SOCIO-CULTURAL FACTORS ASSOCIATED WITH NATURAL OPIOIDS USE IN NORTHWESTERN RAJASTHAN: A CROSS-SECTIONAL STUDY FROM TERTIARY CARE HOSPITAL.

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Abstract

Background: Opioid in natural form (afeem/amal and poppy husk) has been taken from ancient time in north India including Rajasthan. There are approximately 2.3 crore opioid users in India, according to National Survey. Various psychosocial and cultural factors are associated with its use. Socio-cultural factors for the use of natural opioids are inadequately studied. With this rationale, we planned a study to identify these socio-cultural factors.

Method and Material: This was a descriptive, cross-sectional study. 136 subjects were recruited. Along with socio-demographic profile, a semi-structured proforma of various socio-cultural factors was used.

Results: The majorities of subjects were male (97%), married (88.23%), farmer (62.50%), illiterate (44.11%) and hailed from rural areas (92.65). Most common factors associated with starting opioids were to increase work capacity in agricultural work (n= 46; 33.82%) followed by staying away from home for work (n= 36; 26.47%) and usage by another family members (n=34; 25%). Participants were continuously using natural opioids as it increases work capacity and concentration (n=61; 44.85%) and the reasons for quitting were unavailability and financial problems (n=60; 44.12%).

Conclusion: Various socio-cultural factors play important role in initiation and maintenance of natural opioids use.

Keywords: Natural opioids, Opioid dependence, Socio-cultural factors, Northwestern Rajasthan, Agriculture work

Introduction

Opioid in various forms has been taken from ancient time in many parts of India. Asian countries (such as India, China, Burma, Philippines, Vietnam, and the Golden triangle countries such as Myanmar, Thailand and Laos) were the major countries for opioid production from the late 17th to early 20th century.^[1] United Nations Office on Drugs and Crime drug report (UNODC) estimates that global number of opioid users were 53.4 million in 2017 that was 56% higher than estimate for 2016.^[2] According to "National Survey on extent and pattern of substance use in India" which was published in 2019, prevalence of current opium users in India (use within last month) was 2.06 %. The survey also reported that there were about 2.3 crore opioid users in the country among them 77 lakhs are problematic users and 28 lakhs are dependent users. Heroin was most commonly used opioid (1.14%), followed by pharmaceutical opioids (0.96%) and opium (0.52%). In Rajasthan current use is 1.48 % among them 0.18 % was dependent.^[3] According to a household survey conducted in rural areas of Rajasthan, prevalence of natural opium

was 6.4-8.9%.^[4] A recent survey conducted in the Indian state of Punjab showed that approximately thirty three (33%) people used to take natural opiates (opium or poppy husk) among all individuals with opioid dependence.^[5] Opioids cause significant morbidity and mortality, thus contribute to global burden of diseases.^[6]

Botanically opium is known as *Papaver Somniferum*. In India, Natural opiates are used most commonly as either raw opium or poppy husk (called by various names such as "doda," "bhukki," or "phukki"). Poppy husk is left over of the opium plant after extraction of milk from poppy fruit. It is supplied as powdered form which is being consumed by mixing with water. It yields 0.1-0.3 % morphine.^[6,7]

Natural opium has been used in many parts of Rajasthan since long time, especially in western or desert part.^[8] Social and cultural factors play an important role in the initiation, maintenance and therapeutic intervention of any drug abuse.^[9] Historically opium has been used to reduce bleeding and allay apprehension by Rajputs (warrior) during war times, particularly in desert part.^[10] Few Studies concluded that opium is used in ceremonies,

to increase capacity in agriculture work, as medication for physical and mental ailment and it is socially acceptable.^[6,11,12] Such multiple socio-cultural factors play an important role behind the consumption of opiates. Despite the high prevalence of opioids use in northwestern Rajasthan, there are very few studies to identify these socio-cultural factors. With this rationale, we planned a study aimed to assess psychosocial and cultural factors associated with natural opioids consumption.

Methods

Study setting

This was a descriptive, cross-sectional study conducted at Department of Psychiatry at tertiary care centre in northwest part of Rajasthan. This study included participants from OPD only. Our outpatient department daily receives approximate 15-20 new patients of substance use for treatment. Out of these patients, approximately 3-4 new patients seek treatment for natural opioids.

Study sample

After taking ethical clearance from the institutional ethics and review board, informed consent was taken from every participant. Inclusion criteria's were – subjects of any age who had a diagnosis of opioid dependence as per International Classification of Diseases (ICD-10): Mental and behavioural disorders^[13], taking natural opioids at the time of recruitment (ever use of other opioids included) and those who visited OPD for first time for treatment were included. Participants were excluded if they were currently using or ever used another substance apart from opioids except nicotine. Participants with co-morbid psychiatric and severe debilitating medical illness were also excluded. Psychiatric and medical illness was excluded on basis of clinical interview. Total 136 such participants were recruited.

Study tools-

1. Semi-structured socio-demographic proforma along with clinical detail – It includes following information-age, sex, marital status, occupation, education, employment status, socioeconomic class, locality etc. while clinical details included were - age of initiation of Poppy husk use, total duration of use and quantity of it etc.

2. A semi-structured proforma/questionnaire of psychosocial and cultural factors which was prepared on the basis of clinical experience with treatment of individuals with opioid dependence and previously available literature. It was validated by three psychiatrists and modified according to their suggestions. This questionnaire was piloted for clarity on ten participants before administration in this study. Few amendments on the questionnaire were required following the pilot study and responses from the ten participants were included in the main study. It consists of 25 items in Hindi language

and recorded by the interviewer. Every participant was asked to reply in yes/no for factors which they consider for initiation and continuation of poppy husk use. Participants could give more than one response as many factors may be responsible for initiation and maintenance of its use.

Statistics

Data were analyzed with IBM Statistical Package for the Social Sciences (SPSS) statistics software version 20.0^[14] Categorical variables were expressed as frequency and percentage. Descriptive statistics in form of mean and standard deviation were calculated for continuous variables.

Results

Table 1 shows socio-demographic variables of all recruited participants. Most of the participants were male (97%), married (88.23%), farmer (62.50%), illiterate (44.11%), Hindus (63.23%) and hailed from rural areas (92.65%). Age ranging from 20 years to 65 years with mean age of 35.07±9.17 years and maximum number of patients were of age group between 20 to 35 years (55.15%). Regarding socioeconomic class, most of the participants belong to Upper lower class (51.47%). Details of socio-demographics mentioned in table 1. Mean age of initiation of Poppy husk was 23.77±5.93 years; mean total duration of intake was 11.29±7.46 years while the mean of current dose/amount per month was 2.01±0.77 kilograms.

Table 2 shows reasons for starting natural opioids, as reported by the patients. Approximately 33.82% persons started taking opium to increase work capacity in agriculture work while 26.47% of participants reported that they started using it when they were living outside from home for work, 25% started taking natural opiates as other family members were also using it. Many of the participants (21.32 %) started under peer influence (friends and relatives) while 12.50% initiated it to increase concentration in work like labor, driving etc. Rest other reasons are mentioned in table 2.

Table 3 shows reasons for continuous use of natural opioids, as reported by the patients. Approximately forty six percentage (44.85%) of participants accepted that it increases work capacity and concentration in work including agriculture and other occupations, 24.26% of users think that there is no significant behavioral changes occurred after its use so that it was unnoticed by people. A sizeable proportion of patients (23.52%) considered easy accessibility and availability for continuing use and 17.64% of participants think that it is accepted culturally and socially. Rest other reasons are mentioned in table 3.

Table 4 shows reasons for quitting natural opioids. Maximum number of participants (44.12%) considered unavailability of opium and financial issues both for quitting it currently. While 28.68% and 27.20% considered unavailability and financial problems alone respectively.

Lesser number of participants (13.97%) considered harmful effects for quitting. While only 8.08% were quitting because family members were forcing to do so

Table 1: Showing socio-demographic variables of all participants.

VARIABLES		N=136	PERCENTAGE (%)
Age groups	20-35 years	75	55.15
	36-50 years	54	39.70
	51-65 years	07	05.15
Sex	Male	132	97.06
	Female	04	02.94
Marital Status	Married	120	88.23
	Unmarried	14	10.29
	Widow/Separated	02	01.47
Occupation	Farmer	85	62.50
	Skilled worker	14	10.29
	Semiskilled worker	19	13.97
	Unskilled worker	15	11.03
	Unemployed	03	02.20
Education	Illiterate	60	44.11
	Primary School	28	20.58
	Middle School	29	21.32
	High School	16	11.76
	Undergraduate/Postgraduate	03	02.20
Socioeconomic Class	Upper Lower	70	51.47
	Lower Middle	39	28.68
	Upper Middle	14	19.85
Religion	Hindus	86	63.23
	Sikhs	45	33.09
	Muslims/Others	05	03.68
Locality	Rural	126	92.65
	Urban	10	07.35

Table 2: Showing reasons for starting opioids use

Reasons	Responses*
to increase work capacity in agricultural work	46 (33.82%)
staying away from home for work	36 (26.47%)
usage by another family members	34 (25.00%)
Peer pressure	29 (21.32%)
To increase concentration in occupation	17 (12.50%)
To treatment mental problems	13 (9.55%)
To treat physical problems	12 (8.82%)
Used due to Religious cause and ceremonies and familial function	11(8.08%)
Others(i.e. for amusement, mixed in tea with coworkers)	09 (6.61%)
To increase sexual power and treat sexual problems	07 (5.14%)
Believed that it makes body fit and healthy	02 (1.47%)

*% may be >100 because participants gave more than one answers

Table 3: Showing reasons for continuing opioids use

Reasons	Responses*
After use it increase capacity to work and concentration in work	61(44.85%)
Its use does not cause significant behavioral changes	33 (24.26%)
Easy availability and accessibility	32 (23.52%)
Its use is culturally and socially acceptable	24 (17.64%)
Peer pressure	21 (15.44%)
Long term use does not cause any harmful effects on body	17 (12.50%)
Others(i.e. feeling good after use, unable to tolerate withdrawal effects)	13(9.55%)
It's transport is easy	05 (3.67%)
Weaker law regarding opioids	02(1.47%)
Beneficial in mental health problems	02(1.47%)
It increase sexual power	02(1.47%)
Govt. provided them license	02(1.47%)

*% may be >100 because participants gave more than one answers

Table 4: Showing reasons for quitting opioids

Reasons	Responses*
Unavailability and financial problems both	60(44.12%)
Unavailability	39(28.68%)
Financial problems	37(27.20%)
Harmful effects on body	19(13.97%)
Family members forced to quit	11(8.08%)

*% may be >100 because participants gave more than one answers

Discussion

This study was conducted to identify socio-cultural factors associated with natural opium use. In our study, Most of participants were male, married, illiterate, farmer by occupation, belong to upper lower class and from rural areas. Other studies also reported opium use in illiterate, married farmer mostly in fourth decade of their age.^[4, 6] Most of them started opium in their 30's. Other study also reported the same.^[15]

Opium has been used in northern part of India since early times, and its use is associated with socio-cultural sanction, especially in rural areas. A large number of participants started using poppy husk to increase work capacity in agriculture work. This was a single most important factor behind use of natural opioid as found by many other authors as well.^[4,6] Farmers used to take it to relieve stress of farming and cultivation, to remain awake specially in harvesting season to enhance work capacity and kept off fatigue and poverty.^[7,12] The ethnographic information suggests that opium is integrated into the socio-cultural fabric of the local community due to big eco stress because of difficult climate and living conditions of western Rajasthan.^[16] Sizeable proportion of the users reported that they were continuously using poppy husk because it does not cause significant behavioral changes after use so

cannot be noticed by others. Many of the participants were using opium because it was already being used by their family member and under peer influence. Opium consumption keeps the friendship circle growing and encourages friends to help each other in various circumstances.^[7] Peer pressure is an important reason for initiation of natural opium.^[12] Participants believe that opium was easily available and assessable in their home due to usage by their family members so they started using in early age.^[17] A good proportion among persons with poppy use believed that it was socially accepted and used by communities in familial function and in ceremonies. In rural Rajasthan, opium intake is socially sanctioned, acceptable and more prevalent in males than females. It is used in vital events, festivals, social functions as ceremonial drink and in business deals as mark of respect. Consumption of opium by the young and old in every social gathering is a practice which enhances fellow feelings among members of the community.^[6,11,16,17]

Some of the participants started for enjoyment and fun in early age, later they became dependent over it. Few authors reported that young opium users started it for fun and recreation, to enhance their status in the society, or to show their manhood.^[7,15] Initially opium use was restricted to particular class of the society.^[4] Now the opium use is not restricted to any caste or society thus it is used widely by all societies in western Rajasthan.^[18] Many of the patients with poppy husk use reported that they started it to treat physical and mental problems. Few authors reported that the common reasons for offering opium include medical remedy for physical problems including chronic cough, body aches, diarrhea as well as mental elements, insomnia.^[6,12,15] Some of the participants stated that they started poppy husk to increase their sexual power but few number of users continue it for same purpose. Studies reported that some adult males initially consumed opioid for aphrodisiac quality of the opium and to increase sexual performance.^[6,16] It accelerate sexual desire, but in long term use shows adverse effect because it reduce sperm count which leads to infertility.^[19] Very few participants revealed that they were licensed/registered users. The opium and Poppy husk supplied by Govt. as rationing for licensed persons.^[10] Before independence, opium was provided from licensed shops to registered users. Later new registration was stopped after independence due to adaptation of prohibition of intoxicating substances. In independent India, registered shops continue to cater the already registered users.^[6,20]

Most important reasons for quitting poppy husk were unavailability and financial problem. As Rajasthan High court ordered the cancellation of all poppy husk permits and closure of the vends in March 2016. It was difficult to get opium so users moved to seek treatment.^[21] There was hike in cost of opium at that time so to meet the increasing cost; opium dependent had been mortgaging their valuable things and ornaments to the opium traders and

sometime start stealing which ultimately responsible for financial problems.^[4] Some participants wanted to quit poppy husk due to harmful effects. Opium consumption causes several health problems like stomach pain, constipation, upper respiratory tract problem, increase the risk of cardiovascular diseases, osteoporosis, or kidney and hepatic malfunctions, adverse effect on infertility.^[15, 19]

Limitations

Our study has a number of limitations. We have small sample size so results cannot be generalized. We should have included further details of harmful effects of poppy husk and for which physical and mental problems it was used. Socio-cultural factors may differ in other parts of Rajasthan so study from multiple sites with large sample size should be carried out for better understanding of these factors. Longitudinal studies are required to assess influence of these socio-cultural factors in management of patients of opioid dependence.

Conclusion

In our study, it was found that natural opium use is associated with many socio-cultural factors. Most important being to increase work capacity. It is socially acceptable and most commonly used by farmers in desert areas of Rajasthan. Study suggests that most of the users started opium in productive age (early adulthood), which is likely to increase financial burden and disability in long term.

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