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A STUDY OF SOCIO-DEMOGRAPHIC PROFILE, QUALITY OF LIFE AND BURDEN ON CAREGIVER IN PATIENTS OF OPIOID DEPENDENCE AND METHADONE MAINTENANCE THERAPY.

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ABSTRACT **Background:** Substance use disorder is a major public health problem worldwide. The **National Household Survey**[1] of Drug Use in the country was the first systematic effort to document the nation-wide prevalence of drug use and the survey reported that alcohol (21.4%) was the primary substance (apart from tobacco) followed by cannabis (3.0%) and opioid (0.7%).
Objectives: The aim of this study is to assess socio-demographic profile of patients of opioid dependence, burden on their caregiver and compare quality of life in opioid dependent patients who were on methadone therapy. **Methods:** A cross-sectional study was conducted in the Drug De-addiction Clinic and Opioid Substitution Therapy Centre, in Department of Psychiatry, Government Medical College, Kota, India. Study includes 70 patients of opioid dependence, socio-demographic data, quality of life of patients and burden on their care givers were analysed by using SPSS version 21 software.
Results: In the present study all patients were male, ages were between 21 to 63 years, 85.71% were married, 65.71%) Hindus and 34.28 were % Muslims. Majority (77.14%) of patients were from urban background, majorities (80%) of were educated up to 10th standard and 81.4 % of patients were from the labor class (skilled or unskilled). The patients who were on methadone maintenance therapy had comparatively better quality of life than the patients who were not one maintenance therapy **(NOMT).** Burden of 'impact on well being' and 'impact on marital relationship' and "less perceived severity of disease" among caregivers of patients was less and statistically significant in MMT than caregiver of NOMT patients.

KEYWORDS : Opioid dependence, quality of life, caregiver burden.

INTRODUCTION:

Opioids are obtained from the juice of an unripe poppy capsule of *Papaver somniferum*. The milky juice is derived and crushed to make powdered opium which contains a number of alkaloids. The National Institute of Health and Clinical Excellence (NICE) in the UK recommend both buprenorphine and methadone as first line treatment for medically assisted withdrawals from opioids.

The Dependence syndrome[2] has been defined in the 'International Statistical Classification of Diseases and Related Health Problems' (10th revision; ICD-10) as a "cluster of behavioral, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences.

MATERIAL & METHOD:

***Study design*:** Cross-sectional study.

Study participants

The study participants consisted of consenting 70 patients of opioid dependence in which 35 patients were registered for Methadone Maintenance Therapy **(MMT)** and 35 patients were not on maintenance therapy **(NOMT).**

TOOLS OF STUDY;

A Semi structured specially designed proforma that includes

1. socio-demographic details and clinical profile of patients & caregivers.
2. Clinical profile sheet using Quality Of Life Assessment scale, WHOQOL– BREF (Hindi-version).
3. Burden Assessment Schedule.

The Inclusion criteria (for patients)- Patients fulfilling diagnostic criteria of opiate dependence as per ICD-10 guideline, had history of dependence present for at least 6 month, taking any kind of pharmacological treatment at least for one month and is able to understand the questionnaire and ready to give informed consent were included in this study.

The exclusion criteria (for patients)- Patients having significant physical, surgical or psychiatric illness, or having co-dependence with other psychoactive substances were excluded from the study.

The Inclusion criteria (for caregiver)- Caregiver living with the patient for at least one year, directly involved in the care of the patient and older than 18 years were included in this study.

The exclusion criteria (for caregiver)- Caregivers who had significant physical, surgical or psychiatric illness and having any history of substance dependence were excluded from the study.

RESULTS AND DISCUSSIONS:

In the present study all patients were male, the age of the patients varied between 21 to 63 years and the mean age of opioid dependence was found to be 39.07±10.72 with majority (32.85%) of patients being in the age group 31-40. The mean age of the patients who were on methadone maintenance therapy **(MMT)** and who were not on maintenance therapy (**NOMT)** was 39.14 yrs and 35.77 years respectively. Similar to our findings, **Kumar N et al**[4] **(2013)** reported mean age of the patients as 41.9 years in patients attending De-addiction Centre in South India and nearly one-third of patients (31.3%) were aged between 31 –40 years. **Om Prakash Giri et al**[5] **(2013)** conducted a study at De-addiction Centre of tertiary care hospital at BHU, Varanasi and reported the mean age of opioid dependent as 36 years.

On comparing both groups, it was found that the majority (85.71%) of patients were married with 83% males in MMT and 80% males in NOMT **(Table 1)**. Similar findings were also reported by **Kumar N. et al**[4] **(2013)** and **Shahrokh Aghayan et al**[6] **(2018)** who revealed that majority of substance abuse patients attending De-addiction Centers were married (74.7% & 82.5 % respectively).

If we classify the smack dependent patients according to their religion, it was found that majority of the patients (65.71%) were Hindus and 34.28% were Muslims **(Table 1)**.

Similar findings were also reported by **Bichitra N Patra et al**[7] **(2015)** conducted a study in de- addiction centres of tertiary care general

hospitals in North India, found that higher percent of Hindus were taking opioid (52%) . This fact may be possible due to preponderance of Hindu community in our country. If we classify the smack dependent patients according to their religion, it was found that majority of the patients (65.71%) were Hindus and 34.28% were Muslims.

If we classify patients according to domicile status majority (77.14%) of patients were from urban background with 85.71% patients from MMT group & 68.57% patients from NOMT group **(Table 1)**. The reason for higher prevalence of heroin dependence in urban population may be due to easy and wide availability of heroin through various sources in urban areas as compared to rural areas. Also, MMT (Methadone Maintenance treatment) is given on daily basis, so for rural patients it may not be easy to come daily for opioid substitution therapy and in de-addiction centre, which are situated in urban locality due to lack of transportation and distance of our de-addiction center.

Majorities (80%) of substance users in our study were educated up to 10th standard and remaining 20% were having higher education **(Table 1)**. This finding can be explained by the fact that people who were illiterate or having low education were usually not aware of adverse effects of these illegal substances and thus were easy target for drug peddlers. A study conducted our neighboring state Haryana in Rohtak **by Viney Kumar et al[8] (201 3)** revealed that higher proportion of substance abuse patients belongs to lower education groups.

If we classify patients according to their occupation, it was evident that 81.4 % of patients were from the labor class (skilled or unskilled) who earn their livelihood on daily wages basis. If we compare both groups it was evident that in MMT group 71.42 % were from labor class (unskilled 60 %, skilled 40%) and in NOMT group 91.42% labor class (unskilled 45.7 %, skilled 31.20 %) patients belonged to labor class **(Table 1).** Persons from labor class are primary target for drug peddlers. This fact can be explained as opium reduces pain sensitivity and labor class population seeks for various self medicating strategies to reduce pain like analgesics, opium, etc. so they are prone to opium addiction.

If we compare both MMT and NOMT groups according to their family type, it was evident that the majority i.e. 51.42% of MMT and 68.57% of NOMT group belonged to the nuclear family **(Table 1)**. People living in joint family have less chances of having drug abuse, because of family restrictions & social norms. In nuclear family mostly the person himself is head of family, where he doesn't have familial restrictions. Similar findings were also reported by **Kumar N et al[4] (2013)** that the majority of patients (77%) belonged to nuclear families.

In the present study the mean duration of opioid intake was found to be 10.16 ± 6.88 years. Minimum duration of intake was 6 months and maximum duration was 25 years. The mean age for initiation of opioid was 27.39 ± 6.89 years.

Table no. - 1 Socio-demographic profile of opioid dependence patients.

[NOMT -Not one maintenance therapy]

Socio-demographic Profile		Group				Patient (N=70)	
		Methadone		NOMT			
Age	Age group	N =35	%	N=35	%	N=35	%
	20 to 30 year	6	17.2	12	34.3	18	25.71
	31 to 40 year	10	28.6	13	37.1	23	32.85
	41 to 50 year	11	31.4	7	20	18	25.71
	51 to 60 year	6	17.2	3	8.6	9	12.85
	61 to 70 year	2	5.7	0	0	2	2.85
	Mean Age	42.37 ±10.89		35.77±10.72			
Religion	Hindu	19	54.29	27	77.14	46	65.71
	Muslim	16	45.71	8	22.86	24	34.28
Domicile	Urban	30	85.71	24	68.57	54	77.14
	Rural	5	14.29	11	32.43	16	22.85
Marital status	Married	31	88.57	29	82.85	60	85.71
	Unmarried	4	11.43	6	17.14	10	14.28
Education status	Up to 10th	30	85.71	26	74.28	56	80.00
	More than 10th	5	14.29	9	25.71	14	20.00
Employment status	Employed	4	11.43	2	5.7	06	8.57
	Unemployed	6	17.14	3	8.6	09	12.85
	Labor	25	71.43	32	91.43	57	81.14
Family type	Nuclear	18	51.42	24	68.57	42	60.0
	Ext. Nuclear	12	34.28	7	20.0	19	27.1
	Joint	5	28.60	4	11.4	09	12.9

Our findings of socio-demographic profile is similar to previous Indian studies like **Ambekar A et al[9] (2015)** who conducted a survey on 3620 patients of opioid dependence in Punjab and revealed that about 76% opioid dependent individuals were in the age group of 18 to 35 years, about 99% were males, 54% were married, 89% were literate and most of them were employed and their major occupations were: unskilled worker / laborer (27%); farmer (21%); clerical jobs / businessmen (15%); Transport worker (14%) and skilled worker (13%).

Likewise **A.M. Kadri et al[10] (2003)** studied the socio-demographic profile of 560 substance abusers attending de-addiction centres in Ahmedabad city and revealed that majority (46%) of them were in the age group 26-35 years and 46.4% of them had started taking drugs before the age of 20 years. Findings of these studies are almost similar to our study which was conducted in northwestern part of India.

In India family members take the primary responsibility of care. After marriage, spouse is directly involved in the care of partner and can be considered as primary caregiver. In the present study all patients were male and we chose wife, brother, mother, father as a primary caregiver among all family members. In our study 65.7% were wives, 30% were parents, and 7.1% were their child, and 7.1% brothers as primary caregivers **(Table 2)**.

Table no. 2 Distribution of caregiver according to relationship.

Relationship	N	%
Wife	46	65.7
Brother	5	7.1
Mother	12	17.1
Father	2	2.9
Son	5	7.1

If we compare quality of life in patients of opioid dependence, patients on methadone maintenance treatment showed better quality of life as compared to that in patients NOMT. QOL in all four domains (physical health, psychological health, social relationship & environmental health) was better in MMT than the NOMT group & this difference was statically significant (P< 0.05) **(Table 3).**

Table no. 3 Comparison of QOL scores between NOMT & MMT patients.

Quality of Life	Methadone	NOMT	P -value
Physical health	64.26 ± 11.13	51.37 ± 10.84	511**
Psychological health	57.23 ± 11.65	47.46 ± 11.31	.396**
Social relationship	54.17± 11.22	44.34 ± 9.16	.392**
Environmental health	58.66± 9.63	44.31 ± 9.16	.612**

[NOMT -Not one maintenance therapy]

Burden score in all five domains was less in MMT group than NOMT group. Caregivers of patients on MMT perceived less severity of burden than caregivers of NOMT **(Table 4).**

Table no. 4 Comparison of burden scores between MMT and NOMT Patients.

Burden on care giver	Methadone	NOMT	Correlation
Impact on well being	6.69±1.35	7.97±1.34	0.013*
Impact on marital relationship	6.70±1.71	7.13±1.83	0.045*
Appreciation of care giving	7.49±1.14	7.63±1.35	0.058
Impact on relation with others	7.86±1.24	8.40±1.16	0.223
Perceived severity of disease	7.23±1.47	8.29±1.54	0.033*

[NOMT -Not one maintenance therapy]

Burden of 'impact on well being' and 'impact on marital relationship' was less among caregivers of patients on MMT than that of NOMT patients and this difference was found to be statistically significant (p=0.013 and p=0.045 respectively) and this may be explained by the fact that patients on MMT were not experiencing any withdrawal symptoms. Since patients on MMT did not have any active withdrawal symptoms so the 'perceived severity of disease' was also less among caregivers of patients on MMT than that in NOMT patients and this

finding was statistically significant (p=0.033) **(Table 4)**.

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