a difficulty in the management of the heroin addicted patient. The aim of this study was to show that personality disorders were often comorbid with heroin addiction and to specify the predominant pathological personalities in the Moroccan population.

Material and methods:A descriptive cross-sectional study in a population of 171 subjects.Collection of sociodemographic and clinical data by form.Scale:Personality Diagnostic Questionnaire (PDQ - 4+)Statistical analysis: Excel 2016, SPSS 2021: Student test, ANOVA and CHI-2

Results: Sample of 171 patients with 97.7% of male patients and average age of 43,59.Half of the population (48.5%) had only primary education80.7% never received psychiatric care.The average number of incarcerations in our population was 3,96The predominant personality disorders were borderline and antisocial personality disorder respectively.Statistically significant relationship between borderline personality disorder and psychiatric history; and the number of hospitalizations in psychiatric units.Statistically significant relationship between the number of incarcerations and antisocial personality disorder.

Conclusion: Heroin addicts in Morocco suffered from social instability, strong cannabis dependence, delinquency and frequent judicial recidivism. The most frequent personality disorders were borderline and antisocial. However, the causal link between the personality disorder and the addiction remained to be defined.

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Corresponding Author: Adil El Ammouri
Address**:** University Psychiatric Hospital. BP 398 Gzenaya, Route de Rabat Km 17 Tangier, Morocco.
Mail: elammouri.adil@gmail.com

Introduction:-

The abuse of and dependence on illicit substances are widespread among the general population and are associated with substantial societal, personal, and economic costs.

Heroin is the second most harmful drug(Nutt et al., 2010). When a person becomes addicted, the shortage of heroin can cause a withdrawal syndrome that begins 6 to 12 hours after the last dose of heroin is consumed.

For a long time, the sole treatment recommended for heroin addiction was abstinence-oriented treatment. However, since relapses are the rule after this type of therapy, other treatments have emerged, notably maintenance treatments based on a substitution product (methadone, buprenorphine, morphine or diacetylmorphine). One of the objectives is to allow the person to stabilize his or her addiction by means of an opioid or opiate substitute, while at the same time moving away from street heroin, the risks associated with its use and the delinquent environment surrounding illegal products(Stotts et al., 2009).

Heroin addicts have impaired social functioning, including employment, interpersonal relationships and family functioning(Lehman & Simpson, 1992).

In addition, individuals with specific personality disorder traits are also vulnerable to mood disorders and poor social functioning(Friborg et al., 2014). The complex associations between substance use, personality, and functional domain require further study.

According to OMDA (Moroccan Observatory of Drugs and Addictions), the main drugs used in Morocco are: Tobacco; Cannabis; Alcohol; Psychotropic drugs; Cocaine; Heroin; Solvents; Ecstasy(L'Observatoire Marocain Des Drogues et Addictions Au Maroc (OMDA), n.d.).

The prevalence of heroin use in Morocco is 0.02%.In the northern cities of Morocco, injection drug use is higher than in the rest of the kingdom.There are regular reports of the increasing availability and consumption of heroin in northern Morocco, particularly in Nador and Tangier. Extensive drug trafficking takes place between Morocco and Spain, including of Afghan heroin that is shipped to Morocco before heading for European markets(Rammouz et al., 2020).

In Morocco,in 2009, 3 pilot methadone delivery centers, free and anonymous, werecreated.The active file of methadone program beneficiaries increased from 293 individuals in 2012 to 2,327 in 2018, including 180 women(Rammouz et al., 2020).

However, coherence between the different public sectors, universities, basic health care, school health and outpatient addiction services are still lacking. Data on drug use throughout Morocco are still insufficient(Rammouz et al., 2020).

Personality disorder can be a common comorbidity making the medical management of heroin addiction complicated. To our knowledge, there has not yet been any study identifying personality disorders in heroin addicts in Morocco.

Based on the results of previous studies, we hypothesized that heroin addicts in Morocco may have specific traits and associated psychosocial distress. Therefore, we assessed their personality traits, substance use status in addition to their social and psychological functioning. We then explored the association between heroin use, personality disorder, social behavior disorder, and proposed possible mechanisms.

Materials And Methods:-
Type of study:
A descriptive cross-sectional study carried out among a population of 171 subjects aged 27 to 78 years, conducted from January to February 2022 at the Hay El Jadid - Tangier addictology center.

Hay El Jadid addictology center provides treatment for heroin users, who seek treatment voluntarily.

Development:
Subjects with Heroin Use Disorder (HUD) received methadone maintenance therapy. Methadone was given under supervision every morning, on a daily or weekly pace.

The subjects were assessed in the morning before methadone delivery.
We provided detailed explanations about the assessment and procedure for all subjects and obtained informed consent before collecting any data.

Psychometry:
We collected basic sociodemographic data (Gender, Age, Educational level, Employment status); and clinical data about the participant's history (Medical history, Drug use, Psychiatric history, Incarcerations, Suicide attempts); and data regarding the patient's current clinical status(Length of time in the program, Method of methadone use, Average dose of methadone, Use of other substances, Spouse/family use, Relapses)

We used The Personality Diagnostic Questionnaire - Version 4 (PDQ-4) for personality assessment in order to screen for the presence personality disorders.

The PDQ-4+ is composed of 99 items assessing each of the twelve specific criteria of the twelve personality disorders mentioned in the DSM-IV-R, namely paranoid, schizoid, schizotypal, borderline, histrionic, narcissistic, avoidant, dependent, obsessive-compulsive, depressive and passive-aggressive (negativistic).(The Official Website of the PDQ-4 Home of the PDQ-4 and Stimulus Sensitivity Questionnaire Test, n.d.)

Analysis:
Data were inputted with Excel 2016 and analyzed with SPSS version 21.

A descriptive analysis and a univariate analysis were performed. CHI-2 test was used to compare percentages.

This study was approved by the Delegation of the Ministry of Health and Social Protection - Tangier Assilah prefecture –.

Results:-
A total of 171 subjects with heroin addiction were recruited. Most subjects were males 97.7% and at their middle age (mean age: 43,59)

Social profile:
Half of the population (48.5%) had only primary education, 45% of them were unemployed. 54.4% were unwed, and 77.8% had no health insurance. 80.7% have never received psychiatric care.

Consumption pattern:
14% of the population recruited had at least one heroin-addicted family member. 32.2% of patients were also cannabis addicts and 22.8% had a poly addiction including cocaine, alcohol, anxiolytics and tobacco.

The mean treatment duration of subjects with HUD was 29,4 months.the urine toxicology test showed a positive result in 4.1% of the participants.

Delinquency profile:
81.7% of the subjects revealed that they have been detained in penitentiaries. The average number of incarcerations in our population was 3,96 (min = 0; max = 27)>

Table 1 shows the subjects age, hospitalization, imprisonment, suicide attempts, program inclusion duration, methadone doses and relapses.

Table 2 presents the different personality disorders found within the subjects of the study.

Statistics
Table 1:- Medical variables in the study subjects.

	Mean	Standard deviation	minimum	Maximum
Age	43,59 +/- 9.2 [27-78]	9,221	27	78
Hospitalization	,21	,971	0	8
Imprisonmemt	3,96	4,069	0	27
Suicide attempt	,56	1,546	0	10
Methadon Program inclusion	29,40	12,060	3	96
Methadone dose	70,35	20,369	20	130
Relapses	,44	1,577	0	10

Table 2:- Personality disorders objectified during the study.

Personalitydisorder	Percentage	N
No personalitydisorder	6,4%	11
Paranoid	10,5%	18
Antisociale	12,3%	21
obsessive-compulsive	9,4%	16
Negativisite	1,8%	3
Schizoid	8,2%	14
Narcissistic	1,8%	3
Avoidant	2,3%	4
Schizotypal	4,7%	8
Borderline	19,3%	33

Table 3:- Univariate analysis of borderline personality and antisocial personality with other variables.

Variables	Borderline	Non-borderline	p value	Antisocial	Non-antisocial	p value
Gender (Male)	97,0%	97,8%	,579	100,0%	97,3%	,589
Employment	54,3%	54,5%	,984	57,1%	54,0%	,787
Marital status (married)	39,4%	27,5%	,393	23.8%	30.7%	,785
Other substance use						
Cannabis	27,3%	33,3%	,103	23,8%	33.3%	,636
Poly-addiction	22,8%	25,4%	,103	28.6%	22%	,636
Spouse/family use	12,1%	14,5%	,488	28,6%	12,0%	,051
Psychiatricantecedents	42,4%	13,8%	,000	19,0%	19,3%	,620
Urine testing (positive)	0,0%	5,1%	,226	0,0%	4,7%	,390

Statistically significant relationship between borderline personality disorder and psychiatric history with p <0.001.

Table 4:- Variable distribution in antisocial and borderline personality disorders.

Variable distribution	Antisocial personality disorder	Borderline personality disorder
Age	,242	,472
Children	,593	,565
Hospitalization	,874	,005
Incarcerations	,027	,357
Suicide attempts	,721	,365
Duration on Methadone program	,099	,236
Mean methadone dose	,518	,553
Relapses	,260	,058

Statistically significant relationship between the number of hospitalizations in psychiatric units and borderline personality disorder with p<0.005

Statistically significant relationship between the number of incarcerations and antisocial personality disorder with p<0.027.

Discussion:-
The rates of personality disorder amongst heroin users in the current study are high (70.5%). The two most consistently reported personality disorders in subjects with heroin use disorder were borderline (19.3%) and antisocial (12.3%).

Our rates of personality disorder are similar toprevious studies66%, 68% and 66.4% respectively.(Cacciola et al., 1996; Kosten et al., 1982; Rutherford et al., 1994).

In fact, there have been enormous variations across studies in the reported rates of personality disorders among substance users. Trull(Trull, 2000) reviewed rates of borderline personality disorder among substance dependent individuals, and reported rates ranging from 11 to 65%, with the highest level reported among opioid users. In other studies the rates of Borderline personality disorder patients went from 7.6%(Cacciola et al., 1996) to 14% (Kosten et al., 1982)and 46% (Darke et al., 2004).

Enormous variations were also reported among the subjects with antisocial personality disorder, from 14.7% (Teoh Bing Fei et al., 2016) to 37.6% (Cacciola et al., 1996) and 71% (Darke et al., 2004).

These variations can be explained by the heterogeneity of the populations selected in each study. for instance, the prevalence changes when selecting a general population or an incarcerated population.(Brooner, 1997)

Another explanation for these large variations would be the difference in diagnostic criteria and instrumentation used(Moran, 1999).

Psychiatric comorbidity is one of the difficulties experienced by patients on methadone maintenance therapy among others. Compared to the general population, the prevalence of psychiatric disorders is up to 10 times higher among patients on methadone maintenance therapy, with studies reporting a wide range of prevalence from 10% to 70%(Callaly et al., 2001; Pani et al., 1997).

These results are well illustrated in our study, especially with the borderline personality disorder group in which we found a statistically significant relationship with the number of hospitalizations in psychiatric units. We also found a statistically significant relationship between borderline personality disorder and psychiatric history (42.4%). These results are consistent with similar studies where borderline personality disorder in heroin use disorder population predicted psychiatric problemsespecially depression(Barber et al., 1996; Cacciola et al., 1996).

The current study found a statistically significant relationship between the number of incarcerations and antisocial personality disorder. This result goes in line with previous studies reporting significantly more legal problems in antisocial personality disorder group compared to the no personality disorder group(Rutherford et al., 1994). Other studies found that the most common symptoms of antisocial personality disorder among methadone program patients were unlawful behaviors, aggressiveness and recklessness(Darke et al., 1994). These results may explain our findings.

The results of our study are not unexpected as personality disorder exposes to a stable maladaptive way of handling situations, dealing with others and expressing emotion. Therefore people with personality disorders would be expected to have more emotional,family, social and professional problems(Rutherford et al., 1994).

What does the average heroin user patient presenting a personality disorder look like clinically?

According to the results of our study, this individual, most likely, will have more employment and social problems, will have additional substance use disorders (especially cannabis in the Moroccan context)(Afsahi & Chouvy, n.d.).

This patient will likely face comorbid psychiatric problems, will have several prior treatment attempts, and a greater risk of delinquency and incarceration.

Patients with personality disorders are more likely to have a psychiatric comorbidity and to have more severe psychiatric symptoms than patients without personality disorders(Barber et al., 1996).

Knowing that a patient meets criteria for a personality disorder, regardless of type, provides information which could be useful in tailoring treatment plans to address the more complicated problems which these individuals enter treatment with(Ma et al., 2020).

One of the limitations of this study is that it was confined to one particular addictology center with a relatively small sample, which may not be representative of all patients with heroin dependence. Secondly, this study wasperformed among mainly male patients with few female participants. This may limit the generalizability of this study as it does not represent the female population. Thirdly, the cross-sectional design of this study limits its ability to determine the temporal relationship and causality between heroin use disorder and personality disorder.

However, our results were generally in line with previous reports, which might imply these features were significant even under small samples.

Future studies are warranted and needed to assess the treatment response curves for different personality disorder.

Conclusion:-
Heroin addicts in Morocco suffer from social instability, strong cannabis dependence, delinquency and frequent judicial recidivism. The most frequent personality disorders are borderline and antisocial. However, the causal link between the personality disorder and the addiction remains to be defined.

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