

## Prevalence of Disabilities among preschool children in one selected village of Beni- suif Governorate

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**Abstract :** In Egypt, “a disabled person” means a person who need rehabilitation service to meet the basic needs in society because impairment such as movement-related function, sensory function and mental function brings physical, social, economical and psychological disability. More than 1.5 million Egyptians are living with physical and mental disabilities. **Objectives:** The present paper aiming to study the prevalence of disabilities and the most common types of disabilities among preschool children in one selected village of Beni- suif Governorate . In addition to, develop and Implement educational program regarding disabilities among preschool children to the mother. **Results:** The study found that 35.7 % of the preschool children in the selected village have different types of disability. also, revealed a highly significant relation between the mothers knowledge, level of education and types of disability .Moreover, found that a highly significant relation between socioeconomic level and the children health status **Conclusion:** The present study concluded that the family needs to improve their knowledge and attitude regarding disability and rehabilitation to handicap children. **Recommendations:** emphasis on the implementation of educational programe and early detection and intervention, and rehabilitation. Nursing management should assess all children for signs of developmental delays, Support the family at the time of initial diagnosis, Facilitate the child's self-care abilities and Provide child and family teaching.

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### 1. Introduction

In Egypt, “a disabled person” means a person who need rehabilitation service to meet the basic needs in society because impairment such as movement-related function, sensory function and mental function brings physical, social, economical and psychological disability. According to the Central Authority for Public Mobilization and Statistics, there are approximately two million persons with disabilities in Egypt, which represents about 3.5% of the total population. Unfortunately, no comprehensive data on disabilities is currently available (*Arab Republic of Egypt, 2002*)

The World Health Organization (WHO) has defined these concepts Impairment (first stage) as : It is any loss or abnormality of the psychological, physiological or anatomical structure or function. Impairment may be a missing or defective body part. Disability (second stage): It is any restriction or lack (resulting from impairment) of ability to perform an activity in the manner or within the range considered normal for a human being. Handicap (third or final stage): A disability becomes a handicap when it interferes with one's ability to do what is expected at a particular time in one's life. Some handicapping conditions can be congenital and show at time of birth or progress in the first year of life. Others might be acquired during childhood. Thus, causes can be due to,

Familial or genetic many find it hard to access the emotional, medical and financial support that they require. It is estimated that only 2% of disabled people in Egypt access any services at all. In addition, many disabled children are stigmatised and excluded from society, although some progress has been made to encourage integration. Helping children cope with their disability early on can have a huge impact on their lives. The government of Egypt places a high priority on disability, with governmental and non-governmental organizations working together to solve disability issues. However, current services cover only about 10% of the total number of persons with disabilities sectors, prenatal factors and Social reasons (*Arab Republic of Egypt, 2002*).

On the other hand, Avoidable disability is a major socio-economic and public health problem in the developing countries. According to the National Sample Survey Organization (NSSO) Survey-20021, the prevalence of disability in India has been estimated as 1.8%. About 10.63 % of the disabled persons suffered from more than one type of disabilities and 8.4 and 6.1% of the total households in rural and urban India respectively have at least one disabled person. The prevalence of disability has been reported to be higher (1.85%) in rural compared to urban population (1.5%) according to the NSSO Survey. The census 20012 has estimated prevalence rate of disability in

India as 2.2% of the total population (*Arab Republic of Egypt, 2002*).

Handicapped children's action group is a registered charity, working to provide specialist equipment for children with disabilities, learning difficulties and other special needs. The children, from all areas of the UK are unable to obtain this equipment from the NHS and because of the cost it is usually unaffordable by the families. Equipment for children with disabilities, learning difficulties and other special needs. The children, from all areas of the UK are unable to obtain this equipment from the NHS and because of the cost it is usually unaffordable by the families (*World Bank. World Development Indicators, 2001*).

The government of Egypt places a high priority on disability, with governmental and non-governmental organizations working together to solve disability issues. However, current services cover only about 10% of the total number of persons with disabilities. The Ministry of Education provides special education services for children with disabilities. It introduced education services for the visually, hearing and mentally impaired through 165 specialized schools and 204 schools, with at least one or more special classrooms for children with disabilities. (*World Bank. World Development Indicators, 2001*).

Nowadays, Physical handicapping becomes one of the priorities of all governments due to its hazardous effect on physical, mental and social health. The year 1981 was considered the international year of disabled persons. A child is considered to be handicapped if he cannot cope with things other children of his age can do, if he is hindered in achieving of his full physical, mental and social potentialities (*Abdullah et al., 2009*).

Children who are mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multi handicapped, or as having specific learning disabilities, who because of those impairments need special education and related services. (*Social Research Center, American University in Cairo. 2001*).

### **Major causes of impairment and disability in Egypt**

In Egypt, there are two major causes of impairments - economic and social. As a developing country Egypt suffers from widespread poverty. This is associated with unsanitary living conditions, lack of access to safe drinking water, and inadequate means of garbage disposal. All these factors are the cause of communicable diseases leading to various impairments (*Qandil et al., 1994*). The causes of disability are multiple. Disability can occur at birth,

from genetic disorders, but many forms of disability are preventable, and may occur because of lack of preventive health care services (i.e. polio, malnutrition, micronutrient deficiencies) or on account of social situations (armed conflict, war, landmines, poverty). It must not be overlooked that violence is often a cause of childhood disability. (*Anne et al., 2008*).

### **Prevention**

Children with disability are in all societies of the world. More than 80% live in developing countries and have no access to appropriate services (*Anne et al., 2008*). Early intervention can be considered as preventive measures. The levels include health promotion, specific protection, early detection and intervention, disability limitation, and rehabilitation. Nursing management should assess all children for signs of developmental delays, Support the family at the time of initial diagnosis, Facilitate the child's self-care abilities and Provide child and family teaching. (*ICMR Bulletin, 2007 nd Stephen et al., 2012*).

In another hand, Many physical, mental and sensory impairments can be prevented. Even if the impairments have occurred, their undesirable physical, psychological and social consequences can be minimized. A disability prevention programme needs several measures to make it effective, viz. improvements in the educational, economic and social status of the population, introduction of early detection and intervention programmes, improvement to health service delivery particularly primary health care systems that reach all segments of the population expansion of programmes of immunization, modification of lifestyles; control of environmental hazards, conduct of education and information campaigns related to disability prevention and rehabilitation for the public and professionals; and fostering of better informed and strengthened families and communities. Avoidable disability causes economic waste. Developmental programmes that result in better primary health care, nutrition, education and housing increase the likelihood of improved disability prevention and rehabilitation. The provisions of health care and related services for all people are important to eliminate or minimize the disabling consequence of impairment (*ICMR Bulletin, 2007 and Leidy, 2012*

### **Study design:**

The design for this study was (a cross-sectional household survey) used to conduct this study, aiming to study the prevalence of disabilities and the most common types of disabilities among preschool children in one selected village of Beni- suif Governorate (Shraf Basha Village). In addition to, evaluate the impact of an implemented health educational program to improve the knowledge and attitude of mothers

regarding disabilities among preschool children to the mother following criteria:

- Preschool children.
- All family agree to participate in this study

#### **Tool of data collection:**

A questionnaire sheet was designed by the researcher, based on literature review,. Data were collected through using one tools which includes 3 main parts as follows

**Part I: Was** includes questions regarding a sociodemographic characteristics of children and family such as age, income, mother education, housing condition .....etc

**Part II:** Was includes questions regarding medical history of children such as diseases, when and how discovered ,level of education and achievement.

**Part III:** Was includes questions regarding child caregiver data such as level of education ,age, job .....etc.

**Part V:** Was includes mother's knowledge regarding handicap and effect of disability on child's daily life practice

#### **2. Methods of data collection:**

This research was covered in four phases:-

**1-validity & Reliability of tool:-** Tool was developed based on the identified needs and demands of preschool children and their family. Validity by expertise from Pediatric nursing & Pediatric medicine professor , Family and Community nursing professor in the field.

#### **2- Ethical considerations:**

Approval was taken from Undersecretary of the Ministry of Health structures in Bani Sueif and rural health unit director before starting the research and data were collected after explain the aim of the study to family's participated in the study .

**3- Pilot study:** - assess mother abilities to participate in filling questionnaire, and any modifications were done it is approximately 10% of study sample.

**4- Data collection:** data were collected from home to home through survey study from February 2012 until March 2012 for two days weekly mainly Monday, Tuesday, each week according to time available to family and researcher. Each family takes time approximately between 30-45 minutes to filling a questionnaire, also researcher of study help illiterate's mother in filling their questionnaire

#### **Statistical analysis:**

Data were analyzed using statistical package for social sciences (SPSS). The P-value < 0.05 was used as the cut off value for statistical significance and the following statistical measures were used.

#### **Graphic presentation:**

Graphs were done for data visualization and using Microsoft Excel.

### **3. Results**

Tables (1) describe the health status of preschool children in the study sample. The table reveals that about (35.7%) of children in the study sample were unhealthy (handicapped).in the same table can be observed that the handicapped children from male with a statistically significant relation were founded between child's sex and health status Ps (< 0.05\*\*\*).

Table (2) shows the association between socioeconomic level and health status. In this table 100.0% of low socioeconomic were handicapped children while only (20.0%) from Very high level with highly a statistically significant relation were founded between socioeconomic level and health status of the study sample Ps (< 0.05\*\*\*).

Figure 1 demonstrates association between type of child delivery and health status .more than half (51.1%) of children were delivered normally have handicapped and children were delivered by forceps (100.0%) handicapped. Also, in the same table there are highly a statistically significant relation were founded between type of child delivery and health status Ps (< 0.05\*\*\*).

Table (3) Illustrates association between mother's educational level and their knowledge regarding handicapped. In this table the Illiterate mothers don't know the meaning of handicapped. In the on the opposite side the all University women have good knowledge regarding handicapped Also, observed that a statistically significant differences between the studied mother's knowledge in all areas related to handicapped before health education program implementation ( $P < 0.005$ ).

Table (4) presented the types of handicapped in children of the study sample. In this table physical disability is the most common type (26.3%), followed by mental disability (10.1%), while visual and hearing disability (14%).

Table (5) described the intervention study sample total knowledge score related to handicapped. In this table can be seeing that 63.1 % of the mother have sufficient answer regarding physical handicapped while only 23.0 %

Table (6) shows the level of intervention group's knowledge regarding handicapped after the implementation of the program. The improvement in total knowledge score related to handicapped can be observed in the end of the same table to 93.2 % in posttest regarding physical handicapped.

Figure 2 describe the relation between Family leisure time spent in and effect of disability on child's daily life practice. In this table can observed that handicapped have great effect (53.7%) on family relationship with other friends and 68.0% at home while 100 % great effect At gardens.

**Table (1) :**Relation between child's sex and health status

Sex	Health status				Total	
	Healthy		Handicapped			
Male	455	60.2%	301	39.8%	756	100.0%
Female	188	77.0%	56	23.0%	244	100.0%
Total	643	64.3%	357	35.7%	1000	100.0%

 $X^2=22.854$  $P= 0.000$  $P< 0.05***$ **Table (2) :**Association between Socioeconomic level and health status

	Health status No. (1000)				Total	
Socioeconomic level	Healthy		Handicapped			
Low	0	0%	168	100.0%	168	100.0%
Intermediate	139	96.5%	5	3.5%	144	100.0%
High	171	62.9%	101	37.1%	272	100.0%
Very high	333	80.0%	83	20.0%	416	100.0%
Total	643	64.3%	357	35.7%	1000	100.0%

 $X^2=4.129$  $P= 0.000$  $P< 0.05**$ **Table (3):** Association between mother educational level and knowing handicapped before implementing the educational program

Mother's educational level	Knowing handicapped No. (1000)				Total	
	Satisfactory		Unsatisfactory			
	No	Percent	No	Percent	No	Percent
Illiterate	0	.0%	34	100.0%	34	100.0%
Read & write	72	87.8%	10	12.2%	82	100.0%
Primary	163	100.0%	0	.0%	163	100.0%
Secondary	515	78.7%	139	21.3%	654	100.0%
University	67	100.0%	0	.0%	67	100.0%
Total	592	59.2%	408	40.8%	1000	100.0%

 $X^2=4.950$  $P= 0.000$  $P< 0.05***$ **Table (4):** Types of handicapped among children in the study sample

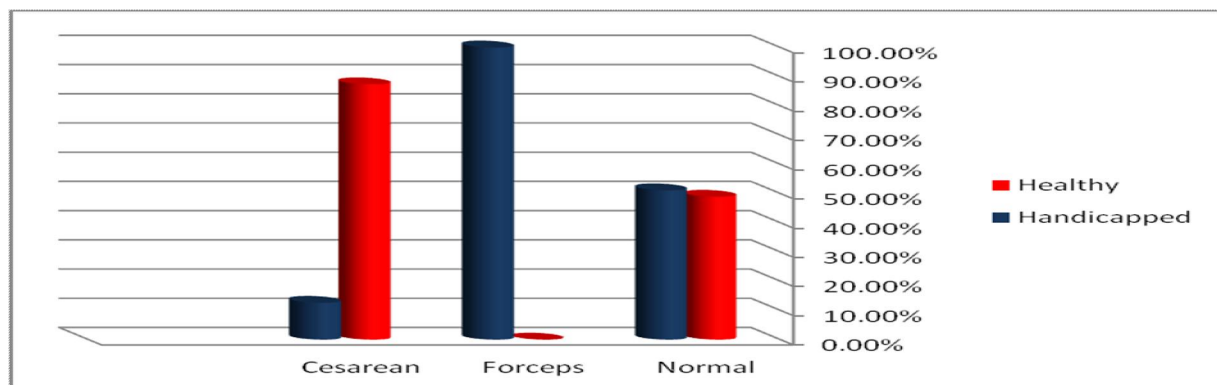
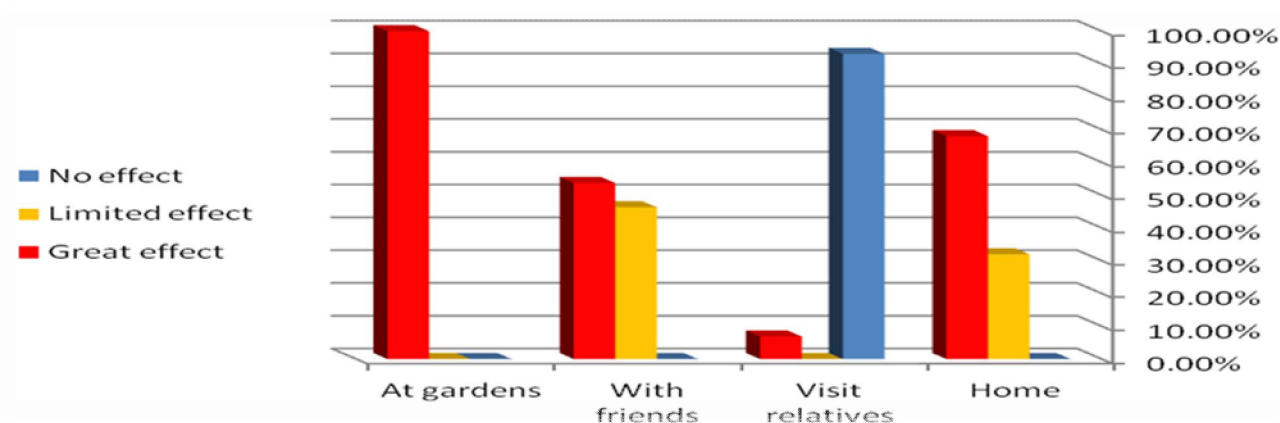
Types of handicapped	The answer No. (1000)				Total
	Yes		No		
Physical disability	263	26.3%	737	37.7%	100%
Mental disability	101	10.1%	899	89.9%	100%
visual disability	140	14.0%	860	86.0%	100%
hearing disability	140	14.0%	860	86.0%	100%

**Table (5):** the level of Mother's knowledge regarding handicapped before the implementation of the program

Items	Level of knowledge				Total
	Satisfactory		Unsatisfactory		
Hearing disability	626	62.6%	374	37.4%	100%
Mental disability	626	62.6 %	374	37.4%	100%
Visual disability	230	23.0 %	770	77.0 %	100%
Physical disability	631	63.1 %	369	36.9 %	100%

**Table (6):** the level of intervention group's knowledge regarding handicapped after the implementation of the program

Items	Level of knowledge No. (103)				Total
	sufficient answer		Insufficient answer		
Hearing disability	77	74.8%	26	25.2 %	100%
Mental disability	62	60.2	41	% 39.8	100%
Visual disability	54	52.4 %	49	47.6 %	100%
Physical disability	96	% 93.2	7	6.8 %	100%

**Figure (1)** Relation between type of child delivery and health status.**Figure (2) :** relation between Family leisure time spent in and effect of disability on child's daily life practice

#### 4. Discussion

WHO and the World Bank estimate that more than a billion people live with some form of disability, which equates to approximately 15% of the world's population. Among these, between 110 million (2.2%) and 190 million (3.8%) adults have very significant difficulties in functioning. There are currently no reliable and representative estimates based on actual measurement of the number of children with

disabilities. Existing prevalence estimates of childhood disability vary considerably because of differences in definitions and the wide range of methodologies and measurement instruments adopted. The limitations of census and general household surveys to capture childhood disability, the absence of registries in most low- and middle-income countries and poor access to culturally appropriate clinical and diagnostic services contribute to lower estimates. As a result many



children with disabilities may neither be identified nor receive needed services (*WHO, 2012*). Regarding the health status of the preschool children in our study sample, 35.7% were handicapped and 100.0% of low socioeconomic were handicapped children while only (20.0%) from Very high level with highly a statistically significant relation were founded between socioeconomic level and health status of the study sample. The probable reason for the high prevalence of disability in lower socio-economic group as due to illiteracy and ignorance coupled with meagre income which had prevented them to seek proper advice at the appropriate time in order to prevent permanent disability (*Mathur, 1995*).

In addition, recent World Health Organization estimates indicate that at least 642 million individuals in the world are affected by some degree of hearing loss. Of this sizable population, 278 million have hearing loss that is defined as disabling. 80% of those with a disabling hearing loss come from low and middle income countries. Low-income communities have the least access to infant and child health services that could otherwise prevent many types of hearing loss. Of the many millions of individuals with a hearing disability in developing countries who would benefit from the use of hearing aids, only about 1 in 40 have the opportunity to use one. Especially for children, not having access to a hearing aid will have a profound negative impact on their expected quality of life (*Stephen et al., 2012*).

Approximately 48.9 million individuals with a disability live in the United States. Of these, approximately 2.9 million are children. This figure translates into nearly one in five Americans having a disability or 19.4% of the total population of the United States (*United States Census Bureau, 2005*). It cannot be disputed that individuals with a disability make up a significant portion of the United States population. Given that, it is important to understand attitudes of non-disabled individuals toward their peers with a disability. This understanding becomes increasingly more important for researchers and practitioners in early childhood, given the current model of inclusive public education and the integration of children with a disability into classrooms with typically developing children. In our research project 35.7% of the study sample handicapped children. On the other hand, one person in 20 has a disability. More than three out of four of these live in a developing country. An integrated approach is required, linking prevention and rehabilitation with empowerment strategies and changes in attitudes (*Anonymous, 2002*).

Results of this study showed that the mothers have unsatisfactory knowledge regarding handicapped, also there are statistically significant differences between the studied mother's knowledge

in all areas related to handicapped before health education program implementation. Several studies have revealed that the mothers' education has a positive impact on their knowledge and how she deals with child health care issues. Child care is mostly the responsibility of mothers. Therefore, the mother's knowledge about child care influences the nature and quality of care that is given to the child. Our experience in pediatric practice has revealed significant gaps pertaining to child health issues in the mothers' knowledge. There seems to have been very little improvement in the knowledge of mothers on common child health matters over the year's inspite of the many years of girl's education in the country (*Ibrahim, 2012*).

According to *WHO, (2012)*, some children will be born with a disabling health condition or impairment, while others may experience disability as a result of illness, injury or poor nutrition. Children with disabilities include those with health conditions such as cerebral palsy, spina bifida, muscular dystrophy, traumatic spinal cord injury, Down syndrome, and children with hearing, visual, physical, communication and intellectual impairments. A number of children have a single impairment while others may experience multiple impairments. For example a child with cerebral palsy may have mobility, communication and intellectual impairments. The complex interaction between a health condition or impairment and environmental and personal factors means that each child's experience of disability is different. In our study the most handicapped children were delivered by forceps and from low socioeconomic status.

Moreover, children's development is influenced by a wide range of biological and environmental factors, some of which protect and enhance their development while others compromise their developmental outcomes. Children who experience disability early in life can be disproportionately exposed to risk factors such as poverty; stigma and discrimination; poor caregiver interaction; institutionalization; violence, abuse and neglect; and limited access to programmes and services, all of which can have a significant effect on their survival and development. Also, Children with disabilities who receive good care and developmental opportunities during early childhood are more likely to become healthy and productive adults. This can potentially reduce the future costs of education, medical care and other social spending *WHO. (2012)*. Through our study observed that the improvement in total knowledge of the mothers score related to handicapped after implementation of health education program.

## Conclusion

This study revealed that, the majority of the studied sample had unsatisfactory scores of knowledge regarding handicap before implementation the educational program. Also, more than thirty five children in the study sample were handicapped. So, the family needs to improve their knowledge and attitude regarding disability and rehabilitation to handicap children.

## Recommendations

The parents will need to take on board a lot of new information in addition to having to cope with the emotional difficulties of adapting to the news. They will also suddenly have to face making important decisions during the different stages of their child's illness. The results indicate that parent-orientated Child Find awareness campaigns must focus on: (1) increasing awareness of the role parents can play in early identification and reduce dependency on physicians, (2) heightening awareness of the importance of early intervention, (3) providing a mechanism to enable parents to detect developmental delays, (4) information parents of services available to handicapped children and their families, and (5) informing parents of handicapped children's educational rights. (6) elevate caregiver awareness regarding child handicapped (7) Increasing disability rehabilitation center to educate family and caregiver to help the handicapped children how to cope with their statues and prevent any complications. Health (8) The public should be made aware of the fact that everyone may carry and inherited disease so as to prevent prejudice and misinformation (9) The effectiveness of the services offered through premarital and reproductive health units (10) Encourage the prevention of handicapped through (Encourage early and regular prenatal care, Provide support for high risk infants, administer immunizations, especially rubella immunization, Encourage genetic counseling when needed and Teach injury prevention – both intentional and unintentional).

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