

## Assessment of Daily Noise Exposure and Prevalence of Hearing Loss in the Shopkeepers Working Near National Highway No. 6: A Case Study of Jalgaon City

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### ABSTRACT

Noise monitoring was conducted to evaluate the average noise levels in the shops in the vicinity of National Highway no. 6 (NH-6) passing through the Jalgaon urban center. The shopkeepers working near the highway have a high risk of hearing loss due to road traffic noise exposure. In the current study, estimates are made on typical sound levels prevailing in the workplace environment, and measures are obtained on hearing status of the shopkeepers. The study focused on the shopkeepers working for 10 to 12 hours daily near the highway. Data on self-reported health status was collected by questionnaire and audiometry used to determine hearing threshold at high, medium, and low frequencies. Among the shopkeepers, 87% reported hearing loss and defined at least some difficulty with hearing in one or both ears. The prevalence of audiometric hearing impairment defined as a threshold average greater than 25 dB (A) hearing level was 82% for binaural low-frequency average (250, 500, 1000, and 1500 Hz), 65.5% for binaural mid-frequency average (1000, 1500, 2000, and 3000 Hz), and 52% for binaural high-frequency average (3000, 4000, 6000, and 8000 Hz) in the shopkeepers.

**Key Words:** audiometric measurements, hearing impairment, National highway, traffic noise exposure.

### 1. INTRODUCTION

Noise emitted from every source in the environment is an undesirable by-product of our modern way of life. Noise pollution emanates from both outdoor and indoor

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