Are children with disabilities more likely to be malnourished?

This is a summary of the following paper: *Rotenberg S, Chen S, Hunt X et al (2023) Are children with disabilities more likely to be malnourished than children without disabilities? Evidence from Multiple Indicator Cluster Surveys in 30 countries. BMJ Nutrition, Prevention & Health, e000779.* **https://www.medrxiv.org/content/10.1101/2023.09.25.23296066v1**

Challenges in accessing adequate nutrition hinder children's development and compromise their wellbeing. Despite evidence suggesting that children with disabilities are at a greater risk of malnutrition, nutrition programme exclusion, and mortality from severe wasting – compared to children without disabilities – there is limited evidence on the nutritional outcomes of children with disabilities in large-scale global health surveys.

Factors that lead to increased risk of malnutrition in disabled children include feeding difficulties, inadequate energy intake, and a higher occurrence of common childhood illnesses (such as acute respiratory infection, fever, and diarrhoeal disease). These are worsened when coupled with inequities in maternal education, poverty, parental employment status, and inadequate water, sanitation, and hygiene and ICT access. Without sufficient focus on disability, it will be impossible to achieve the Sustainable Development Goal to 'end all forms of child malnutrition' or meet global child mortality reduction targets.

This study analysed data collected between 2017 and 2021 during the implementation of the sixth round of the UNICEF-supported Multiple Indicator Cluster Survey from 30 low- and middle-income countries. Estimations were completed, providing adjusted prevalence ratios for stunting, wasting, and underweight. The study compared children aged two to four years with and without disabilities by country and sex. To ensure comparative analysis, the survey questions were standardised across the different countries included in the study.

Of the 229,621 children included in the study, 15,071 (6.6%) had disabilities. After adjustment, the overall findings indicated that children with disabilities were at a greater risk of being stunted (RR 1.16, 95% CI 1.11-1.20) than children without disabilities. The same was true of wasting (RR 1.28, 95% CI 1.18-1.39) and underweight (RR 1.33, 95% CI 1.17-1.51), where significant differences were also observed. In sex-disaggregated analyses, both boys and girls with disabilities were significantly more likely to be malnourished than boys and girls without disabilities. This study affirms existing evidence that shows a higher prevalence of malnutrition in young children with disabilities compared with those without.

The study highlights several programmatic and policy implications. Recommendations include the development of tailored and financed programmes within the primary healthcare system that target children with disabilities, as well as using proactive referral mechanisms for those at risk of malnutrition. Also, the training of healthcare workers and establishing of parental support programmes aimed at addressing stigma, cultural attitudes, and barriers were highlighted.

In summary, children with disabilities face notably higher risks of various forms of malnutrition (wasting, stunting, underweight). This emphasises the urgency of enhancing disability inclusion within nutrition programmes. To effectively address the nutritional needs of this group, a two-way approach strategy is essential – integrating children with disabilities into regular nutrition initiatives while also providing targeted programmes to address their specific requirements.

Children with disabilities lack access to nutrition, health, and other services

This is a summary of the following paper: *Rice I, Opondo C, Nyesigomwe L et al (2024) Children with disabilities lack access to nutrition, health and WASH services: A secondary data analysis. Maternal & Child Nutrition, e13642.* **https://doi.org/10.1111/mcn.13642**

Poor diets, inadequate access to nutrition and health services (NaHS), and poor water, sanitation, and hygiene (WASH) all increase the risk of malnutrition and infection, especially for individuals with disabilities. The authors explored access to NaHS, household WASH, and dietary adequacy among households with and without children with disabilities, in Uganda. The study used cross-sectional secondary data from a survey conducted in 2021 and followed the PECO framework (STROBE, 2024) reporting guidelines. Adjusted logistic regression was used to explore associations between disabilities, access to NaHS, WASH, and dietary adequacy.


Poor water, sanitation, and hygiene (WASH) increase the risk of malnutrition and infection

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Of the 6,924 households included in the final analysis, half of households with children with disabilities reported not having access to all the services they needed. Deworming and vaccination were reported as both the most important and most difficult-to-access services. After adjusting for confounders, households with children with disabilities reported 30% reduced access to services on average, when compared to households without disabilities present (OR = 0.70; 95% CI 0.55–0.89, p = 0.003). Interestingly, improved WASH adequacy was strongly associated with improved access to services, including for households with children with disabilities.

Households with children with disabilities experienced a higher prevalence of illnesses, including diarrhoea and skin infections.

The proportion of malnourished children (mid-upper arm circumference <12.5cm) was higher among households with children with disabilities than households without (6.3% vs. 2.4%, p < 0.001). Only 61% of children aged over two years with disabilities reportedly ate three meals a day – and just 14% had an adequate diet.

The study found that households with children have insufficient access to essential NaHS, especially those households with children with disabilities. There are concerning gaps in access to NaHS services in Uganda and households of children with disabilities reported worse access, particularly for those with low WASH adequacy.

> ***"This suggests that about a third of children do not have access to an adequate quantity of food, while nearly three quarters do not have access to an adequately diverse diet, with implications for undernutrition, particularly micronutrient deficiencies."***

Surveys were conducted by professional surveyors, reducing the risk of information bias, and the sample size was large with limited missing data. However, the cross-sectional secondary data used in the study is inherently limited and the sample of three districts may not be representative of Uganda as a whole. It was also not possible to adjust for individual confounders or analyse alongside other information as the data was collected at household (and not individual) level.

Nevertheless, the findings clearly indicate that few children are receiving an adequately diverse diet, putting them at risk of malnutrition, including micronutrient deficiencies. Gaps in these essential services exacerbate inequalities and have implications for the nutrition and health outcomes of children, families, and communities. To better address the need for access to essential NaHS for families in Uganda, it remains vital that these services are inclusive, accessible, and comprehensive.

References

STROBE (2024) What is STROBE? strobe-statement.org