Quality of Life among Patients undergoing Opioids Substitution Therapy in hospitals of Sikkim

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Abstract: <u>*Background*</u>*: Extreme use of harmful substances can advance in deterioration of quality of life (QOL) among substance abusers. Opioid substitution therapy (OST) is the accessible alternative for long term treatment for substance use disorder (SUD) which is identified as an effectual agonist for maintaining the treatment.* <u>*Aim*</u>*: To assess the impact of OST on QOL of patient and potential association between QOL and variables.* <u>*Methods*</u>*: The samples were assessed using structured questionnaire which has two sections - Demographic Performa and OST profile. QOL was assessed by using WHOQOL-BREF questionnaire.* <u>*Statistical analysis*</u>*: The data was analyzed by using both descriptive and inferential statistics using SPSS (statistical package of social science) version 25 software.* <u>*Result*</u>*: The result showed that 4 patients (2.4%) had fair quality of life, 108(65.5%) had good quality of life, and 53(32.1%) had very good quality of life with an average mean 262.79 and SD 47.68. In physical domain 116 (70.3%) patients had good quality of life; in psychological domain 133(80.6%) patient had good quality of life; in social 72(43.6%) patients had good quality of life and in environment domain 108(65.6%) patients had good quality of life. There was significant association between quality of life with selected variables i.e. occupation(0.032), reasons for taking drug (0.04) how many year did you take drugs(0.001), and stay in rehabilitation centre(0.0016) at p (<0.05).* <u>*Conclusion*</u>*: Opioid substitution therapy was found to be effective in improving quality of life of the patient undergoing opioid substitution therapy.*

Keywords: quality of life (QOL), opioid substitution therapy (OST), substance use disorder (SUD)

1. Introduction

Substance abuse is one of the global issues. It was estimated that there were about 33 million opioid users globally in 2014 and 184 million cannabis users.[1] According to WHO people dependent on opioids are the group most likely to suffer an overdose. About 275 million people worldwide (5.6 percent of the global population aged 15-64 years) used at least once during 2016. There were an estimated 27 million people who suffered from opioid use disorder in 2016.[2] People dependent on opioids not only suffer from adverse health outcomes but also suffer high rates of overdose and overdose deaths [3,4]

According to Center for Addiction and Mental health opioid agonist therapy (OAT) is an effective treatment for addiction to opioid drugs such as heroin, oxycodone, hydromorphone (Dilaudid), fentanyl and Percocet.

The therapy involves taking the opioid agonists methadone (Methadone) or buprenorphine (Suboxone). These medications work to prevent withdrawal and reduce cravings for opioid drugs. People who are addicted to opioid drugs can take OAT to help stabilize their lives and to reduce the harms related to their drug use (according to mayo clinic). Opioid dependence requires treatment and care much like any other chronic (long-term) health problem. The key objectives of OST are to improve the physical and mental health and wellbeing of people who use opioids through, reducing or stopping illicit opioid use , reducing or stopping injecting and associated risk of blood borne virus transmission , reducing

the risk of overdose , reducing substance related criminal activity , promoting and supporting client, family recovery journeys and access to recovery support systems and networks.[5]

It is recognized that the concept of quality of life should be applied to the studies on drug dependence in terms of social functioning, physical, and psychological well-being and environment and life satisfaction.[6] Quality of life evaluation should represent an assessment of the impact of treatment on patient functioning and well-being. The quality of life has also been acknowledged as an important tool in the evaluation of drug programs.[7]

India too has a sizeable problem of opioid use. The national survey published in 2004 estimates the prevalence of current opioid use to be 0.7% in general population. This corresponds to 2-3 million current opioid users and 0.5 million opioid-dependent people.[8] According to NDDTC (national drug dependence treatment center) of AIIMS (All India institute of medical science) in 2019 prevalence of current use rate of opioids over all is 2.06% and about 0.55% of Indians are estimated to need help for opioid use problem [9] . These figures are likely to be much higher if the findings from recent surveys in some states are an indication[10]. Similarly, the problem of Injecting Drug Use (IDU) in India seems insignificant if their numbers (177,000) alone is considered. IDUs, however, have the highest rates of HIV (9.9%) and hepatitis C compared to other population,[11,12]. IDUs also face other problems including abscesses (56%), blocked veins

(53%), and overdose episodes (41%). In addition, almost all IDUs (98%) are dependent on opioids, because of which IDUs incur harms associated with opioid dependence as well [13]

National Household Survey on Drug and Alcohol Abuse, Government of India, observed the prevalence of opioid abuse of 0.7% after alcohol (21.4%) and cannabis (3%) among adult males.[14] North Eastern India, particularly states of Manipur and Nagaland are known for problems of opioid abuse, mainly due to their proximity to the "Golden Triangle" – Myanmar, Thailand, and Cambodia.[15]

Approximately 2% of the population in Manipur and Nagaland inject drugs most commonly heroin and Spasmoproxyvon (SP, a synthetic opioid analgesic that contains dextropropoxyphene, dicyclomine hydrochloride and paracetamol). As a consequence, Manipur and Nagaland are the two states with the highest HIV prevalence in the country.[16]

According to the study conducted by Dr Satish Rasaily, Dr Netra Thapa data on illicit dugs is scarce and it is hard to draw any conclusion about the recent trends in illicit substance use pattern in Sikkim. Hospital based study that examines the drug use profile of substance abusers revealed opiates as constituting the most common drug of abuse contributing to 15.8% of treatment seekers in tertiary care.[17] Prevalence of cannabies 13.6% and opioids 5.8% in a study conducted in rural Sikkim (2010).[18] The number of IUDs in Sikkim is estimated to be between 1,400-1,500 as reported by Sikkim State AIDS control Society.[19]

2. Material and Method

2.1 Methods

- The study is a Non-experimental descriptive study.
- The study was conducted in the hospitals of Sikkim where the opioid substitution therapy was provided for the patients.
- The sample (165) for the study consisted of the patients receiving opioid substitution therapy in STNM Multispecialty Hospital, Singtam District Hospital and Joerthang Community Healthcare Centre of Sikkim.

2.2 Tools and Techniques

Tool I: Section A: Demographic Proforma
A total of four questionnaires for personal profile were developed

Section B: OST profile
A total of seventeen questionnaires for OST profile were developed
Questionnaires for personal and OST profile were outlined after an extensive review of literature and suggestions from experts.

Tool II: WHOQOL-BREF: (World Health Organization Quality Of Life –BREF)
Quality of life consist of four domain i.e. Physical, Psychological, Social, Environmental
It compromised of 26 questionnaires.

3. Results

Section 1: Description related to sample characteristics.

Section 1.1: Description related to demographic proforma
Most (57%) of the patients were Hindus followed by Christian (23%) than Buddhist (18.2%) and Muslim (1.8%). Majority (73.9%) of the patients were from urban area and (26.1%) were from rural area. (32.7%) of the patients were having private job or were self employed followed by (15.8%) government job. (35.2%) of the patient monthly income was less than 10,000, 32.1% were in range from (10,000-20,000) followed by (29.7%) were from (20,001-30,000) rest 3% were in the range above 40,000.(50.9%)of the patient were married, (44.2%) of the patient were single and the rest 4.8%were divorced. Majority (98.8%) of the patients were males. The education level of most (55.2%) of the patient were primary followed secondary education (30.3%) and tertiary (14.5%)

Section 1.2: Description related to OST profile.
48.5% of the patient started using drugs at the age of < 18 years followed by 35.3% at the age 19-27years, 13.3% at the age 28-37years and rest 3% at the age 38-47years.

Majority (77%) of the patient were introduced to the drugs by their friends followed by self (19.4%) and (3.6%) by family members. Majority (82.4%) of the patient reasons for talking drugs were for enjoyment(others) . Majority (82.4) of the patients would get the drugs/substances from the broker. Most (60.6%) of the patient used the drugs more than 36 months . Maximum (77%) of the patient would take the drugs for more than three times. Majority (90.3%) of the patient had not received any treatment before OST. Maximum (75.8%) of the patient had never been to rehabilitation centre and 24.2 % had stayed in rehabilitation centre. 58.8% of the patient were taking OST for 1-6 months followed by 34.5% were taking for more than 12 months and rest 6.7% between 7-12 months. 100% the patient were taking tablet buprenorphine for the treatment. All the patient were coming regularly for OST. Most (45.5%) of the patient were motivated by friends to take up the OST, followed by own self (31.5%) then family members and healthcare workers (11.5%). None of the patient were diagnosed with any psychiatric disorder in past 6 months. Majority (98.2%) of the patients had no medical condition. All (100%) the patient had the desire to continue the treatment till they recover. All (100%) the patient were benefitted by the treatment.

Section 2: Findings related to quality of life.
Section 2.1: Description related to QOL

Table 1.1: Quality of life among patients undergoing opioids substitution therapy, n=165

Quality of life	F	%	Mean SD
Poor (0-100)	0	0	262.79±47.68
Fair (101-200)	4	2.4	
Good (201-300)	108	65.5	
Very Good (3001-400)	53	32.1	

Table 1.1 shows the Quality of life among patients undergoing opioids substitution therapy revealed that 4(2.4%) had fair quality of life, 108(65.5%) had good quality of life and 53(32.1%) had very good quality of life with an average mean and SD was 262.79 and 47.68.

Section 2.2: QOL domain wise

Table 1.2: Domain wise Quality of life among patients undergoing opioids substitution therapy, n=165

Quality of life	Physical Domain		Psychological Domain		Social Domain		Environmental Domain	
	f	%	f	%	f	%	f	%
Poor (0-25)	0	12	0	0	7	4.2	0	0
Fair (26-50)	42	25.5	13	7.9	52	31.6	4	2.4
Good (51-75)	116	70.3	133	80.6	72	43.6	108	65.5
Very good (76-100)	5	3	19	11.5	34	20.6	53	32.1
Mean±SD	57.61±9.942		67.61±9.440		63.36±19.36		74.21±10.15	

Table 1.2 shows the domain wise Quality of life among patients undergoing opioids substitution therapy reveals that in physical health domain 2(1.2%) had poor quality of life, 42(25.5%) had fair quality of life, 116(70.3%) had good quality of life and 5(3.0%) had very good quality of life with an average mean and SD was 57.61 and± 9.942.

In psychological domain 13(7.9%) had fair quality of life, 133(80.6%) had good quality of life and 19(11.5%) had very good quality of life with an average mean and SD was 67.61 and ±9.940.

In social domain 7(4.2%) had poor quality of life, 52(31.6%) had fair quality of life, 72(43.6%) had good quality of life and 34 (20.6%) had very good quality of life with an average mean and SD was 63.36 and ±19.36.

In environmental domain 4(2.4%) had fair quality of life, 108(65.6%) had good quality of life and 53(32.1%) had very good quality of life with an average mean and SD 74.21 and ±10.15.

Section 3: Association between quality of life with selected variables.

Table 2.1: Association between quality of life among patients undergoing opioids substitution therapy with selected demographic variables, n=165

Demographic Variables	N	Mean	SD	F/t value	df	'p' value
Religion						
a) Hindu	94	266.33	45.48	2.172	3	0.093 NS
b) Muslim	3	262.67	17.01			
c) Christian	38	269.55	45.29			
d) Buddhist	30	243.13	55.47			
Area of Residence						
a) Urban	122	258.8	46.89	1.821	163	0.071 NS
b) Rural	43	274.09	49.62			
Occupation						
a) Private job	54	269.41	51.04	2.705	4	0.032*
b) Government job	26	245.85	48.35			
c) Self employed	54	255.15	38.63			
d) Employed	25	283.36	47.91			
e) Student	6	259.67	60.96			
Monthly income						
a) <10,000	58	260.83	47.25	1.33	3	0.804 NS
b) 10,000-20,000	53	267.68	47.36			
c) 20,001-30,000	49	260.96	48.14			
d) 40,000 and above	5	251.6	62.2			
Marital status						
a) Married	84	262.02	51.35	1.023	2	0.978 NS
b) Single	73	263.51	43.98			
c) Divorced	8	264.25	45.75			
Gender						
a) Male	163	262.63	47.95	1.378	163	0.706 NS
b) Female	2	275.5	9.192			
Education						
a) Primary	91	270.09	41.117	2.407	2	0.069 NS
b) Secondary	50	260.02	54.09			
c) Tertiary	24	241.71	52.38			

* p value <0.05 level of significance
NS- Non significant

Table 2.1 shows the association between quality of life among patients undergoing opioids substitution therapy with selected demographic variables which was tested by using ANOVA test /Independent t test at 0.05 level of significance. Occupation of the patient was found significant association with quality of life. The other demographic variables such as religion, area of residence, monthly income, marital status, gender and education was not found significant association with quality of life of patients undergoing opioids substitution therapy.

Table 2.2: Association between quality of life and patients opioids substitution therapy profile, n=165

Demographic Variables	N	Mean	SD	F/t Value	df	'p' Value
What age did you take drugs						
a) ≤18 years	80	171.29	48.1	2.133	3	0.098 NS
b) 19-27 years	58	251.45	44.47			
c) 28-37 years	22	264.86	52.51			
d) 38-47 years	5	249.2	36.23			
How were you introduced to drugs						
a) Family members	6	246.33	67.32	0.456	2	0.635 NS
b) Friends	127	264.2	47.93			
c) Self	32	260.25	43.5			
Reason for taking the drugs						
a) Peer pressure	6	250.5	32.26	2.841	3	0.040*
b) Family problems	5	252.8	54.47			
c) Stress	18	234.5	49			
d) Others	136	267.44	46.74			
From where you get drugs						
a) Friends	21	239.86	46.19	3.292	3	0.022*
b) Medical store	5	225.4	62.54			
c) Broker	136	267.37	46.28			
d) Others	3	277.67	43.66			
For how many years you take drugs						
a) Less than 6 months	8	198.75	49.94	6.171	4	0.001*
b) 6-12 months	18	257.11	49.35			
c) 13-24 months	16	271/62	52.74			
d) 25-36 months	23	288.39	54.18			
e) More than 36 months	100	261.63	39.93			
Frequency in a day						
a) Once a day	6	224.17	41.34	2.603	3	0.054 NS
b) Twice a day	13	245.69	71.37			
c) Three times a day	19	277.79	41.29			
d) More than three times	127	264.12	45.01			
Received ant treatment for OST						
a) No	149	263.49	48.36	0.576	163	0.565 NS
b) Yes	16	256.25	41.62			
Stayed in rehabilitation centre						
a) No	125	257.44	47.6	2.441	163	0.016*
b) Yes	40	278.3	45.05			
Duration of taking OST						
a) 1-6 months	97	261.42	45.58	1.117	2	0.890 NS
b) 7-12 months	11	267.45	45.14			
c) More than 12 months	57	264.21	52.19			
Name of treatment						
a) Buprenorphine	165	262.79	47.68	NA	NA	NA
Are you regularly going OST						
a) Yes	165	262.79.	47.68	NA	NA	NA
Who motivated you to take treatment						
a) Family members	19	252.74	46.51	0.409	3	0.746 NS
b) Friends	75	262.53	42.84			
c) Health care workers	19	262.47	24.3			
d) Self	52	266.94	60.17			
Any psychiatric diagnosis in past 6months						
a) None	165	262.79.	47.68	NA	NA	NA
Any medical condition						
a) Diabetes mellitus	1	244	0	0.427	2	0.654 NS
b) Hypertension	2	291	4.243			
c) None	162	262.56	48			
Desire to continue the treatment						
a) Yes	165	262.79	47.68	NA	NA	NA
Are you benefited with treatment						
a) Yes	165	262.79	47.68	NA	NA	NA

* p value <0.05 level of significance   NS- Non significant

Table 2.2 shows the association between quality of life among patients undergoing opioids substitution therapy with selected demographic variables which was tested by using ANOVA test /Independent t test at 0.05 level of significance. Reason for taking the drugs, From where you get drugs, For how many years you take drugs and Stayed in rehabilitation centre was found significant association with quality of life. The other substitution therapy profile of the patient such as What age did you take drugs, How were you introduced to drugs, Frequency in a day, Received ant treatment for OST, Duration of taking OST, Name of treatment, Are you regularly going OST, Who motivated you to take treatment, Any psychiatric diagnosis in past 6months, Any medical condition, Desire to continue the treatment and Are you benefited with treatment was not found significant association with quality of life of patients undergoing opioids substitution therapy.

Section 4: Distribution of booklets.
The booklets were distributed to all the samples according to the preferred language.
The booklet was put together after extensive review of literature and suggestions from experts.

4. Discussion

The study was done to assess the quality of life of patients who were undergoing Opioid substitution therapy in the hospitals of Sikkim among 165 patients by using structured questionnaire and WHOQOL-BREF. Findings of the present study suggests that the patients who are taking the therapy have good quality of life in all the domains. Our findings supported a study conducted by Abhinav Kapoor et al, to check the improvement in quality of life with buprenorphine opioid users in Gurgaon for 6 month follow up.

Further, the present study observed that most of the patients were Hindus(57%) ,residing in urban areas(73.9%) ,married (50.9%), upto primary education level(55.2%) ,males (98.8%). It was observed that the patients were introduced to the drugs by their friends (77%) , most of the patients started taking drug just to explore/ for enjoyment which later became a habit(82.4), most patients would accquire the drugs from brokers(82.4),(77%) of the patient would take the drugs for more than three times.

Further, the present study also observed some association between quality of life with selected variables i.e occupation, reasons for taking drugs , from where would you get the drugs,for how many years did you take the drugs and stayed in rehabilitation centre.

The finding of the study had some limitations as the the baseline quality of life of the patients was not known. The study was conducted by convenience sampling technique so the study cannot be generalised.

5. Conclusion

To conclude, the study has shown the effectiveness of the opioid substitution therapy for improving the quality of life of the patients. The therapy has also proven long term efficacy with less side effects. However, in future, the study can be initiated in more samples, further it would be beneficial to first know the baseline quality of life of the patients before the treatment and evaluate the patients months after taking up the treatment.

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