

**Misuse of sedative hypnotics: A call to awareness**

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**Dear Madam,** Sedative Hypnotics, including Benzodiazepines and Non-Benzodiazepine drugs produce Sedative Hypnotic, anxiolytic, anti-convulsive, and anti-depressant effects. BZDs work by increasing the concentration of GABA in the brain, producing a calming effect. This is why they have a wide-spectrum use, primarily for insomnia and anxiety.<sup>1</sup> Benzodiazepines are known to act as mechanisms that affect bone metabolism and increase bone resorption, thus leading to osteoporotic fractures.<sup>2</sup>

A recent meta-analysis of 20 observational studies in over six million individuals showed that Benzodiazepine Receptor Agonists (BRAs) including Benzodiazepines and non-benzodiazepine BRAs, such as Zolpidem, are likely to cause a statistically significant increase in osteoporotic fractures with an odds ratio ranging from 1.2 to 1.4. A study conducted worldwide suggests a rise in the use of sedative hypnotics in the past few years, particularly after the COVID-19 pandemic.<sup>3</sup> Furthermore, a study conducted in Taiwan, revealed that the use of benzodiazepines in adults > 65 years increases the risk of developing hip fractures, even at a moderate dosage and short-term exposures.<sup>4</sup>

In South-Asian countries, particularly Pakistan, recommending and dispensing medication without prescription is a significant issue. A previous study shows that self-medication is quite a common practice in Pakistan for a lot of common illnesses. The factors contributing to the rampant self-medication in Pakistan

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**Submission complete:** 20-06-2024 **First Revision received:** 15-08-2024

**Acceptance:** 23-10-2024 **Last Revision received:** 22-10-2024

**AUTHORS' CONTRIBUTIONS:**

**GA:** Concept, drafting and data collection.

**AZ:** Revision, editing and data collection.

include easy access to medicines, poor availability of healthcare facilities, and lack of enforcement of regulatory policies.<sup>5</sup>

Benzodiazepines are widely prescribed in many countries including Pakistan, and a general increase in trend is observed, but differences in drug type and exposure remain. A comprehensive needs assessment as to the quantity of the drug and the duration of its administration should be conducted before its prescription to an older adult. There should be a thorough evaluation of the drug response and it must be checked for drowsiness or residual fatigue, which can lead to falls and fractures. Further research is warranted to estimate the adverse effects of sedative hypnotics on various age groups and sexes with variable dose administration.

**DOI:** <https://doi.org/10.47391/JPMA.21110>

**Disclaimer:** None to declare.

**Conflict of Interest:** None to declare.

**Funding disclosure:** None to declare.

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