Parental Response to Benefits of Early Detection in Hearing Impaired Children in Pakistan

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ABSTRACT:

Background: Hearing impairment is amongst one of the four major disabilities recognized by WHO. It is a generic term including both deaf and hard of hearing which refers to persons with any type or degree of hearing loss that causes difficulty working in a traditional way. Being invisible disability, goes undetected and may deter early intervention and cause delay in speech and language development.

Objectives: The purpose of this study was to ascertain the parental response regarding the benefits of early detection of children with severe to profound degree of hearing impairment.

Methodology: A cross sectional study was conducted and 100 patients were recruited through convenient sampling. The study was conducted between January to July 2012 in various special schools of Islamabad, Rawalpindi and Lahore. The data was conducted through a structured questionnaire and analyzed through SPSS version 10.0 software programme for statistical analysis.

Results: According to analyzed results 68% of parents responded in the affirmative and 32% did not support the benefits of early education.

Conclusion: It is concluded that parents feel early detection of severe to profound hearing impairment is beneficial for children. Further work is required to explore the relationship between early detection and the age at which remedial treatment was sought by parents.

Keyword: Hearing Impairment (HI), Early Detection, Severe to Profound Degree of HI, Decibel Hearing Loss, Hertz, Quality of Life (QOL), World Health Organization(WHO), (JRCRS 2013; 1(1): 17-20)

INTRODUCTION:

It is an established fact that hearing sense is the corner stone on which human communication system is built[1]. Hearing impairment is the most common developmental disorder identifiable at birth. Hearing plays a vital role in the development of verbal communication as a person who lacks in this sensational sense is at disadvantage[2]. The natural mechanism of acquiring information from environment is through intact hearing mechanism which is compromised in

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severe to profound degree of hearing impairment. HI is a broad term including both deaf and hard of hearing which refers to person with any type or degree of hearing loss that causes difficulty working in a conventional way[2].

There are three basic types of hearing loss: conductive hearing loss, sensorineural hearing loss and mixed hearing loss. HI varies from mild, moderate, severe and profound on account of being measured in decibel. It can be unilateral or bilateral meaning involving one or both ears. Another categorization of hearing loss can be pre lingual or post lingual. HI is at variance in severity from individual to individual[2-3]. Around one in 1000 infants are born with HI. The prognosis for children whose hearing impairment is recognized within the first year of life is better than that of children whose impairment is discovered after the first year[2]. As per W.H.O estimates, 278 million people worldwide have a disabling HI. Being an invisible disability hearing loss may not be detected without scheduled age-appropriate screening as an infant with hearing loss may still react to a few environmental sounds, making parents presume that hearing falls in standard parameters thereby precluding benefit of early intervention[4].

MATERIALS AND METHODS:

The research work has been conducted in the Special Schools for Hearing Impaired of the Federal Capital, Islamabad, the adjacent city Rawalpindi and the provincial capital Lahore. The sample size was 100 children with equal number of male and female participants.

The inclusion criteria was children with severe/profound hearing loss, only hearing impaired without any other disability of both gender, while the exclusion criteria was the children with other congenital and acquired disorders and children with mild/moderate degree of hearing loss.

A questionnaire of 10 questions was composed and every question consisted of three to five sub-divisions by conducting a study on late detection in children with severe/profound hearing loss from birth till two years. In the study, 100 questionnaires were filled from Lahore, Rawalpindi and Islamabad. The researcher personally collected the information from available parents of HI children by visiting special schools. All the data of 100 parents were analyzed by SPSS version 10.0 to draw the results.

RESULTS:

A retrospective cross-sectional study was used for the evaluation of late detection of severe to profound degree of hearing loss at the special schools, in Rawalpindi/Islamabad and Lahore, Pakistan. The purpose of the study was to determine the response of parents as to the benefits of early detection along with the extent of HI.

Parent's response was tabulated as positive and the results in the graph above signified the benefits of early detection for their children. Children diagnosed with only severe/profound hearing impairment and no other disability were selected for the study and assessed with questionnaire filled by parents only. All parents were given questionnaire from a predesigned proforma to evaluate responses. A sample of one hundred children attending special schools with only HI disability was considered. The parents of all the one hundred children in the sample responded so no subjects dropped out. Sixty-eight percent of the sample exhibited positively whereas thirty two percent did not agree.

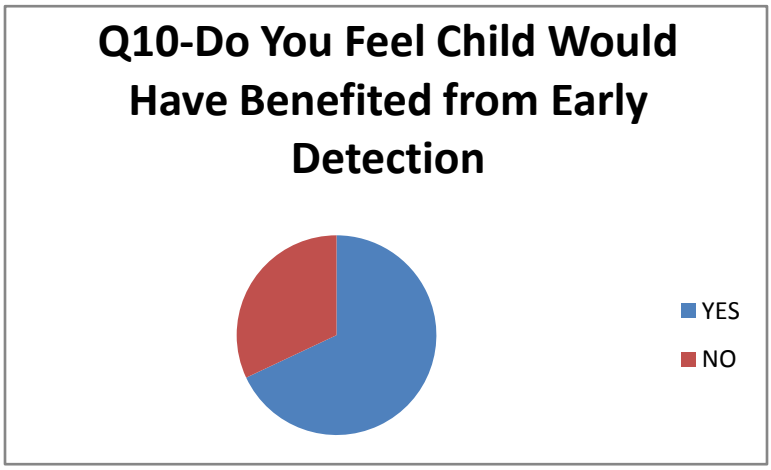

Figure1: Parent's response as to whether the child would have benefited from early detection

DISCUSSION:

The results of retrospective cross-sectional study of children with severe to profound hearing loss indicate that according to the parents and care givers early detection is highly beneficial to the child (68 %) which suggests they are aware of the importance of early detection once they realize the benefits it can bring to the Quality Of Life of their child 5-6. As evident from most of the studies carried out in the developed countries, they have been taking hearing impairment at large without giving due importance to the severity or degree of hearing loss. While justifying the model of the speech processing chain by Duggirala and Dodd, 1991, said that the phonological systems of children with impaired hearing vary according to the degree and type of loss which places significant emphasis on the fact that severity of the hearing loss has a direct relationship to the impact on the child's speech and language, eventually on the emotional, social, cognitive and family life7. Timely detection of hearing loss, together with suitable intervention, is vital for speech, language, and cognitive development in hearing-impaired children [8].

The Benefits of early detection leads to positive results as it reduces the gap between the chronological and the functional age of the child9. Research is needed to understand the impact of social domains on how children with HI interact and learn in complex settings, such findings could lead to interventions that may enhance QOL thus making it more successful for these children in the view of parents [10].

CONCLUSION:

The current study has established that parents feel early detection of severe to profound hearing impairment is beneficial for children. The early detection of childhood hearing impairment is being associated with higher scores for language later on. Further work is required to explore the relationship between early detection and at what age remedial treatment was reported by the parents. Unfortunately, HI is not always detected immediately, and parents/care givers do not always seek treatment promptly. Research shows that early management of hearing impairment provides the best-possible outcome in terms of cognitive, social, emotional and physical functioning for the HI child. Research has established that the parental response is that early detection is beneficial for children as there is late detection on account of which there is dire need of early intervention being imperative for HI children.

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