14th ICBEN 2023 18 - 22 JUNE BELGRADE

14th ICBEN Congress on Noise as a Public Health Problem

How are children's hearing, cognition and behavior affected by the preschool sound environment? Results from ongoing study.

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ABSTRACT

Over 90% of 4-5-year-old children in Sweden spend most of their awake time at preschool. This is a phase in their life when language, cognition, emotional awareness, social behavior, and coping are learned and manifested. The high noise levels found at preschools may negatively affect these functions, and even impair hearing function. Dysfunction of these developments or impaired hearing function may have long term implications for learning and health. With the aim of identifying effects of noise on cognition, hearing and behavior among preschool children, a cross-sectional study is conducted in 30 preschools in Gothenburg. The preschools are randomly selected from different building years and socio-economic areas. The effects on children's hearing by the acoustic environment are measured by a repeated measure design, during the course of a day and over a week. Noise levels are measured using sound level meters and personal dosimeters. Hearing function are measured using Distortion Product Otoacoustic Emissions (DPOAE). To find out how children perceive and cope with noise, the questionnaire; Inventory of Noise and Children's Health (INCH) is used. Children's emotional and behavioral problems are assessed using the Strength and Difficulties Questionnaire (SDQ). Data from the ongoing study will be presented at the conference.

Keywords (3-6): Noise, Hearing, Children, DPOAE, INCH, SDQ