



## Addiction to Drugs in Low Back Pain Patients: An Anthro-Medical Review

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**Abstract:** Low back pain is prevalent all over the world. It's one of the chronic diseases that affects people aged fifty and above. Majority of them go for surgery while few depend on alternative strategies to combat pain. Analgesics are the drugs commonly used to relieve pain. Physicians often prescribe opioids; these drugs are excellent narcotics which force patients to take it regularly. The present article is based on secondary literature available at PubMed. From PubMed, research papers were collected using various search terms related to the title of the article. This article is developed to address the issues related to low back pain and gradual addiction to narcotic analgesics. The opioids act on the opioid receptors in brain. Continuous intake of the drugs to make the pain insensitive is one of the behaviors induced by the drug on patients. This leads to dependence on the drug and increased tolerance levels to experience the same intensity of relief. Chronic back pain reduces the quality of life (QoL) and makes people less productive. Use of opioids has many side-effects that affect people themselves and the society. The current study aims to find some of the reasons of addiction to drugs in low back pain patients and the impacts of lower back pain in these patients.

**Keywords:** Addiction, Low back pain, Analgesics, Opioids, Drugs.

### INTRODUCTION

Lower back pain is one of the chronic diseases among adults all over the world. It's found that 75% - 85% of people in a population suffer from lower back difficulties, some of them may be acute, however, some last longer and turn to chronic back pain (Andersson, 1999; Jaiswal, 2007). The prevalence of chronic low back pain is found to be 3-4 times higher among elderly, aged over 50 than people aged 18-30 and considering various demographic characteristics like female sex, low socioeconomic status, less schooling, and smoking are more prone to the disease (Meucci *et al.*, 2005; Jaiswal, 2012).

Dureja *et al.*, (2017) classified pain into different types like based on duration or intensity, anatomical location, and pathological mechanism of pain. Based on pathophysiology, low

back pain is a nociceptive pain; based on duration, pain can be acute when it lasts from few seconds to less than 6 months and chronic when it stays for more than 6 months; and based on the location it's mainly attributed to bad posture, strains or sprains which may or may not impair movement or physical function.

A drug is a substance acting on a target molecule that helps to clear the underlying causes of the condition that prevent the body from doing normal functions. Analgesics are used to relieve pain. These are of two types: narcotic and non-narcotic analgesics. Non-narcotics like acetaminophen and aspirin are used to control mild pain whereas narcotic analgesics such as opioids, barbiturates, and cannabinoids are often taken for severe pain.

The commonly used drugs to relieve back pain are opioids. The user becomes addicted to the drug after prolonged use and may result in drug abuse. In the brain, there are three types of opioid receptors such as mu-opioid receptor (MOR), delta-opioid receptor (DOR), and kappa-opioid receptor (KOR). Opioids bind to these receptors to express their analgesic effects (Crowley *et al.*, 2015). The prescription of narcotic analgesics for chronic pain management should be carried out in a regulated way such as the need for assessment of long-term chronic opioid therapy, a trial prescription of non-narcotic analgesics, spreading awareness of potential side-effects of the drug and its dependence and abuse (Manubay *et al.*, 2011; Jaiswal, 2014).

## METHODOLOGY

The present paper is totally based on secondary data. The data was drawn from various sources which have been duly acknowledged. Information on Addiction to Drugs in Low Back Pain Patients and various issues related to an anthropo-medical feature like addiction to drugs was obtained by consulting the websites concerned. The reports of the various Government agencies, NGO's and private agencies were also referred for obtaining the necessary data.

## RESULT

Although pain is a major complaint among patients visiting the hospital, it is often undertreated. Therefore, higher number of visits to health services are reported for patients who experience persistent pain and long-term disability. Addiction is considered a chronic disease rather than a condition. In the several developed or developing country, the prevalence of illicit opioid use among people aged above 50 with back pain has increased drastically. Illicit drug usage to relieve pain has become more common in the society with chronic health conditions than in a general population who consume it for various other reasons

(Shmagel *et al.*, 2016). The opioid prescribing rate has increased worldwide. The overuse of opioids for chronic pain leads to dependence and tolerance.

It is the undertreatment of the underlying conditions which tend the patient to go for oral medications after back surgery (Tetsunaga *et al.*, 2018). The prevalence of chronic pain is found to be higher among women than in men belonging to the same age group and there is also a difference in the prevalence among women in rural and urban areas (Nakua *et al.*, 2015). Chronic pain usually affects the quality of life (QoL) whereas pain-coping ability determines it more (Jeong, & Lee, 2015). The unemployment rate among these patients is high (Geurts *et al.*, 2018). Low back pain and knee pain also affect sleep (Murase *et al.*, 2015; Jaiswal, 2016).

In this review study, most of them were found to be having a low back pain followed by shoulder pain, hip pain, and knee pain. Although there was no significant difference seen for the sex.

## DISCUSSION

Narcotics are extensively used in pain clinics because of their high efficiency to relieve pain besides inducing euphoria. When a person continuously takes analgesics, the drug dependence, and tolerance level increase. These people will start taking drugs regularly and become completely dependent on them to reduce their pain sensitivity, as a result, the tolerance level also becomes high consequently and they tend to elevate the dose. When the body gets used to the medication, it will demand an increased amount of dose to get the same effect as before and if the drug isn't available on time or is insufficient, the person may experience withdrawal symptoms owing to dependence on the drug. Surgery is considered as an option to relieve low back pain but due to the poor outcomes of surgical intervention, people tend to go for drugs even though they know it leads to addiction and dependence.

Nakua *et al.*, (2015) showed that women, when aging, face different problems like psychological stress, rise in blood pressure, chronic diseases, etc. They are proven to face non-communicable diseases earlier in life than men. These can be the reasons for the gender gap in the prevalence of back pain. Rhee *et al.* (2007) found that lower back pain patients who use narcotic drugs often have comorbid illnesses and they frequently visit health centers and consume more health services than people who do not use narcotic medications for lower back pain. Jeong *et al.* (2020) support the fact that functional limitation due to chronic pain reduces the quality of life, however, if the person has the high pain-coping ability and social support the reduced QoL gradually rises.

For patients who are suffering from higher degrees of disabilities, the rate of absenteeism in the workplace tends to be higher so is the unemployment rate too. The direct healthcare cost spent on therapy and indirect economic cost of the society assumes to be very high. Here, people who were considered as the assets of society during their productive life period turn to be the liabilities, due to the onset of pain and its future consequences. Back pain along with knee pain contribute to short sleep duration and poor sleep quality. It gives people more discomfort and prevents them from getting a sound sleep and also sleep deprivation causes obesity due to hormonal imbalance (Taheri, *et al.*, 2004). Persons with new chronic pain syndromes may, however, be at somewhat higher risk than usual for the development of substance use disorders. For such patients, regardless of previous history of drug addiction or low back pain disorders, focused efforts at drug addiction screening and preventive education may be warranted. Larger studies of medical and general populations of individuals with chronic back pain are needed to confirm the results of this study.

## CONCLUSION

This study was able to identify people with low back pain become addicted to drugs to get rid of the pain even though they are aware of the harmful side effects. These drugs have localized effects during the initiation phase but in the far future, the whole body and behavior of the person will get influenced. The impacts of narcotic analgesics will remain lifelong until a rehabilitative action to uplift the person is installed.

**Conflicts of interest:** The authors declare no conflicts of interest.

## References

- Andersson G. B. (1999). Epidemiological Features of Chronic Low-Back Pain. *Lancet (London, England)*, 354(9178), 581–585.
- Crowley, N. A., Kash, T. L. (2015). Kappa Opioid Receptor Signalling In The Brain: Circuitry and Implications For Treatment. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*. 62, 51–60.
- Chen, Y. C., Lee, C. Y., Chen, S. J. (2019). Narcotic Addiction in Failed Back Surgery Syndrome. *Cell Transplantation*. 28(3), 239–247.
- Dureja, G. P., Iyer, R. N., Das, G., Ahdal, J., Narang, P. (2017). Evidence and Consensus Recommendations for The Pharmacological Management of Pain in India. *Journal of Pain Research*. 10: 709–736.
- Geurts, J. W., Willems, P. C., Kallewaard, J. W., Van Kleef, M., & Dirksen, C. (2018). The Impact of Chronic Discogenic Low Back Pain: Costs and Patients' Burden. *Pain Research & Management*. 46: 96-98.
- Jaiswal, A. (2007). Health Status of Textile Industrial Workers of Uttar Pradesh, India. *EAA Summer E-Book. European Anthropology Association, Prague, Czech Republic*. 1:217-233.

- Jaiswal, A. (2012). -Medical Profile of Textile Workers, Alfa Publications, New Delhi, 11-21.
- Jaiswal, A. (2014). Study the Relationship between fatigue, sleepiness and Accidents among workers of Indian Weaving Industries” *International Journal of scientific Footprints*. 2 (2): 18-30.
- Jaiswal, A. (2016). Occupational Health Risk and Blood Pressure among Salt Workers of Marakkanam District of Tamil Nadu” *International Journal of Research in Sociology and Anthropology (IJRSA)*. 2: 1, 36-47.
- Jeong, H., & Lee, Y. (2020). Sex-Based Differences in The Quality of Life of Elderly Koreans With Chronic Musculoskeletal Pain. *International Journal of Environmental Research and Public Health*. 17(3), 743.
- Manubay, J. M., Muchow, C., & Sullivan, M. A. (2011). Prescription Drug Abuse: Epidemiology, Regulatory Issues, *Chronic Pain Management with Narcotic Analgesics. Primary Care*. 38(1), 71– 90.
- Meucci, R. D., Fassa, A. G., Faria, N. M. (2015). Prevalence of Chronic Low Back Pain: Systematic Review. *Revista De Saude Publica*. 49, 1.
- Murase, K., Tabara, Y., Ito, H., Kobayashi, M., Takahashi, Y., Setoh, K., Kawaguchi, T., Muro, S., Kadotani, H., Kosugi, S., Sekine, A., Yamada, R., Nakayama, T., Mishima, M., Matsuda, S., Matsuda, F., Chin, K. (2015). Knee Pain and Low Back Pain Additively Disturb Sleep in The General Population: A Cross-Sectional Analysis of The Nagahama Study. *Plos One*; 10(10), E0140058.
- Nakua, E. K., Otupiri, E., Dzomeku, V. M., Owusu-Dabo, E., Agyei-Baffour, P., Yawson, A. E., Folson, G., & Hewlett, S. (2015). Gender Disparities of Chronic Musculoskeletal Disorder Burden in The Elderly Ghanaian Population: Study on Global Ageing and Adult Health (SAGE WAVE 1). *BMC Musculoskeletal Disorders*. 16, 204.
- Rhee, Y., Taitel, M. S., Walker, D. R., & Lau, D. T. (2007). Narcotic Drug Use Among Patients with Lower Back Pain In Employer Health Plans: A Retrospective Analysis Of Risk Factors And Health Care Services. *Clinical Therapeutics*. 2007; 29 Suppl, 2603–2612.
- Shmagel, A., Krebs, E., Ensrud, K., Foley, R. (2016). Illicit Substance Use in US Adults with Chronic Low Back Pain. *Spine*. 41(17), 1372–1377.
- Taheri, S., Lin, L., Austin, D., Young, T., Mignot, E. (2004). Short Sleep Duration Is Associated with Reduced Leptin, Elevated Ghrelin, And Increased Body Mass Index. *Plos Medicine*. 1(3), 62.
- Tetsunaga, T., Tetsunaga, T., Nishida, K., Kanzaki, H., Misawa, H., Takigawa, T., Shiozaki, Y., & Ozaki, T. (2018). Drug Dependence in Patients with Chronic Pain: A Retrospective Study. *Medicine*. 97(40).

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