Quality of Life among Respondents Receiving Opioid Substitution Therapy in the Hospitals of Koshi Province

*Uma Pradhan[1], Anjuly Mandal[1], Ashmita Shrestha[1]
Menuka Shrestha[1], Dipty Subba[1]

[1]Department of Nursing, Purbanchal University School of Health Sciences (PUSHS), Gothgaun

ABSTRACT

Introduction: Opioid Substitution Therapy (OST) is one of the safest and cost-effective treatments for the clients with opioid dependance. Studies have found that the quality of life of the respondents receiving OST has been significantly improved over the period of time. The objective of the study is to identify the quality of life (QOL) among respondents receiving Opioid Substitution Therapy in Hospitals of Koshi Province, Nepal.

Methods: Quantitative cross-sectional design was adopted in the study. Total number of 105 respondents participated in the study from Koshi Hospital and Mechi Hospital. A standard tool WHOQOL-BREF was used to collect the data. Data was collected through in person interview. Ethical clearance was done by Purbanchal University School of Health Sciences-Institutional Review Committee (PUSHS-IRC). Manwhitney U test and Kruskal Wallis Test were used to find out the association of domains of quality of life with selected variables. SPSS version 16 was used for data analysis.

Results: The median (IQR) value of quality of life was 66.0(59.62-73.5). There was significant association between environmental domain of QOL (p=0.028) with the age of the respondent. There was also a significant association of physical domain (p=0.026), social domain (p=0.026) and environmental domain (p=0.046) of QOL with duration of the Opioid Substitution Therapy. There was a significant association of Mental (p=0.008) and Environmental domain (p=0.002) of QOL with the level of education.

Conclusion: Respondents in OST demonstrated better QOL in physical, social and mental domain in comparison to environmental domain. The domains of quality of life varied with the age, education of the respondent and the duration of Opioid Substitution Therapy.

Keywords: Nepal, Opioid Substitution Therapy, Koshi Province, Quality of Life.

*Correspondance: Uma Pradhan, Assistant Professor, Department of Nursing, Purbanchal University School of Health Sciences (PUSHS), Gothgaun
Email: umapradhan977@gmail.com
Cell: +977-9842140777

INTRODUCTION

According to UNODC (United Nations Office of Drugs and Crime), World Drug Report 2020, use of drug is in rising trend. Among various substances, opioid is considered as the most harmful one.[1] Opioid users are susceptible for blood borne diseases, homelessness, unemployment, criminal activities and family conflict.[2] and even death due to its overdose.[3]

Opioid Substitution Therapy (OST) is one of the safest and cost-effective treatments for the clients with opioid dependance [4] and OST is found to improve the health status of

the respondents significantly.[5-7] OST is also important to reduce the effects of withdrawal symptoms, relapse and drug overdose.[8] Several studies have found that with better quality of life, there will be the sustained remission from substance dependance.[9] The principle of the OST is to reduce the costs of health hazard, criminal behaviour and improve the quality of life of respondents and their family members. The drugs commonly used in OST i.e. Methadone and Buprenorphine has fewer adverse effects, minimum withdrawal symptoms and lower physical dependance.[10] OST treatment which is given under medical supervision will reduce the high-risk behavior like needle sharing among the drug users. Very few researches on QOL among OST respondent is conducted in Nepal. It will also help to sensitize the concerned authority to focus on interventions to improve the quality of life and well-being of the respondents. The objective of the research is to assess quality of life among respondents receiving Opioid Substitution Therapy in Hospitals of Koshi Province, Nepal and to find out the association of domains of quality of life with selected variables.

METHODS

This was a cross-sectional study carried out from September 2021 to September 2022. Study was conducted in Opioid Substitution Therapy Center at Koshi Hospital, Biratnagar and Mechi Hospital, Bhadrapur at Koshi Province. As census sampling method was adopted for the study, the total sample size was 105. Sixty one from Mechi Hospital, Bhadrapur and 44 respondents from Koshi Hospital, Biratnagar who met the inclusion criteria were included. Respondents who are of age ≥18 years in Opioid Substitution Therapy Centers who are willing to participate in the study were included in the study. WHOQOL-BREF questionnaire in Nepali language was used for the data collection. WHOQOL-BREF is composed of 26 items which consists of two items from the overall QOL and General Health and 24 items are divided

into four domains: physical health with 7 items, psychological health with 6 items, social relationships with 3 items and environmental health with 8 items. Each item was rated on a 5-point Likert scale. All the items are rated positively except for items 3, 4 and 26. WHOQOL-BREF is a valid and reliable tool with Chronbach's alpha 0.87. Data was collected through interview technique. Respondents were explained about the purpose of the study and then informed written consent was taken. SPSS version 16 was used to analyze the data. Normality test was done using Kolmogorov Smirnov Test and Saphiro-Wilk Test. P-value was < 0.05, so non parametric test Manwhitney U test and Kruskal Wallis test was used to find out the association between the Quality of life and the selected demographic variables. Ethical clearance was obtained from the PUSHS-IRC (Ref: 131-077-078). Permission was obtained from the authority of each selected hospital. Confidentiality was maintained throughout the study.

RESULTS

Table 1: Sociodemographic Variables of the Respondents (n=105)

Characteristics	Categories	Number	Percent
Age (in years)	20-30	68	64.8
	31-40	23	21.9
	41-50	10	9.5
	51-60	2	1.9
	>60	2	1.9
Mean ± SD, Median 30.62±8.9, 28			
Gender	Male	101	96.2
	Female	4	3.8
Educational Level	Illiterate	5	4.8
	Primary	27	25.7
	Secondary	38	36.2
	Higher Secondary	26	24.8
	Bachelor	9	8.6

Characteristics	Categories	Number	Percent
Marital Status	Unmarried	38	36.2
	Married	62	59.0
	Divorced	5	4.8
Occupation	Unemployed	57	54.3
	Daily wages	20	19.0
	Services	16	15.2
	Business	12	11.4
Duration of OST enrollment	≤1 year	85	81.0
	years	17	16.2
	>5 years	3	2.9
History of chronic disease	Yes	4	3.8
	No	101	96.2
Health insured	Yes	22	21.0
	No	83	79.0

Majority (64.8%) of the respondents were of age group 20-30 years. The Mean ± SD of the age was 30.62±8.9. The majority 96.2% of the respondents were female. More than one-third (36.2%) of the respondents had secondary level of education followed by 25.7% with primary level. More than half (59%) of the respondents were married. More than half (54.3%) of the respondents were unemployed. Majority (81%) of the respondents had received OST treatment for less than 1 year. Majority (96.2%) had no history of chronic illness. Majority (79%) of the respondents had not insured health insurance (Table 1).
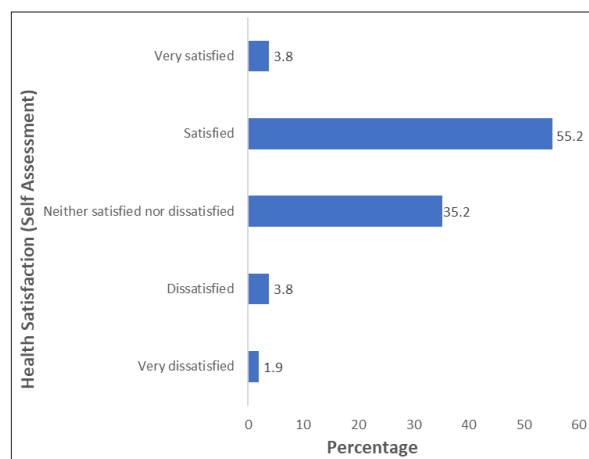
Figure 1: Self-assessment of Quality of Life of the Respondents (n=105)
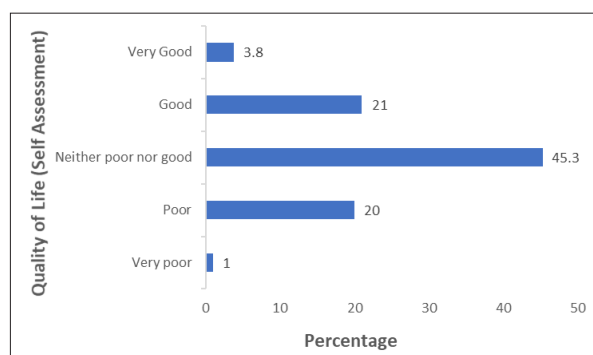
Nearly half (45.3%) of the respondents perceived that their quality of life is neither

poor nor good followed by 21% perceived good quality of life. (Figure 1)

Figure 2: Self-assessment of Health Satisfaction of the Respondents (n=105)

More than half (55.2%) of the respondents were satisfied with their health followed by more than one third (35.2%) of the respondents were neither satisfied nor dissatisfied with their health. (Figure 2)

Table 2: Quality of Life in Different Domains among Respondents Receiving OST (n=105)

Domains of QOL	Median (Q1-Q3)	Mean (SD)	Min-Max
Physical	69.0 (63.0-81.0)	70.1 (11.8)	38-94
Psychological	69.0 (59.5-75.0)	66.7 (11.7)	19-88
Social	69.0 (56.0-75.0)	66.0 (14.5)	25-100
Environmental	63.0 (56.0-69.0)	62.3 (10.4)	31-88
Total	66.0 (59.62-73.5)	66.28 (9.8)	34.25-89.25

Total Mean ± SD of QOL was 66.28±9.8. Study have found that maximum Mean ± SD (70.1 ± 11.8) was found in physical domain followed by psychological domain 66.7±11.7. (Table 2)

Table 3: Association of Domains of Quality of Life among Respondents Receiving OST with Selected Variables (n=105)

Variables	Physical	Mental	Social	Environmental
	Median (IQR)	Median (IQR)	Median (IQR)	Median (IQR)
Age (years)				
≤28	69 (63-75)	69 (63-75)	69 (56-75)	63 (56-63)
>28	69 (63-81)	69 (56-75)	69 (56-75)	63 (56-69)
p-value	0.08	0.887	0.088	0.028*
Gender				
Male	69 (63-81)	69 (59-75)	69 (56-75)	63 (56-69)
Female	78 (51-86)	72 (50-79)	69 (36-73)	66 (48-73)
p-value	0.491	0.643	0.700	0.707
H/O chronic Disease				
Yes	72 (64-79)	69 (64-83)	72 (59-89)	59 (56-67)
No	69 (63-81)	69 (56-75)	69 (56-75)	63 (56-69)
p-value	0.734	0.445	0.368	0.707
Duration of OST				
≤ 7 months	69 (63-75)	69 (56-69)	69 (53-75)	56 (56-69)
>7 months	75 (63-81)	69 (63-79)	72 (56-75)	63 (56-69)
p-value	0.026*	0.139	0.026*	0.046*
Marital Status				
Unmarried	69 (61-81)	69 (61-75)	69 (56-75)	63 (56-69)
Married	69 (63-81)	69 (56-75)	69 (56-75)	63 (56-75)
Divorced	69 (56-78)	69 (53-72)	75 (40-75)	63 (53-72)
p-value	0.568	0.903	0.529	0.762
Occupation				
Unemployed	69 (63-81)	69 (56-72)	69 (56-75)	63 (56-66)
Daily wages	69 (63-81)	69 (57.75-69)	69 (56-75)	63 (56-69)
Services	69 (63-81)	69 (63-69)	69 (56-75)	66 (56-69)
Business	78 (69-81)	81 (69-81)	69 (51-93)	75 (57-75)
p-value	0.529	0.672	0.691	0.153
Education				
Illiterate	69 (69-81)	63 (56-72)	56 (50-75)	56 (47-66)
Primary	69 (63-81)	63 (56-69)	56 (69-75)	56 (56-63)
Secondary	69 (56-69)	66 (56-69)	62 (56-75)	63 (56-69)
Higher Secondary	75 (63-81)	69 (69-81)	69 (56-75)	69 (61-69)
Bachelor	81 (62-81)	69 (69-81)	75 (69-87)	75 (62-84)
p-value	0.007	0.008*	0.238	0.002*

Note: Manwhitney-U Test and Kruskal Wallis test was used, * p value significant at <0.05.

There was significant association of environmental domain of QOL with the age of the respondent. There was also a significant association of physical domain (p=0.026), social domain (p=0.026) and environmental domain (p=0.046) of QOL with duration of the OST. There was a significant association of Psychological (p=0.008) and Environmental domain (p=0.002) of QOL with the level of education. (Table 3)

DISCUSSION

In the present study, majority (64.8%) of the respondents belong to the age group of 20-30 years. Among 105 respondents, male was the predominant (96.2%) one. This finding is consistent with the survey done by Narcotic Drug control section, Ministry of Home affairs, Government of Nepal (2020)[11], and the study conducted in Kathmandu Valley, Nepal.[12] Studies done in other countries also shows male to be the predominant gender in case of drug use. [13, 14] Lesser number of female respondents could be due to a smaller number of female drug users and stigma faced by them in the society. Survey by Government of Nepal (2020), showed that majority of the drug users had completed secondary level of education. Similar findings are found in the current study. More than one third of the respondents had completed secondary level of education (36.2%) followed by the higher secondary education level (24.8%).

The mean score of the quality of life of respondents receiving OST in study was 66.28. The result was similar to the study conducted in other countries.[13, 15] The highest mean score was found in physical domain (70.1) followed by psychological (66.7) and social domain (66.0). Similar study in Kathmandu, Nepal[12] also showed the maximum mean differences in physical domain during OST treatment. This could be because of improvement in activities of daily living, management of pain and discomfort, satisfaction with the sleep and capacity of the work. The drug users are stigmatized in our society. OST respondents might have difficulty in maintaining good self-esteem, psychological well-being, social relationships and financial stability. This could be the reason for comparatively lower mean score of psychological and social domain.

In the present study, there was significant association of QOL with age, duration of the OST enrollment and education. Several studies have found the significant increment in Quality of life after certain duration of OST treatment.[13, 14, 16-18] Multiple factors could play a role in improving QOL e.g. cost effective and supervised treatment. Such factors may influence individuals on OST to lead healthy life, overcome financial crisis and keep them away from high risk activities like needle sharing. So, it will finally help them to reintegrate in society. Other studies have also found association of quality of life with education. [16, 19] Higher education and age will help to gain the maturity and will have good satisfaction in social relationship, might help in better address social and environmental problems.

CONCLUSION

Respondents in OST demonstrated better quality of life in physical, social and psychological domain in comparison to environmental domain. The domains of quality of life varied with age, education of the respondent and the duration of Opioid Substitution Therapy enrollment. Awareness regarding OST among drug users and assessment of effectiveness of OST program is recommended.

REFERENCES

1.   UN. World Drug Report 2020 2020 [cited 2021 3rd March]. Available from: https://wdr.unodc.org/wdr2020/en/previous-reports.html.

2.   WHO. Substitution maintenance therapyin the management of opioid dependence and HIV/AIDS prevention 2004 [Available from: https://www.who.int/substance_abuse/.

3.   WHO. Opioid Overdose: WHO; 2020 [Available from: https://www.who.int/.

4.   UNODC. Opioid Substitution Treatment (Buprenorphine) 2012 [Available from: https://www.unodc.org/documents/southasia/Training.

5.   Shi J, Zhao L-Y, Epstein DH, Zhao C, Shuai Y, Yan B, et al. The Effect of Methadone Maintenance on Illicit Opioid Use, Human Immunodeficiency Virus and Hepatitis C Virus Infection, Health Status, Employment, and Criminal Activity Among Heroin Abusers During 6 Months of Treatment in China. Journal of Addiction Medicine. 2007;1(4):186-90.

6.   Lawrinson P, Ali R, Buavirat A, Chiamwongpaet S, Dvoryak S, Habrat B, et al. Key findings from the WHO collaborative study on substitution therapy for opioid dependence and HIV/AIDS. Addiction. 2008;103(9):1484-92.

7.   Gowing L, Farrell M, Bornemann R, Sullivan L, Ali R. Substitution treatment of injecting opioid users for prevention of HIV infection. Cochrane Database Syst Rev. 2008(2):Cd004145.

8.   Wolff K. Characterization of Methadone Overdose: Clinical Considerations and the Scientific Evidence. Therapeutic Drug Monitoring. 2002;24(4).

9.   Laudet AB, Becker JB, White WL. Don't wanna go through that madness no more: quality of life satisfaction as predictor of sustained remission from illicit drug misuse. Subst Use Misuse. 2009;44(2):227-52.

10. WHO. WHO Collaborative Study on Substitution Therapy of Opioid Dependence and HIV/AIDS General Protocol 2003 [cited 2021 15th March]. Available from: https://www.who.int/substance_abuse/activities.

11. Nepal Drug Users Survey 2076. In: Government of Nepal MoHA, editor. June, 2020.

12. Sapkota B. Changes in the Quality of Life of Outrespondents in Methadone Maintenance Treatment Clinics in Kathmandu Valley. Journal of Institute of Medicine Nepal. 2019;41(3):30-4.

13. Baharom N, Hassan MR, Ali N, Shah SA. Improvement of quality of life following 6 months of methadone maintenance therapy in Malaysia. Subst Abuse Treat Prev Policy. 2012;7:32.

14. Adeline Gong Wooi Huong NCG, Amer Siddiq Amer Nordin, Aida Syarinaz Ahmad Adlan, Hussain Habil. Quality of life assessment of opioid substance abusers on Methadone Maintenance Therapy (MMT) in University Malaya Medical Center. ASEAN Journal of Psychiatry. 2009;10(1):1-11.

15. Quyen BTT, Nguyen LT, Phuong VTV, Hoang LT. Quality of life in methadone maintenance treated respondents in Long An, a southern province of Vietnam. Health Psychol Open. 2020;7(2):2055102920953053.

16. Chou Y-C, Shih S-F, Tsai W-D, Li C-sR, Xu K, Lee TS-H. Improvement of quality of life in methadone treatment respondents in northern Taiwan: a follow-up study. BMC Psychiatry. 2013;13:190-.

17. Dhawan A, Rao R, Ambekar A, Chopra A, Jain R, Yadav D, Ray R. Methadone Maintenance Treatment in India: A

feasibility and effectiveness report. New Delhi, India: United Nations Office on Drugs and Crime, Regional Office for South Asia; 2014.

18. Xiao L, Wu Z, Luo W, Wei X. Quality of life of outrespondents in methadone maintenance treatment clinics. J Acquir Immune Defic Syndr. 2010;53 Suppl 1(Suppl 1):S116-S20.

19. Anggraini A. Quality of life among Methadone Maintenance Treatment (MMT) respondents with higher education. Health Science Journal of Indonesia. 2018;9:93-8.