Is Early Intervention Effective in Improving Spoken Language Outcomes of Children With Congenital Hearing Loss?

1. Select the correct statement:
   a) By the time they enter school, approximately three in 1,000 children are fitted with hearing aids or receive cochlear implants for a permanent hearing loss
   b) By the time they enter school, approximately ten in 1,000 children are fitted with hearing aids or receive cochlear implants for a permanent hearing loss
   c) By the time they enter school, approximately five in 1,000 children are fitted with hearing aids or receive cochlear implants for a permanent hearing loss
   d) By the time they enter school, approximately thirty three in 1,000 children are fitted with hearing aids or receive cochlear implants for a permanent hearing loss

2. Congenital hearing loss has major adverse developmental and health impacts on children’s lives — including
   a) speech and language
   b) literacy
   c) mental health
   d) social and cognitive functioning
   e) educational achievement
   f) employment, and socioeconomic opportunity
   g) All of the above

3. Lifetime costs of all care related to deafness and lost productivity were estimated to be very high per birth cohort of children
   a) True
   b) False

4. Previous studies have linked early intervention to better
   a) Motor development
   b) preschool language
   c) Speech abilities
   d) None of the above

5. By implementing universal newborn hearing screening (UNHS) programs to detect deafness soon after birth, treatment can begin later in life with the ultimate goal of improving long-term outcomes.
   a) True
   b) False

6. Despite widespread implementation of UNHS programs, high-quality evidence on the efficacy, at a population level, was lacking. The following statement(s) is true:
   a) These mixed results leave the fundamental question of whether early intervention is effective in improving language outcomes unanswered.
b) The Wessex study of English children who were offered UNHS in 1993–1996 revealed a benefit for receptive language at 7–8 years old, but no clear benefits for either expressive language or speech production.


d) All of the above.

7. To address the evidence gap, the researchers took advantage of a unique research environment in Australia to conduct the

a) Wessex study
b) Leiden study
c) Longitudinal Outcomes of Children with Hearing Impairment (LOCHI) study
d) All of the above

8. The LOCHI study was designed to investigate the influence of

a) UNHS, together with a range of demographic and intervention-related factors, on outcomes of children with hearing loss
b) age of intervention, together with UNHS factors, on outcomes of children with hearing loss

c) age of intervention, together with a range of demographic and intervention-related factors, on expectations of children with hearing loss

d) age of intervention, together with a range of demographic and intervention-related factors, on outcomes of children with hearing loss

9. Findings at 3 years of age indicated

a) children scored below the normative populations for global language development
b) children scored above the normative populations for global language development
c) children scored similar to the normative populations for global language development
d) children scored below the normative populations for motor development

10. It was found that the following significantly influenced outcomes

a) severity of hearing loss
b) gender
c) presence of additional disabilities
d) maternal education, and
e) age at cochlear implantation
f) All of the above

11. There was a weak, nonsignificant effect of age of amplification

a) True
b) False

12. There was weak evidence that earlier age at intervention was associated with better outcomes at 5 years of age.
13. The following factors were linked to higher language scores
   a) higher maternal education
   b) use of an oral mode of communication
   c) absence of additional disabilities
   d) use of signing mode of communication
   e) A, B & C
   f) A, B & D

14. Further, it was found that early performance measures obtained when the children were younger than 2 years of age, either in the form of parent reports on the basis of the Parent’s Evaluation of Aural/Oral Performance of Children (PEACH) scale or formal tests (Preschool Language Scale) directly administered to the children were
   a) significant predictors of language development at 3 and 5 years
   b) insignificant predictors of language development at 3 and 5 years
   c) significant predictors of language development at 3 and 6 years
   d) significant predictors of language development at 2 and 6 years

15. Early monitoring of performance assists with identifying children who may be at risk of language development, so that changes in intervention strategies (e.g., cochlear implantation and changes in communication mode or intensity of early intervention) may be implemented before delays set in.
   a) True
   b) False

16. Despite the benefits of early intervention, the study found that many children exhibited deficits in
   a) articulation
   b) phonological awareness
   c) language
   d) Speech

17. Phonological awareness deficits are likely to have a negative effect on children’s development of
   a) Academic skills
   b) reading skills
   c) Early literacy skills
   d) All of the above

18. In summary, the LOCHI study provides evidence on
   a) the effectiveness of early intervention for improving outcomes of children with hearing loss, at a population level
   b) the importance of monitoring early outcomes after intervention
   c) strategies for targeting the development of phonological awareness skills which may be necessary to support children’s development of literacy skills in formal education
d) A & C  
e) All of the above

19. Further research should investigate  
a) a range of speech and language outcomes and the factors influencing outcomes  
b) a range of psychosocial and quality of life outcomes and the factors influencing outcomes  
c) a range of language, literacy, and psychosocial and quality of life outcomes and the factors influencing outcomes  
d) a range of reading and writing outcomes and the factors influencing outcomes

20. The research method used in this study was  
a) Survey method  
b) Longitudinal  
c) Retrospective  
d) None of the above