

Association between Mobile Phone Usage and Hearing Sensitivity among Third Year Students; (of) University of Kelaniya, Sri Lanka

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With advancement of Global System for mobile (GSM) communication, mobile phones (MP) have become an essential communication tool. Mobile networks operate in frequencies which fall in the microwave range of electromagnetic spectrum. The close proximity of a mobile phone antenna, radio frequency electromagnetic radiation can penetrate into organic tissues causing health hazards. In Sri Lanka, the number of MP users is over 20.3 million and the majority of users are young adults. Up to date, no study has been conducted regarding MP usage and its effects on hearing in Sri Lanka. The objective was to determine the association between MP usage and hearing sensitivity among third year students, University of Kelaniya, Sri Lanka. A descriptive cross sectional study was conducted among 223 students who filled a self-administered questionnaire regarding MP usage and hearing related symptoms. All participants underwent otoscopic examination, and a Distortion Product Otoacoustic Emission (DPOAE) screening at 3 kHz, 4 kHz and 5 kHz frequencies. The mean MP usage hour per day was 1.41 hours (SD 1.22) and the mean MP usage duration was 5.57 years (SD 1.72). The majority of students preferred the right ear for MP conversation, while highest prevalence of hearing loss was observed at 4 kHz (5.6%) and 5 kHz (6.7%) in the right ear. There was no significant difference in hearing loss between the ears of the two sides. A significant association between hearing loss and prolonged usage (more than 5.57years) of MP or excessive usage of MP (more than 1.41 hours per day) could not be found. Symptoms such as warmth, tinnitus, need of repetition and muffled sensation were associated with excess usage of MP.