

Childhood Deafness: How Big a Problem In Malawi?

Douglas Lungu

INTRODUCTION

Few studies have been made of the prevalence of hearing loss in African populations, certainly in comparison to the considerable amount known about the incidence, prevalence and antecedents of visual impairment and blindness (1). Yet hearing loss at any age leads to considerable social disadvantage and isolation, and, among children, severe educational handicap. This is all the more serious in societies where infectious diseases with possible sequelae in deafness are common, yet which lack the resources for screening and special educational services. This short paper reviews what is known about the prevalence of childhood deafness in societies similar to Malawi's and extrapolates figures to derive estimates for the size of the problem in this country.

ESTIMATE OF PREVALENCE IN MALAWI

WHO classifies hearing impairment into mild, moderate, severe and profound, unilateral or bilateral. In the latest estimate (1985) 18 million people worldwide have moderate bilateral impairment, and a further 7 million severe or profound. Within these 3 categories (moderate, severe, profound), 11% (2.75 million) are children aged 3-14 years (2). A further 10 million children are estimated to have some degree of hearing impairment; at least two thirds of these (6.6 million) are in developing countries (3).

A recent (1990) study in The Gambia (1) found a prevalence of severe and profound hearing loss of 2.7/1000 among rural children age 2-10 years. Eighty percent were profoundly impaired, and the remaining 20% severely so; all suffered a consequent gross speech impairment and were in need of special education. A similar study in Swaziland showed that 3.3% of children aged between 5 and 14 years were mildly impaired and a further 1% moderately or severely so (4).

Using an estimated population (1993) of 9.3 million for Malawi, with 25% of the population between 5 and 14 years, the Swazi figures suggest there are approximately 72,900 children with mild hearing loss in Malawi, and a further 23,000 with moderate, severe or profound loss. Since there are only 2 schools for deaf children, with an annual combined intake of 225, the majority of children must go unhelped. At present, Malawi has no comprehensive screening or referral system for handicapping conditions in childhood.

CAUSES OF DEAFNESS

WHO statistics list eleven causes of childhood deafness in approximate order of prevalence (Table I). Ascertaining

causes before the age of speech acquisition is difficult, not least in Malawi because parents presenting at the schools for the deaf suppose too many details may prejudice chances of admission (personal communication). For those becoming deaf after acquiring speech, meningitis, cerebral malaria, mumps and chronic otitis media are listed as principle causes. In general, it is these children, who are so profoundly deaf that it is obvious both to parents and teachers, who find their way to the special schools. The far greater number with moderate hearing loss may simply be labelled 'dull' or 'slow'; they are educationally severely handicapped as they try to make their way through the large classes of the ordinary primary school.

Table 1. Causes of Childhood Deafness

1. FOREIGN BODIES
2. CHRONIC SUPPURATIVE OTITIS MEDIA
3. CONGENITAL 'UNKNOWN' INCLUDING INHERITED CAUSES
4. MEASLES
5. MENINGITIS
6. CONVULSIONS
7. PRENATAL CAUSES: JAUNDICE, BIRTH TRAUMA, PREMATURITY, ANOXIA
8. CONGENITAL RUBELLA SYNDROME
9. MUMPS
10. OTOTOXIC DRUGS
11. CASSAVA DIET

WHICH PREVALENCE SURVEY?

Further information can only be acquired by means of population based surveys. Given available resources, a simple screening tool which can be used by relatively untrained staff should be used. Because 'deafness' is only one impairment among other possibilities (sight, cerebral palsy, mental retardation etc) and may be associated with them, a multiple screening method seems desirable.

One such 'tool' has been developed and fairly extensively validated. Table 2 lists the 'Ten Questions' which have been developed to provide a rapid and cross-culturally acceptable method for estimating the age-specific prevalence of at least moderate handicap. Tested during a survey in Bangladesh (6), it was shown to have a sensitivity of 100% and a specificity of 95%, and these findings were confirmed in a subsequent study in Southern India (7). An opportunity to assess the usefulness of these questions will present itself in two demographic and health surveys being planned by the Department of Community Health, College of Medicine of Malawi in 1993.

Clearly the major importance in identifying mild to moderately deaf children at an early age is not primarily to ascertain the precise cause, nor to provide special facilities in an economy already overwhelmed by far more pressing health problems, but to signal to teachers and

Department of Community Health, College of Medicine
P O Box 431 Mangochi, Malawi

Correspondence to:
Douglas Lungu

parents the simple and easy techniques which will ensure that children with hearing loss are not educationally and socially handicapped as a result.

Table 2. Ten Questions for estimating handicap (6).

1. Compared with other children, did (child's name) have any serious delay in sitting, standing or walking?
2. Compared with other children, does (child's name) have difficulty seeing, either in the daytime or at night?
3. Does (child's name) appear to have difficulty hearing?
4. When you tell (child's name) to do something, does he /she seem to understand what you are saying?
5. Does (child's name) have difficulty in walking or moving his / her arms or does he / she have weakness and / or stiffness in the arms or legs?
6. Does (child's name) sometimes have fits, become rigid, or lose consciousness?
7. Does (child's name) learn to do things like other children his / her age?
8. Does (child's name) speak at all (can he / she make himself / herself understood in words: can he / she say any recognisable words)?
- 9.(a) For 2 year old children ask: Can (child's name) name at least one object (for example: an animal, a toy, a cup, a spoon)?
- 9.(b) For 3-5 year old children ask: Is (child's name) speech in any way different from normal (not clear enough to be understood by people other than his / her immediate family)?

10. Compared with other children his / her age, does (child's name) appear in any way mentally backward, dull, or slow?

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