

## Long-Term Otitis Media with Effusion and Related Hearing Loss and Its Impact on Developmental Outcomes

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**Abstract :** Introduction: This study aims to estimate the prevalence of long-term otitis media with effusion (OME) and hearing loss in a prospective longitudinal cohort study and to study the relationship between the condition and educational and psychosocial outcomes. Methods: Analysis of data from the Avon Longitudinal Study of Parents and Children (ALSPAC) will be undertaken. ALSPAC is a longitudinal birth cohort study carried out in the UK, which has collected detailed measures of hearing on ~7000 children from the age of seven. A descriptive analysis of the data will be undertaken to estimate the prevalence of OME and hearing loss (defined as having average hearing levels > 20dB and type B tympanogram) at 7, 9, 11, and 15 years as well as that of long-term OME and hearing loss. Logistic and linear regression analyses will be conducted to examine associations between long-term OME and hearing loss and educational outcomes (grades obtained from standardised national attainment tests) and psychosocial outcomes such as anxiety, social fears, and depression at ages 10-11 and 15-16 years. Results: Results will be presented in terms of the prevalence of OME and hearing loss in the population at each age. The prevalence of long-term OME and hearing loss, defined as having OME and hearing loss at two or more time points, will also be reported. Furthermore, any associations between long-term OME and hearing loss and the educational and psychosocial outcomes will be presented. Analyses will take into account demographic factors such as sex and social deprivation and relevant confounders, including socioeconomic status, ethnicity, and IQ. Discussion: Findings from this study will provide new epidemiological information on the prevalence of long-term OME and hearing loss. The research will provide new knowledge on the impact of OME for the small group of children who do not grow out of condition by age 7 but continue to have hearing loss and need clinical care through later childhood. The study could have clinical implications and may influence service delivery for this group of children.

**Keywords :** educational attainment, hearing loss, otitis media with effusion, psychosocial development

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