Nutritional Status of Children with Disabilities

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Abstract

Objective of the study: This study was conducted to determine the nutritional status of children with disabilities attending at CRP-Savar, Dhaka, Bangladesh. Method: A cross-sectional study was done among 103 children with disabilities.Results: This study found 72.8 % of children with cerebral palsy were underweight whose age range was 2 to 15 years. Only 25.2% was found with normal body weight and 1.2% had overweight. In the midst of them highest 58.8% children with disabilities are underweight in the age group of 2-5 yrs Underweight children had less nutritional status than normal weight children. Conclusion: Disabled children with neurological impairments had feeding difficulties that leaded to poor nutritional status.

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Introduction:

Over one billion people worldwide are undernourished. This includes an estimated 171 million children aged <5 years who are stunted (chronically malnourished).Over one billion people worldwide live with a disability. An estimated 150 million infants and children aged <5 years3, often have poor health and limited life opportunities4. Ensuring access to appropriate services and support and tackling marginalization is key to improving their nutritional status and development. Nutrition and disability are intimately related: both are global development priorities; and for both the elimination of malnutrition and ensuring the health and well-being of children with disabilities can only be addressed by also tackling issues of poverty, ensuring equity and guaranteeing the human rights of at risk individuals.

According to WHO's statistics there are about 10% disabled people in total population in Bangladesh and about 17 % of its disable children. Child disability as well as Cerebral Palsy is the commonest physical disability in childhood but in many cases the causes remains unknown (Reddihough and Collins, 2003).Bangladesh has one of the highest malnutrition rates among women and children in the world. Malnutrition has serious implication for the productivity as well as overall development of the country because micronutrients are essential for growth, protection from infections, cognitive function and for performing physical work. Undernutrition contributes to dysfunctional societies with individuals too weak, too vulnerable to disease, and too lacking in physical energy to carry out the extraordinarily laborious tasks of escaping the poverty trap. Malnutrition and hunger feed directly into ill health and poverty(Jeffrey, 2004).

Nutrition and disability are intimately related: both are global development priorities; and for both the elimination of malnutrition and ensuring the health and well-being of children with disabilities can only be addressed by also tackling issues of poverty, ensuring equity and guaranteeing the human rights of at-risk individuals.Children and adults with disabilities often do not benefit from the same level of services, such as health and social welfare services, as the non-disabled population. This is due to a variety of reasons, including: inaccessible premises, and professionals that are not able to adequately communicate with persons with disabilities (WHO,2011).

A disabled child needs proper nutritional care as much as, if not more than, a non-disabled child. Malnutrition can potentially prone a child to further morbidities and thus imposes further suffering to the affected child, his/her family and the whole community, both emotionally and financially. However, many factors may predispose a child (disabled or non-disabled) to malnutrition even in developed countries with high health standards. In developing countries with various degrees and forms of malnutrition being common among the whole population, prevalence of nutritional problems in disabled children could be inevitably even higher (Mohsen,et. al., 2010).

Methods:

Study design: A cross-sectional study was done at Pediatric unit of the Center for the Rehabilitation of the Paralyzed (CRP), Savar, Dhaka.103 Samples were selected purposively from the population for this study. Face to face Interviews were conducted by the researcher himself using the semi-structured questionnaire. Anthropometric measurements (height, weight, head and upper-arm circumference) will be measured and BMI will calculate according to WHO standards (WHO, 2008). Statistical Program for Social Sciences (SPSS) version16 was used for analysis of data.

Results

This cross-sectional study was explores the nutritional status of the children with disabilities among the main objective of this study was to assess the nutritional status of children with disabilities as number of 103. Among 103 participants, 54% respondents were male and 46% were female.

Table: 1. Distribution of the respondents according to family income

Category	Frequency	Percentage
5000-10000	23	22.3
10001-15000	24	23.3
15001-20000	33	32.0
20001-25000	22	21.4
25000 and above	1	1.0
Total	103	100.0

21.4% and 1% of the respondents monthly family income is 20001-25000& above 25000Taka, and 23.3% and 32.3% has a middle category earning from 10001 to 15000 and 15001 to 20000 taka respectively. However, 22.3% respondents' monthly family income is 5000-10000 taka.

Table: 2 Distribution of the respondents according to the feeding started time and duration of feeding
Duration of breast feeding

Duration of breast feeding	Feeding started of the respondents			Total
	Within 1 hour	Within 24 hours	After 24 hours	
Upto 6month	2(1.1%)	3(2.1%)	5(4.9%)	10
Upto 1year	4(3.4%)	6(5.9%)	3(2.1%)	13
1 and half year	2(1.1%)	11(10.7%)	17(16.6%)	30
Upto 2year	9(8.8%)	26(25.3%)	15(14.6%)	50
Total	17(14.4)	46(44%)	40(38.2%)	103

Greater parts of the respondents are taking breast feed up to 2years & only 10 respondents are taking this up to 6month.Among the 103participants, the average breast feeding was started within 24 hours 44% which nearly varied with after 24 hours 38.2%. Only 14.4% participants started breast feeding within 1 hour.

The study revealed that 72.8% of the respondents were underweight whereas only 1.9% was overweight. Among 103 participants, 25.2% were normal. Mean weight of the children of disabilities 11.59 and standard deviation is 11.59±4.833. Mean height is 84.05825and standard deviation is 84.05825±17.904882 cm. (Data is given in Table 9).

Discussion:

The study was conducted among children with disabilities to determine the nutritional status and socioeconomic condition in Bangladesh.Among the children with disabilities 54 % are Male and 46% were Female. Mean weight of the children with disabilities is 11.59 and standard deviation is 12.12 ± 4.833. Height of Mean 84.05825 and standard deviation is 17.904882.In Bangladesh, 48% of all children under the age of five being underweight and 43% having stunted growth (Bangladesh Demographic Health Survey, 2004).

Socio-economic status of the families usually assessed through condition of different aspects such as family income, housing conditions, parent's education, occupation, availability of materials in home and family composition. There is a close relationship between poverty and disability. Children were found aroundsix major socioeconomic categories. The socio economic status of this study population found mostly similar to the status of Bangladesh socioeconomic status. At present 36 percent of the population lives on less than 1 day in Bangladesh.Parent's income, living status, family type is found almost nearly similar to national figures. In terms this study, combined family was comparatively higher (65%) while single family was less as 35%.The nutritional status of children was closely linked with several maternal characteristics. Household size has negative and significant impact on child nutritional status. Household income has an important and significant impact on child nutritional status. (Butt, et. al., 2006)

In terms of educational qualification at mother's maximum 39.8 % respondents completed primary education and 10 % and 11% completed H.S.C and S.S.C education respectively. The lowest 1 % respondents were found in others. Another highest part 39.8% of them were found illiterate.& Among fathers proportion 10.7% of illiterate 23.3% of primary 26.2% secondary,18.4% ofHSC,21.4% of Honors. Maternal education has been associated with nutrition outcomes among children in studies in various countries Bolivia and Kenya (Abuyaet, et. al., 2012).

Among the 103 respondents, 82.3% are house wives, 4. 9 % are doing government job and 4.9 % are engaged in teachers, and only 1 .9% is doing as day labour.while 21% of the father of the children with disabilities is honour's degree holders and 10.7 % of them are illiterate father found. Almost 33 % fathers of child with disabilities are doing business while as only 18.4% are unemployed. Maximum respondent as 74% are living rural area& 26% are living in urban area while 68% of the respondents as child's mothers were no problem during pregnancy while 32% of respondents were problem during pregnancy. Moreover, 65% of the respondents are living in Joint family where as 35 % single family is from. Evidence shows that when unemployment and low wages are presenting factors, families eat cheaper food, which is less nutritious, leading to weight loss and malnutrition. Nutritional status of this age group significantly varies according to both sex and residence. Rural men and women are more likely to be undernourished or thin than the urban men and women but in case of overweight or obesity the scenario is totally reverse.(Nutrition, Health & Demographic survey of Bangladesh, 2011).

Majority of the respondents, 44% are currently giving only other foods without breast milk to their children with

disabilities, while 38.2% are giving breast milk with other foods and the rest14.4 % are giving only breast milk. 65% of the participating mothers start complementary feed at the age of 4-6 months, while 32% start after 6 months of age. Meanwhile, only 2.9% start in 0 to 3 months of age.Interms of breast feeding & complementary food, need appropriate feeding practices during infancy and childhood are essentialfor attaining and maintaining proper nutrition, health, and developmentof infants and children((ICDDR,B, 2011).

Reading found that among Based on BMI score underweight 72.8% ,normal(healthy)25.2% and overweight 1.9%.In my study we found most of the children with disabilities were severely underweight.Moreover 44.7% respondents are underweight in the age group 2 to 5years. Mean weight of the children of disabilities 11.59 and standard deviation is 11.59±4.833. Mean height is 84.05825and standard deviation is 84.05825±17.904882 cm.In Bangladesh, 48% of all children under the age of five being underweight and 43% having stunted growth (Bangladesh Demographic Health Survey, 2004).

According their findings,they found, the rate of malnourished children with disabilities is very high in the underweight measures. They also were found underweight as 44.7% of the subjects in study. It occurred more in the age group 2-5yers with non-educated mother as illiterate as 21% .In the developed countries stunting amongst normal children ranged from one to two percent while up to twenty-three percent have been documented in children with disabilities up to adolescent age are seen in the clinic. This might account for the higher rate of stunting in studies from such countries (Ifeyinwa and Ngozi, 2010).

Conclusion:

Good health and nutritional status of mothers is crucial for the children as wellas for their self. Besides good nutritional status of all age people also important for their healthy and productive life. Nutrition is the foundation for healthy development of the child which is often underestimated. Poor nutrition leads to ill health and ill health contributes to further deterioration in nutritional status. Poor growth and malnutrition can be conceptualized as important secondary health conditions that impact the global health and well-being of children with disabilities and their families.

References

Abuya, B.A., Ciera, J. and Kimani-Murage, E., (2012).Effect of mother's education on child's nutritional status in the slums of Nairobi.Bmc Pediatrics, 12(1), pp.1.

Ahmed, T., Mahfuz, M., Ireen, S., Ahmed, A.S., Rahman, S., Islam, M.M., Alam, N., Hossain, M.I., Rahman, S.M., Ali, M.M. and Choudhury, F.P., (2012). Nutrition of children and women in Bangladesh: trends and directions for the future. Journal of Health, Population and Nutrition, 3, pp.1-11.

Groce, N.E., Banks, L.M. and Stein, M.A., 2014. Surviving polio in a post-polio world.Social Science & Medicine, 107, pp.171-178.

Haque, M.M., Khatun, T., Sarkar, M.R. and Hoque, M.A. (2004).Nutritional Status of Preschool Children of Ethnic Community in Bangladesh.

Haseen, F. (2003). Malnutrition among Bangladeshi women in ultra-poor households: prevalence and determinants, retrieved on January, 2014 from www.hdr.undp.org/report/global/2003/

Ifeyinwa, B. and Ngozi, C. (2010). Nutritional Status of Children with Cerebral Palsy in Enugu Nigeria.European Journal of Scientific Research, 39(4), pp.505-513.

Khattak, A.M., Gul, S. and Muntaha, S.T., (2007). Evaluation of nutritional knowledge of mothers about their children.Gomal Journal of Medical Sciences, 5(1).

Kibria, G. (2010). Nutrition status and cognitive development of preschool children of selected ECD programs in Bangladesh (Doctoral dissertation, BRAC University).

Malnutrition.(2006). Retrieved on October, 2013 from ww.unicef.org/progressforchildren/2006n4/malnutritiondefinition.htm)(Nutrition& EURPIA Project).

Malnutrition from Wikipedia (2013).Retrieved 25 December, 2013 from http://en.wikipedia.org/wiki/Malnutrition).

Motil, (2006). The nutritional status of disabled children in Nigeria: a cross-sectional survey. European Journal of Clinical Nutrition, 53, pp.915-919.

Nutrition.(2011). Health& Demographic survey of Bangladesh. A Preliminary Report, pp.22.

Nutrition, Health& Demographic survey of Bangladesh (2001). A Preliminary Report, pp.25.

Olack, B., Burke, H., Cosmas, L., Bamrah, S., Dooling, K., Feikin, D.R., Talley, L.E. and Breiman, R.F., (2011).Nutritional status of under-five children living in an informal urban settlement in Nairobi, Kenya.Journal of Health, Population and Nutrition, pp.357-363.

Osthuizen, D.O. (2007). Impact of nutritional education program on nutritional knowledge and dietary intake behavior practices of primary school children in Boipatong.Vaal University of Technology, pp. 5.

Reddihough, D.S. and Collins, K.J., (2003). The epidemiology and causes of cerebral palsy.Australian Journal of physiotherapy, 49(1), pp.7-12.

RefeIfeyinwa, B. and Ngozi, C. (2010).Nutritional Status of Children with Cerebral Palsy in Enugu Nigeria.European Journal of Scientific Research, 39(4), pp.505-513.

S M Shahnawaz Bin Tabib, Prevalence of childhood disabilities and cerebral palsy in the community, Institute of Child and Mother Health.Bangladesh, 24.11.2009; pp. 1-7.

Suvarna, (2007). Nutritional Status, Level Of Intelligence And Participation In Extracurricular Activities Of School Children. University Of Agricultural Sciences, Dharwad, 580 005.

Tompsett, J., Yousafzai, A.K. and Filteau, S.M. (1999). The nutritional status of disabled children in Nigeria: a cross-sectional survey. European journal of clinical nutrition, 53(12), pp.915-919.

UzmaIram, Muhammad S. Butt, (2006) "Understanding the health and nutritional status of children in Pakistan: A study of the interaction of socioeconomic and environmental factors", International Journal of Social Economics, 33(2), pp.111 - 131.

WHO/World Bank (2011). World Report on Disability-Geneva.Retrieved on December' 014 fro m http://www.who.int/disabilities/world_report/2011/en/index.html.

World Bank (2004).Nutrition & Disability. Retrived on January from http://www.dcdd.nl/data/1187771560035_capturing_hidden_voices_english.pdf.