Background Children and young people with hearing loss (HL) may be at high risk of peer victimisation and negative mental health, which have lasting consequences for health, relationships, and employment. We estimated the prevalence of peer victimisation and negative mental health in young people with childhood HL and examined the association of HL with depression.

Methods We included 7241 singleton 14 year-olds (n=3670, 49.2% girls) with complete data from the UK Millennium Cohort Study, a prospective cohort born between 2000–2002. Outcomes were self-reported dichotomous measures at age 14 of: depressive symptoms (low, <8, or high, ≥8, score on the Short Mood and Feelings Questionnaire), self-harm (yes/no), and peer victimisation (yes/no either in person or online). HL was defined as parent- or self-reported HL at any interview (ages 9 months, and 3, 5, 7, 11, or 14 years). Sources of confounding included: sex, ethnicity, neonatal intensive care/special care baby unit (NICU) admission, maternal age, limiting longstanding illness (LLI), and highest parental educational qualification. We calculated prevalence of HL and outcomes, followed by multivariable logistic regression to estimate the odds of high depressive symptoms by childhood HL status, adjusting for confounding, survey design, and age 14 attrition (Stata: Release 15; StataCorp LP).

Results HL was reported in 1395 young people (20.7%, 95% CI: 19.4–22.1%) and boys, those of white ethnic background, or with LLI were over-represented in those with HL (8.6%, 3.5%, and 8.9% difference to those without HL, respectively).

At age 14 years, 31.5% (n=433, 95% CI: 28.5–34.7%) of young people with HL reported a high level of depressive symptoms, compared to 27.6% (n=1573, 26.1–29.1%) without HL. Similar trends were seen for self-harm and peer victimisation, with 17.9% (15.4–20.8%) and 12.9% (10.8–15.3%) young people with HL reporting these, versus 14.6% (13.4–15.9%) and 10.1% (9.2–11.1%) without HL, respectively. The adjusted odds of high depressive symptoms in young people with HL were 1.28 (1.09–1.50) times higher than in those without HL.

Conclusion Preliminary findings suggest that young people with HL are at increased risk of depression. Strengths are the nationally representative and prospective nature of the study. Limitations are the lack of objective HL measures. Next steps are to fit causal models to explore the relationship of childhood HL with depression, peer victimisation, and self-harm further. Should these analyses suggest a causal association, it will be important to identify strategies to protect the mental health of young people with HL.

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