A REVIEW ARTICLE

Handicapped Children in Developing Countries

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Handicapped children have been the concern not only of their parents but of the total community for centuries. Some primitive societies would not accept a child unable to withstand the hazards of nature and eliminated him early in life.[1] During the Middle Ages the situation improved, handicapped individuals, dwarfs for example, were treated humanely, and many of them made lasting contributions to drama, art and literature.

The care and treatment of and society's attitude toward children with handicaps have been completely transformed in recent years. The handicapped child has come to be accepted as no different from other children because modern medicine has made possible either improvement or correction of his handicap. Emphasis has shifted from the handicap to the child and public understanding of his problems is increasing. Presently the objective is to enable the child to progress in as normal a manner as possible physically, mentally and socially.

The «handicapped child» is defined as one with a physical, mental or emotional problem which interferes with normal growth and development. In the past when most of the attention was focused on the child with an orthopedic defect, the term «crippled child» was more common. The term «crippled» is now restricted mostly to the group which has a physical deformity. Today orthopedic handicaps are still recognized as important, but many other conditions such as rheumatic heart disease, congenital heart lesions, cerebral palsy, other types of brain damage, speech defects, ear and eye defects and emotional disturbances are considered equally important.

It is estimated that there are about 215 million handicapped people in the world.[2] It is thought that in most countries at least

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10 per cent and possibly 15 per cent of the population need some special attention because they are disabled.[3] Recent statistical surveys carried out in Asia, Europe and North America show that at least seven to eight per cent of the population of any given community are affected by a permanent and substantial physical disability.[4]

In India, though no complete statistics are available, a minimal estimate reveals that there are over two million blind, over 800,000 deaf and over 40 million crippled.[5] The percentage of physically and mentally handicapped has been estimated to be as high as seven per cent of the total population in Equador[5] and there are reported to be 300,000 severely disabled in Egypt.[6] The number of disabled in Turkey is about 400,000, more than half of whom are males.[5] Three per cent of her school children are in some way handicapped : 10,000 blind, 60,000 deaf and about 100,000 mentally retarded.

In a country with rudimentary maternal and child health services and a high infant mortality rate, many children die young who in other countries would have survived with a disability. If primitive living conditions and imperfect social services reduce the chance of the normal child's surviving the first three or four years of life, then the handicapped child will stand an even greater chance of dying young.

Blindness, no longer a major problem in many western countries, is widespread in lands where trachoma and other infections are still prevalent. According to a recent WHO estimate, about 500 million persons are afflicted with trachoma. In developing countries where virtually the whole population is afflicted with trachoma and seasonal conjunctivitis, more than one per cent of the adults are totally blind, more than four per cent are economically blind (unable to perform any useful work for which sight is essential), more than 10 per cent have serious impairment of vision and a much higher percentage has lesser visual defects.[4] Poliomyelitis is a common cause of crippling in developing countries, and, until recently, was the leading crippling disease. The incidence of poliomyelitis cannot be accurately determined because in nearly half of the cases paralysis does not occur. A sample survey conducted in 1959 in Italy showed that approximately 100,000 limb disabilities out of 338,000 cases were caused by poliomyelitis.[5] Leprosy causes much crippling in Africa. In most developing countries crippling by both lung and bone-joint tuberculosis is predominant.[7] Deafness due to neglected infections of the ear is quite common. Malnutrition

and the deficiency diseases, like rickets, beriberi and kwashiorkor, may cause not only deformity but make it likely that the handicapped child will also have poor general health to contend with. Table 1 gives classifications of handicaps.

TABLE 1
CLASSIFICATIONS OF HANDICAPS

A. Physical.
   I. Sensory.
      a. visual (blind)
      b. acoustic (deaf)
      c. speech (mute)
   II. Functional.
      a. orthopedic (crippled)
      b. cardiac
         1. congenital heart disease
         2. rheumatic heart disease
      c. malnutritional
      d. metabolic
         1. diabetes
         2. phenylketonuria
      e. epileptic
      f. cerebral palsied
B. Mental.
   I. Mental retardation.
   II. Emotional disturbance.

In a developing country the prevention of handicaps should be given high priority. Much of this work would be initially social rather than medical. Better housing, nutrition and general standards of living have to be provided. Specific preventive measures such as large-scale vaccination programs against the diseases which cause disabilities are needed. It is important to remember that the developing countries are seriously deficient in medical and training resources and the job opportunities necessary for rehabilitation.[8] They are generally not oriented toward mass education. Even more significant is the fact that they lack an economic base to generate enough wealth to invest in medical facilities and equipment. They concentrate their limited financial resources on economic development; therefore, programs for health and rehabilitation services receive minimal amounts in a limited national budget.

Early detection of cases is not easy in developing countries. Children with congenital dislocation of the hip or poliomyelitis are usually seen by physicians at a late stage of disability when good results could not be achieved even by the finest orthopedic care. In such countries the child with an obvious illness has a chance of coming under the care of one of the small number of doctors available; however, many disabilities which are congenital, which develop without apparent illness or which arise after an illness cannot be detected without child welfare clinics, visiting health personnel and school medical inspection services.

All efforts should be concentrated on good preventive medical programs in developing countries. A large-scale program would be very helpful in preventing many cases of disability from tuberculosis. For example, after the adaption of milk pasteurization and the campaign to eliminate tuberculosis in cattle, the incidence of tuberculosis of the bone has been lowered in many western countries. The number of blind prematures has decreased following the discovery that high oxygen concentration is a contributing cause. The administration of prophylactic vitamin supplements has reduced the occurrence of rickets as a cause of bone deformity. Since the recent discovery of polio vaccine, cases of poliomyelitis have been reduced considerably in many parts of the world. Many children can be protected from crippling with the early treatment of burns with physiotherapy to prevent crippling joint contractions, orthopedic casting of club feet in the first four weeks of life, early diagnosis and treatment of strabismus, detection of phenylketonuria in the first few weeks of life and genetic counseling.[9] Needless to say, it is far more profitable to anticipate handicaps than to treat them.[10]

Early recognition and treatment of handicaps can be achieved by comprehensive case-finding.[11] The only way to find cases in time to treat them successfully is to have more people looking for them. If there is a shortage of doctors, visiting health personnel and other skilled workers, then case-finding must depend upon an auxiliary medical, nursing and hygiene staff. The school teacher, especially in the villages, not only has a chance to observe children who come to school but also to know the other members of the family. These workers could be taught to screen the children and report the handicapped, but the less skilled and experienced these workers are, the greater the need for expert assessment after screening.

The shortage of expert staff is complicated by transportation difficulties. To solve this problem, permanent centers could be created to combine with a treatment center or a special school. Children who have or are suspected of having a disability could be taken to the center where, according to the type of handicap, they could have further clinical investigation as well as an educational and vocational assessment. Another solution could be mobile medical teams who would tour the country, visiting provincial centers at regular intervals. Both solutions have advantages, but in a country with very limited resources where it is difficult to provide all the necessary equipment at provincial centers, a combination of the two may be the most effective.

How can a country which cannot afford more than four of five years of general education spend money on special schools for the handicapped? It is generally agreed that special classes for the handicapped should be avoided whenever it is possible to fit these children into the regular school program.[6] Special classes for the hard of hearing, the partially sighted, the mentally or orthopedically handicapped could be organized within existing schools, but the blind, deaf and severely handicapped need their own schools.[12]

The rural areas of developing countries accept blind persons more naturally than urban areas. In rural areas the blind can be trained to work the land and become self-supporting. The blind child who lives in a town where industry is developing needs special education. The aim of education while resources are limited should be as practical as possible.

It is estimated that 0.5 to 1.0 per cent of school children have a hearing defect which requires medical supervision, a hearing aid and/or special education. Loss of hearing may develop from such causes as intrauterine infection (i.e. rubella), prematurity, birth injury, anoxia, large doses of streptomycin or chronic middle ear infection. Usually the care of deaf children depends on expensive equipment and skilled personnel. In developing countries the education of deaf children can be started on a small scale and progress as necessary equipment and personnel become available. Children with speech disorders will have to have special training by speech therapists.

Children with physical handicaps may need operations, special appliances or physiotherapy.[13] Physiotherapy can be provided, in the case of shortages of skilled personnel, by training auxiliaries and/or mothers.

Schools for the mentally handicapped should have a second priority in developing countries as long as physical work remains the main basis of employment and literacy is not an essential for daily living.

Conclusion

Under existing conditions, further efforts are needed to reveal the magnitude of the problem of handicapped children in developing countries. Reporting handicaps to local municipalities or district boards should be compulsory. Because handicapped children are not merely the responsibility of individual sufferers, but the concern of society as a whole, they constitute a burden on the socio-economic progress of their countries. Both the government and the public should pay greater attention to this sadly neglected field.

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