



# Intensity Of Psychological Distress And Extension Of Distress Symptomology Across Psychopathology Among Individuals Under Opioid Substitution Therapy

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*Abstract:* Opioid Substitution Therapy (OST) is an integral part of treatment for Opioid Dependency Syndrome. In the Indian state of Sikkim, OST started in 2012 under The National Aids Control Program (NACP III- 2006) to reduce the prevalence of ODS currently the program initiated gives an account of psychosocial and pharmacological intervention. The current study is an attempt to explore the association of duration of therapy (OST) with psychological distress, level of distress, and extension of symptoms of distress in individuals under opioid substitution therapy. Data was collected using purposive sampling. The sample comprised 60 individuals enrolled in the OST program at Sikkim STNM Hospital between the ages of 18 to 50 years (M=30.26, SD=5.300) and having primary education of 5<sup>th</sup> standard. The sample was divided into three groups according to the duration of participation in the OST Program, such as <12 months, between 13 to 36 months, and 37 to 96 months. The SCL-90 (R) by Leonard R. Derogatis, was used to assess the psychological distress of the sample. Statistical analysis of the research data showed significant differences in psychological distress, the level of psychological distress, and the extension of the symptoms in all three groups. This study has been undertaken to investigate the determinants of stock returns in Karachi Stock Exchange (KSE) using two assets pricing models the classical Capital Asset Pricing Model and Arbitrage Pricing Theory model. To test the CAPM market return is used and macroeconomic variables are used to test the APT. The macroeconomic variables include inflation, oil prices, interest rate and exchange rate. For the very purpose monthly time series data has been arranged from Jan 2010 to Dec 2014. The analytical framework contains.

**Index Terms** - Psychological distress, Opioid Substitution Therapy (OST), Opioid Dependency Syndrome

## I. INTRODUCTION

The current prevalence rate of Opioid use in India is 2.06%. Heroin is the most used opioid in India with 1.14%. pharmaceutical opioids followed them at 0.96% and opium at 0.52%. About 0.70% of Indians. are estimated to need help with their opioid use problem. In Sikkim, the use of pharma opioids and heroin is more prevalent (Ambekar et al.,2019). The regular use of opioids is associated with elevated rates of mood and anxiety disorders, conduct disorder, and borderline personality disorder. With the injection of these drugs. It is associated with high rates of pathology (Conway et al.,2006; Dark et al.,2008).

II. Previous studies have found a relationship between the diagnosis of substance dependence and psychological distress. Comorbid diagnosis and levels of individual substance use with the severity of pathology (Conway et al.,2006; Marsden et al., 2000; Nakama et al.,2008). Psychological distress is defined as a state of emotional suffering and is characterized by symptoms of loss of interest, sadness, hopelessness, anxiety, and Somatic symptoms. (Mirawsky & Ross, 2002). Psychological distress impacts an individual's social functioning and day-to-day living (Wheaton, 2007). The prevalence of compulsive behaviour and its role in the affective process is associated with addictive behaviour (Den Ouden et al., 2020). Opioid Substitution Therapy began in India with the use of buprenorphine for the treatment of opioid dependence in 1989 in the deaddiction centre of AIIMS, New Delhi after which a few of the NGOs also started the program in a community setting (Mohan et al.,2006).

III. A project supported by the Department of International Development; United Kingdom supported various centres in India for the prevention of HIV among Injecting Drug users (IDU). Under UNODC, Regional Office of South Asia with the help of the National Drug Dependence Treatment Centre (NDDTC), AIIMS started the study to validate OST in India (Ray et al.,2012). The National Aids Control Program (NACP III, 2006), "Strategy and Implementation Plan identified various harm reduction services to prevent HIV which included syringe exchanges, abscess management, condoms, and residential care. In 2010 NACP started the pilot program in Punjab (Ambekar et al.,2018). In Sikkim, the program commenced in 2012 (SSACS, 2012).

IV. This study highlights the association between duration in a therapy program and psychological distress as most studies evaluated outcomes relative to the index episode of care with only one or two of these factors. Unfortunately, hardly available studies estimated the duration of treatment and its association with psychological distress. Moreover, co-occurring psychiatric problems are associated with higher substance use severity, more intensive level of care placements, lower treatment participation, and worse outcomes (Angst et al., 2002; Enns et al., 2001; Grella, 2003).

## RESEARCH METHODOLOGY

The sample for the study was collected from the OST centre in STNM Hospital Gangtok, Sikkim. The sample was collected using the Purposive sampling method. Sixty samples were taken and the sample was divided into three groups based on the duration in the OST program for less than a year,1-3 years, and more than three years. The Symptom Checklist 90 R (SCL-90-R) is a 90-item self-report symptom inventory developed by Leonard R. Derogatis in the mid-1970s to measure three parameters Global severity index GSI, the positive Symptom Distress index PSDI, and Positive Symptom Total.

V. The GSI measures psychological distress, while the PSDI reflects the level of distress reported as symptoms. The PST reflects

#### IV. RESULTS AND DISCUSSION

Table 1: Demographic details of the participants

Groups.	0-12 months	13.36 months	37-96 months
Age			
22-30	9	15	11
31-43	11	5.	9
Religion			
Christianity.	3	4	4
Hinduism.	12	11	13
Buddhism.	3	4	3
Islamic	2	1	0
Marital status			
Married.	13	12.	9
Unmarried.	7	7	11
Separated.	0	1	0

Table 2: Kruskal Wallis value, degree of freedom, and asymptomatic significance for all group

Mean rank	PDSI	PST	GSI
0-12mnths	38.85.	37.08	39.98
13-36mnths	25.03	30.98	27.43
37-96mnths	27.63	23.45	24.10
Kruskal Wallis H	7.101	6.132	9.214
df	2	2	2
Assymp Sig	.029*	0.047 *	.010**

p>0.01\*\* p>0.05 \* level of significance

### Discussion

Studies in South Asia and the Middle East show a high lifetime prevalence of psychiatric disorders, especially depression and anxiety, and psychological distress among opioid users (De Maeyer et al., 2010). The results indicate an association between GSI psychological distress, PSDI the severity, and PST the extension of symptomology over all three groups of patients being treated for one year, 1-3 years, and three years and more. The mean rank of 39.98 for less than a year in the therapy group to 27.43 in 1 - 3 years in the therapy group and 24.10 in more than three years in the therapy group indicate that psychological distress is more in

individuals who are in therapy for less than one year. Hence, the duration of treatment has an association with psychological distress with the asymptomatic significance of .010. Opioid agonist medications are the first line of treatment for opioid use disorder that has a long history in the treatment of mood disorders even before antidepressants became available in the market (Stoll & Reuter, 1999).

Opioid-dependent patients with psychiatric comorbidities benefit from Opioid Agonist treatment targeting both mental issues and addictive problems. (Marmannani et al., 2011) Buprenorphine reduces the risk of dependence and has a therapeutic effect on depressed patients. (Emrich, 1984). Opioid agents act as anti-panic agents for anxiety disorder and are responsible for the prevention of psychotic relapse (Gold et al., 1982). Opioid agonists have been effective in controlling aggressive behaviours (Shaikh et al., 1990).

The mean rank of PDSI for less than a year in the therapy group is 38.85 and 25.03 in 1-3 years in the therapy group. The mean rank in the more than three years group is 27.63, reflecting the level of distress higher in the less than a year group (Gorodokin, 2019), established structural and dynamic pathology symptoms in persons undergoing Opioid Substitution Therapy. The severity of mental disorders in the initial stage of pathogenesis was highly correlated.

The mean rank of PST In less than a year in the therapy group is 37.08 and 30.98 in 1-3 years in a therapy group. The mean rank for more than three years group in therapy is 23.45. This is indicative that Individuals in less than a year in therapy group have more extension of symptoms. The asymptomatic significance value of 0.047 is an indication that the duration of therapy is associated with the extension of this distressed symptomology.

## Conclusions

The study substantiates that the duration of therapy in OST decreases psychological distress and the intensity of distress. The longer the duration of therapy lower the psychological distress along with a lower intensity of distress level. Buprenorphine not only possesses an anti-craving activity but is also able to act as a psychotropic instrument in treating mental illness, with special reference to mood, anxiety, and psychotic syndromes (Maremmani et al., 2006). This study established an association between the treatment period and psychological distress. One year of treatment with opioid agonists works effectively for the psychiatric well-being of opioid-dependent patients. (Marmmani et al., 2011).

## REFERENCES

- Ambekar, A., Agrawal, A., Rao, R., Mishra, A., Khandelwal, S., & Chadda, R. (2019). Magnitude of Substance Use in India: Ministry of Social Justice and Empowerment Government of India.
- Ambekar, A., Rao, R., Agrawal, A., & Kathiresan, P. (2018). Research on opioid substitution therapy in India: A brief, narrative review. *Indian journal of psychiatry*, 60(3), 265-270.
- Anglin, M. D., Hser, Y. I., & Grella, C. E. (1997). Drug addiction and treatment careers among clients in the Drug Abuse Treatment Outcome Study (DATOS). *Psychology of Addictive Behaviors*, 11(4), 308.
- Angst, J., Sellaro, R., & Ries Merikangas, K. (2002). Multimorbidity of psychiatric disorders as an indicator of clinical severity. *European Archives of Psychiatry and Clinical Neuroscience*, 252, 147-154.
- Anthony, J. C., & Petronis, K. R. (1995). Early-onset drug use and risk of later drug problems. *Drug and alcohol dependence*, 40(1), 9-15.
- Brooner, R. K., King, V. L., Kidorf, M., Schmidt, C. W., & Bigelow, G. E. (1997). Psychiatric and substance use comorbidity among treatment-seeking opioid abusers. *Archives of General Psychiatry*, 54, 71 – 80.
- Conway, K. P., Compton, W., Stinson, F. S., & Grant, B. F. (2006). Lifetime comorbidity of DSM-IV mood and anxiety disorders and specific drug use disorders: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of clinical Psychiatry*, 67(2), 247-257.
- Darke, S., Kaye, S., McKetin, R., & Duflou, J. (2008). Major physical and psychological harms of methamphetamine use. *Drug and alcohol review*, 27(3), 253-262.
- De Maeyer, J., Vanderplasschen, W., & Broekaert, E. (2010). Quality of life among opiate-dependent individuals: A review of the literature. *International journal of drug policy*, 21(5), 364-380.
- Den Ouden, L., Tiego, J., Lee, R. S., Albertella, L., Greenwood, L. M., Fontenelle, L., ... & Segrave, R. (2020). The role of experiential avoidance in transdiagnostic compulsive behavior: a structural model analysis. *Addictive Behaviors*, 108, 106464.
- Derogatis, L. R. S., & Kathryn, L. The SCL-90-R and the Brief Symptom Inventory (BSI). *Handbook of Psychological Assessment in Primary Care Settings*. Mahwah, NJ: Lawrence Erlbaum Associates, 297-334.
- Dhawan, A., & Chopra, A. (2013). Does buprenorphine maintenance improve the quality of life of opioid users? *The Indian journal of medical research*, 137(1), 130.
- Dhawan, A., & Jhanjee, S. (2007). Manual for long-term pharmacotherapy. New Delhi: National Drug Dependence Treatment Centre, AIIMS.
- Dhawan, A., Jain, R., & Chopra, A. (2010). *Opioid Substitution: Buprenorphine in India: a Study Report*. United Nations Office on Drugs and Crime, Regional Office for South Asia.
- Dorabjee J, Samson L. (1998). Self and community-based opioid substitution among opioid-dependent populations in the Indian sub-continent. *International Journal of Drug Policy*, 1998; 9: 411-416.
- Emrich, H. M., Vogt, P., Herz, A., & Kissling, W. (1982). Antidepressant effects of buprenorphine. *The Lancet*, 320(8300), 709.

- Enns, M. W., Swenson, J. R., McIntyre, R. S., Swinson, R. P., & Kennedy, S. H. (2001). Clinical guidelines for the treatment of depressive disorders. VII. Comorbidity. *Canadian Journal of Psychiatry*, 46 (Suppl. 1), 77S – 90S.
- Fiellin, D. A., Schottenfeld, R. S., Cutter, C. J., Moore, B. A., Barry, D. T., & O'Connor, P. G. (2014). Primary care-based buprenorphine taper vs maintenance therapy for prescription opioid dependence: a randomized clinical trial. *JAMA internal medicine*, 174(12), 1947-1954.
- Gold, M. S., Pottash, A. C., Sweeney, D., Martin, D., & Extein, I. (1982). Antimanic, antidepressant, and antipanic effects of opiates: clinical, neuroanatomical, and biochemical evidence. *Annals of the New York Academy of Sciences*, 398, 140-150.
- Gorodokin, A. (2019). The structure and genesis of non-psychotic psychopathology in persons who undergo opioid substitution maintenance therapy.
- Grella, C. E. (2003). Effects of gender and diagnosis on addiction history, treatment utilization, and psychosocial functioning among a dually diagnosed sample in drug treatment. *Journal of Psychoactive Drugs*, 35, 169 – 179.
- Grella, C. E., & Joshi, V. (1999). Gender differences in drug treatment careers among clients in the national drug abuse treatment outcome study. *American Journal of Drug and Alcohol Abuse*, 25, 385 – 406
- Maremmani, A. G. I., Rovai, L., Pani, P. P., Pacini, M., Lamanna, F., Rugani, F., ... & Maremmani, I. (2011). Do methadone and buprenorphine have the same impact on psychopathological symptoms of heroin addicts? *Annals of general psychiatry*, 10, 1-8.
- Maremmani, I., Pacini, M., & Pani, P. P. (2006). Effectiveness of buprenorphine in double diagnosed patients. Buprenorphine as psychotherapeutic drug. *Heroin Addiction & Related Clinical Problems*, 8(1), 31-48.
- Marsden, J., Gossop, M., Stewart, D., Rolfe, A., & Farrell, M. (2000). Psychiatric symptoms among clients seeking treatment for drug dependence: Intake data from the National Treatment Outcome Research Study. *The British Journal of Psychiatry*, 176(3), 285-289.
- Mirowsky, J., & Ross, C. E. (2002). Depression, parenthood, and age at first birth. *Social science & medicine*, 54(8), 1281-1298.
- Mohan, D., Dhawan, A., Chopra, A., & Sethi, H. (2006). A 24-week outcome following buprenorphine maintenance among opiate users in India. *Journal of Substance use*, 11(6), 409-415.
- Mountney, J., Griffiths, P., Sedefov, R., Noor, A., Vicente, J., & Simon, R. (2016). The drug situation in Europe: an overview of data available on illicit drugs and new psychoactive substances from European monitoring in 2015. *Addiction*, 111(1), 34-48.
- Nakama, H., Chang, L., Cloak, C., Jiang, C., Alicata, D., & Haning, W. (2008). Association between psychiatric symptoms and craving in methamphetamine users. *American Journal on Addictions*, 17(5), 441-446.
- Ramdurg, S., Ambekar, A., & Lal, R. (2012). Sexual dysfunction among male patients receiving buprenorphine and naltrexone maintenance therapy for opioid dependence. *The journal of sexual medicine*, 9(12), 3198-3204.

- Rao, R., Ambekar, A., & Agrawal, A. (2014). Opioid Substitution Therapy under National AIDS Control Programme. *New Delhi: Department of AIDS Control, Ministry of Health and Family Welfare, Government of India.*
- Rao, R., Ambekar, A., Yadav, S., Sethi, H., & Dhawan, A. (2012). Slow-release oral morphine as a maintenance agent in opioid dependence syndrome: An exploratory study from India. *Journal of Substance Use, 17*(3), 294-300.
- Rao, R. V., Dhawan, A., & Sapra, N. (2005). Opioid maintenance therapy with slow release oral morphine: Experience from India. *Journal of Substance Use, 10*(5), 259-261.
- Ray, R., Dhawan, A., Ambekar, A., Yadav, D., Agrawal, A., Chopra, A., ... & Joseph, F. OST program in Government health-care settings: treatment compliance and retention.
- Ronel, N., & Levy-Cahana, M. (2011). Growing-up with a substance-dependent parent: Development of subjective risk and protective factors. *Substance Use & Misuse, 46*(5), 608-619.
- Sansone, R. A., & Sansone, L. A. (2015). Buprenorphine treatment for narcotic addiction: not without risks. *Innovations in clinical neuroscience, 12*(3-4), 32.
- Shaikh, M. B., Dalsass, M., & Siegel, A. (1990). Opioidergic mechanisms mediating aggressive behavior in the cat. *Aggressive Behavior, 16*(3-4), 191-206.
- Sikkim State AIDS Control Society. (n.d.). *About us*. Sikkim SACS. <https://www.sikkimsacs.com/about/>
- Simpson, D. D., Joe, G. W., & Broome, K. M. (2002). A national 5-year follow-up of treatment outcomes for cocaine dependence. *Archives of General Psychiatry, 59*, 538 – 544.
- Stoll, A. L., & Rueter, S. (1999). Treatment augmentation with opiates in severe and refractory major depression. *American Journal of Psychiatry, 156*(12), 2017-2017.
- Tsuang, M. T., Tohen, M., & Zahner, G. E. (Eds.). (1995). *Textbook in psychiatric epidemiology*. New York: Wiley-Liss.
- Volkow, N. D., Frieden, T. R., Hyde, P. S., & Cha, S. S. (2014). Medication-assisted therapies—tackling the opioid-overdose epidemic. *New England Journal of Medicine, 370*(22), 2063-2066.
- Wheaton, B. (2007). The twain meet: distress, disorder, and the continuing conundrum of categories (comment on Horwitz). *Health, 11*(3), 303-319.