



Too Little, Not Enough: Impact of Safety Nets on Food Security Among Households with Disabled Members in Nigeria

Hussaini Zandam, Surajo Kamilu Sulaiman & Ashiru Hamza Mohammad

To cite this article: Hussaini Zandam, Surajo Kamilu Sulaiman & Ashiru Hamza Mohammad (2024) Too Little, Not Enough: Impact of Safety Nets on Food Security Among Households with Disabled Members in Nigeria, *Ecology of Food and Nutrition*, 63:3, 268-279, DOI: [10.1080/03670244.2024.2345615](https://doi.org/10.1080/03670244.2024.2345615)

To link to this article: <https://doi.org/10.1080/03670244.2024.2345615>



© 2024 The Author(s). Published with license by Taylor & Francis Group, LLC.



Published online: 25 Apr 2024.



Submit your article to this journal [↗](#)



Article views: 201



View related articles [↗](#)



View Crossmark data [↗](#)

Too Little, Not Enough: Impact of Safety Nets on Food Security Among Households with Disabled Members in Nigeria

Hussaini Zandam^a, Surajo Kamilu Sulaiman^b, and Ashiru Hamza Mohammad^c

^aThe Lurie Institute for Disability Policy, The Heller School for Social Policy and Management, Brandeis University, Waltham, Massachusetts, USA; ^bDepartment of Physiotherapy, Tishk International University, Kurdistan Region, Iraq; ^cPublic Health Unit, Godiya Disability Inclusion & Development Initiative (GDID), Dutse, Jigawa, Nigeria

ABSTRACT

This study assessed the impact of safety nets on food insecurity in households with people with disabilities (PWD) in Nigeria. Using data from the 2019 Nigeria General Household Survey, we assessed the risk of experiencing food insecurity among households and the moderating role of safety nets using households without PWDs as a reference. PWD households were three times more likely to experience severe food insecurity compared to households without PWDs. The impact of the safety net program on the risk of food insecurity showed that receiving social benefits had little effect among households with disabled members experiencing severe food insecurity.

ARTICLE HISTORY

Received 6 May 2023
Accepted 16 April 2024

KEYWORDS

disability; Food security; household; Nigeria; safety net

Introduction

People with disabilities (PWD) in Low- and Middle-Income Countries are one of the most vulnerable populations experiencing poor socioeconomic situations, health, and well-being (Hume-Nixon and Kuper 2018; García; Iriarte, McConkey, and Gilligan 2016). In addition, households with PWDs are more likely to experience catastrophic health expenditure, reduced earnings, and significant additional expenses resulting from their disability (Sophie, Findley, and Sambamoorthi 2009; Trani et al. 2010; Zandam and Hanafiah Juni 2019). These adverse socioeconomic conditions experienced by PWDs and their households expose them to deprivations and impoverishment, including food insecurity (Kassy et al. 2021; Mitra et al. 2017). Several studies reported a higher prevalence of food insecurity among families with PWDs than in the general population (Kassy et al. 2021; Schwartz et al. 2019).

CONTACT Hussaini Zandam  huzandam@gmail.com  The Lurie Institute for Disability Policy, The Heller School for Social Policy and Management, Brandeis University, 415 South Street, MS 035, Waltham, MA 02453, USA
This article has been corrected with minor changes. These changes do not impact the academic content of the article

© 2024 The Author(s). Published with license by Taylor & Francis Group, LLC.

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

Compared to most developed countries where safety net programs are designed to provide interventions targeting hardships and deprivations for PWDs, including food insecurity, such programs are often unavailable or inequitably implemented in resource-poor settings such as Nigeria (Walsham et al. 2019). While support for economically disadvantaged families and individuals is limited in the country, it is not absent, as both governmental and non-governmental organizations and groups, such as mutual-aid groups and networks of families and friends, do provide social services and support that are critical in reducing poverty and decreasing food insecurity (Bank 2020; Kabalo et al. 2019).

The Nigerian government launched the social safety net programs under the National Social Investment Programs (N-SIP) initiative 2016 to offer social assistance to the most vulnerable people (groups) in society (NSIP 2018). The program is designed to prevent and alleviate poverty and socio-economic shocks by promoting livelihoods and a dignified life throughout the life cycle for individuals and households. The program is governed by the National Social Investment Office (NSIO), a social security agency to ensure effective coordination, standardization of delivery, monitoring and evaluation, provide clarity of roles and responsibilities, and promote accountability and transparency (NSIP 2018). Another key mandate of the program through the National Social Safety-net Coordinating Office (NASSCO) is the development of a robust data instrument and database, a national social register (NSR) of the poor and vulnerable households in the country (NASSCO, 2016).

The NSR is built using four targeting approaches are utilized, namely; Geographic, Community Ranking, Community Based Targeting (CBT), and Proxy Mean Testing (PMT). This approach focuses resources on regions that are statistically more likely to have the majority of households living in poverty by targeting the bottom 30% of LGAs by poverty level, followed by the next 50%, and concludes with the remaining 20% of the poorest LGAs, thereby ensuring that all areas are methodically reached. Community ranking involves giving priority to the neediest communities and households for program entry and coverage. Community-based targeting involves the local population in identifying which households are the most in need of assistance. Enumerators visited each household to capture their data on income and other observable characteristics. The data was subjected to a means test with a ranking of 0–9. Those below the 6th quintile are finally mainstreamed into the national social register, establishing a universally acceptable platform of social protection activities for all the stakeholders at all levels of government (state and local governments) and non-governmental organizations who adopted the register as the primary database for direct cash transfers, food assistance, and other in-kind assistance to reduce poverty and the prevalence of food insecurity in the country (World Bank 2019).

A Situation Analysis report on the Inclusion of people with disabilities in social protection in Nigeria report by Save the Children and Partners (2021) found that while NSIP processes are inclusive of disability as a priority target vulnerable

group, the focus is mainly on those with visible impairments based on the medical definition of disability contrary to the functioning definition in the National Disability Act and the UN Convention on the Right of Persons with Disabilities (UNCRPD), which covers more groups of disabilities. This represents a gap in the extent to which people with disability are knowledgeable, meaningfully participating, accessing, benefiting, and impacted by the social protection policies, programs, and processes in Nigeria. Another significant gap is the lack of provision for disability extra costs, which leaves a substantial portion of the population inadequately supported. These extra costs are often necessary for individuals with disabilities to achieve a basic living standard comparable to those without disabilities.

Findings like these constitute a critical research gap with significant policy implications on the inclusive and potential impact of the NSIP on food insecurity among households with PWDs. Disabled people and their families are one of the poorest and most marginalized communities experiencing economic hardships, notably food insecurity (Akerle et al. 2013; Ogguniyi et al. 2021). This study used recent nationally representative data to assess the impact of the NSIP on food insecurity among households with PWDs compared to households without PWDs.

Materials and methods

Study design

This study is a cross-sectional survey using data from the Nigeria 2019 General Household Survey (NGHS), a survey of a nationally representative sample of households conducted by the Nigerian Bureau of Statistics with support from other agencies, including the World Bank. The GHS is an innovative model for collecting household data, inter-institutional collaboration, and comprehensive analysis of welfare indicators and socioeconomic characteristics. The design, implementation, and coverage of the NGHS are detailed elsewhere, (National Bureau of Statistics 2016).

Study population and sample

The 2019 NGHS contained a sample of new and long panels of 519 enumeration areas (EA). The total number of households successfully interviewed in both samples was 4,976. The analytic sample for the study included 4,755 (26,552 individuals) households that provided complete information on disability and food security status. Households that did not respond to the household food security survey or did not answer disability modules were excluded.

Measures

Outcome variables

The NGHS documented retrospective accounts of household food insecurity using the food insecurity module. Questions on food security were asked 30 days prior to each interview. The questions were directed to the person in each household responsible for preparing and purchasing food. Households were categorized as food secure, moderately, and severely food insecure. This assessment method was modified based on the refined Household Food Insecurity Access Scale (HIFAS) (Kabalo et al. 2019).

Independent variable

The primary independent variable was household composition based on household composition of disability. Disability status was assessed from responses to the standardized Washington Group Short Set of Questions on Disability (WGSS), the standard approach to measuring disability in censuses and large, internationally comparable surveys (Madans, Loeb, and Eide 2017). Disability status assessment was based on the experience of difficulties by an individual related to six functional domains, including (1) seeing, (2) hearing, (3) walking, (4) remembering, (5) communicating, and (6) washing or taking care of self. Possible responses to the questions were as follows: no difficulty, some difficulty, a lot of difficulty, and cannot do at all. Households that had members reporting “a lot of difficulties” or “cannot function at all” to any of the six functional domains were classified as households with a disabled member (Washington Group 2006).

Moderating variable

Safety net reception status was assessed as a dichotomous variable where “yes” represents a household receiving institutional assistance and “no” otherwise. In the GHS, questions were asked at each house if the household or any household member received benefit or assistance from any institution, including cash, foodstuff, and any in-kind assistance in the survey year.

Covariates

Covariates linked to food insecurity and disability, including the occupational status of the household head (assessed as unemployed, agriculture, sales and services, professional jobs, and others), educational attainment of the household head (categorized as follows: no education or forms of education other than formal education, primary, secondary, and higher education), age in years, marital status (married monogamy, married polygamy and single) and

gender of the household head (coded as one for males and zero for females), and religion (Muslim, Christian, and others). Other household covariates included:

- Household size and dependency ratio (equal to the number of individuals aged below 15 or over 65 divided by the number of individuals aged 15-64).
- Household wealth (coded poor, moderate, and rich).
- Residence status (coded one for urban, zero for rural).

Statistical analysis

Demographics and socioeconomic characteristics of households with and without disabilities were compared using the chi-square test for categorical variables and the T-test for continuous variables. Using a series of multinomial logistic regression models, we assessed the impact of the safety net on the relationship between household food insecurity and the presence of a member with a disability in the household. The first model (Model 1) includes just the indicators of household disability composition. Other households' socioeconomic and demographic covariates were controlled in Model 2. In model 3, we tested the moderating effects of safety nets on the relationship between food insecurity and household disability composition.

Results

Sample characteristics

Table 1 shows that household characteristics differed significantly between the households with and without PWDs. Heads of households with PWDs were more likely to be female, older, unemployed, and less educated than those of families without PWDs. Households with PWDs tended to have a higher dependency ratio.

Safety nets participation and food insecurity

The findings regarding receiving any form of safety net assistance and household food security status are presented in Table 2. About 17.1% of households with disabled members benefitted from assistance programs compared to 13.0% without disabled members. More than one-quarter (26.5%) of households with PWD reported worrying about not having enough food. Severe food insecurity was observed in 17.5% of households with disabled members compared to 10.3% among non-disabled members.

Table 1. Description of the sample of households with and without persons with disabilities (N = 4,755).

Variables	No member with disability (N = 3,492)	Has member with a disability (N = 1,263)	P-value
Gender of household head (HH)			0.000
Male	84.2	72.5	
Female	15.8	27.5	
Age of HH (mean)	52 (7.7)	59.8 (5.3)	0.000
Educational status of HH			0.001
No education	34.1	56.0	
Primary level	26.3	21.2	
Secondary level	24.1	9.6	
Tertiary level	15.6	13.2	
Occupation of HH			0.000
Unemployed	9.6	27.1	
Agriculture	43.9	35.5	
Sales and services	25.2	18.4	
Professional jobs	13.3	5.7	
Others	8.0	13.3	
Marital status of HH			0.075
Monogamous married	72.8	70.6	
Polygamous married	17.2	19.3	
Unmarried	10.0	9.1	
Residence			0.024
Rural	54.3	65.8	
Urban	45.7	34.2	
Dependency R (mean)	3.1 (1.4)	5.3 (2.5)	0.002
Wealth index			0.000
Poorest	35.2	48.3	
Middle	44.4	37.7	
Rich	18.4	12.0	

Source: Nigeria General Household Survey (NGHS) 2019. P-values for differences.

Table 2. Social Benefits and food security status in households with and without persons with disabilities (N = 4,755).

Variables	No member with disability (N = 3,492)	Has member with disability (N = 1,263)	P-value
Received social benefits the last 12 months			
Received assistance in form of food	4.3	5.9	0.000
Received assistance in form of cash	8.1	9.8	0.000
Received assistance in form of other in-kinds	0.6	1.4	0.000
Received any form of assistance	13.0	17.1	0.000
Food security questions in the last 30 days			
Worried about not having enough food	17.8	26.5	0.011
Ate less than you should	13.1	16.2	0.008
Ran out of food	8.8	13.3	0.033
Time hungry but did not eat	11.5	14.2	0.042
Unable to eat healthy/nutritious food	27.1	34.7	0.000
Ate only a few kinds of food	29.1	38.6	0.000
Went without food for a whole day	9.1	16.0	0.025
Restricted consumption for children	9.7	15.9	0.031
Borrowed food or relied on friends/relatives	10.3	14.1	0.027
Food security status			0.000
Food secure	72.6	62.8	
Moderate food insecure	17.1	19.7	
Severely food insecure	10.3	17.5	

Source: Nigeria General Household Survey (NGHS) 2019. P-values for differences.

Table 3. Unadjusted and adjusted odds ratios (with 95% confidence intervals) for food insecurity households with and without persons with disabilities (N = 4,755).

Model	Food insecurity	
	Moderate	Severe
Model 1 (Disability only)		
HH without a disabled member	Reference group	Reference group
HH with at least 1 disabled member	1.78** 0.91–4.51	3.72*** 1.62–6.41
Model 2 (Disability + covariates)		
HH without a disabled member	Reference group	Reference group
HH with at least 1 disabled member	1.56** 1.18–3.09	2.93** 1.50–3.33
Model 3 (Disability + covariates + safety net)		
HH without a disabled member	Reference group	Reference group
Receipt of benefits	1.02* 0.94–1.15	1.96** 1.83–2.33
HH with at least 1 disabled member	1.31 0.70–2.77	2.58** 1.43–4.11
HH without a disabled member and received benefits (interaction)	1.17 0.81–2.44	1.81* 1.09–2.65
HH with at least 1 disabled member and received benefits (interaction)	1.22 0.47–2.41	2.14** 1.12–4.49

Source: National Bureau of Statistics (2016).

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Model 1: unadjusted model; Model 2: Adjusted for gender of HH, age of HH, education status of HH, marital status of HH, occupation status of HH, religion of HH, dependency ratio, and wealth index. Model 3: Adjusted for safety nets participation. Boldface indicates statistical significance ($p < 0.05$). Abbreviations: uOR = unadjusted odd ratios, aOR = adjusted odd ratios, CI = confidence interval, HH = Household head.

Association between safety net participation and food insecurity among households

Table 3 shows the risk-in-odds ratio of experiencing moderate and severe food insecurity security among households relative to being food secure. As shown in Model 1, relatively, the likelihood of experiencing moderate (OR = 1.78, 95% CI = 0.91–4.51) and severe (OR = 3.72, 95% CI = 1.62–6.41) food insecurity was almost twice and over three times among households with PWDs to compared households without PWDs, respectively. After adjusting for covariates and the receipt of benefits in safety net programs in Model 3, the associations were somewhat attenuated but still significant in the likelihood of severe food insecurity (AOR = 2.58, 95% CI = 1.43–4.11).

The moderating effect of safety net benefits on severe household food insecurity was minimal. Households with PWD who benefited from assistance, as shown from the interaction term, had higher predicted probabilities of reporting severe food insecurity than those without disabilities (AOR = 2.14, 95% CI = 1.12–4.49). Also, the magnitude of the odds of reporting severe food insecurity among these households with disabled members is higher than that of households without PWD who also received benefits (AOR = 1.81, 95% CI = 0.92–3.43).

Discussion

Although previous studies have assessed the impact of safety nets on food insecurity according to geographic and sociodemographic characteristics in developing countries (Dejene and Cochrane 2021; Khanam et al. 2020), to the best of our knowledge, this study is the first to be conducted

among households with disabled members (s), using a nationally representative sample in the sub-region. We found that the socio-demographic characteristics of households with PWDs differed considerably from those without such members. For example, households with PWDs were more likely to be from low socioeconomic status, reside in rural areas, and have uneducated heads of household. Previous studies have reported similar findings on the poor socioeconomic and living situation of people with disabilities in the country (Arimoro 2019; Ekechukwu et al. 2017; Natalie 2011).

Our analyzes showed that severe food insecurity was higher among households with PWDs than those without PWD, and is consistent with findings from previous studies in Nigeria (Akerlele et al. 2013; Kassy et al. 2021; Ogunniyi et al. 2021). Several factors may explain the association between disability and food insecurity. First, people with disabilities are more likely to have fewer economic resources due to fewer opportunities for education, skill development, and employment, all of which result in lower earnings (Pinilla-Roncancio and Alkire 2020; Trani et al. 2018; Mónica; Pinilla-Roncancio 2018). These limitations can also lead to lower jobs and income for other household members who need to look after disabled households and PWDs. Another explanation includes more significant expenditures for households with disabled members, including medical care, adaptive and assistive devices (such as wheelchairs, ear-helps, and prostheses), and other disability-related costs (Kim et al. 2020; Mitra et al. 2017; Palmer, Williams, and Mcpake 2016). These disability-related expenses may require families with PWDs to choose between essential needs (like food) and disability-related expenses.

The impact of the safety net program (measured as reviving benefits in cash or in-kind) on food insecurity is observed when added to the multinomial regression model. The higher likelihood of exposure to moderate food insecurity was no longer statistically significant for all households participating in the program. However, the risk of severe food insecurity among households with PWD was slightly attenuated but remained statistically significant, suggesting that the existing social assistance is not sufficiently effective in addressing severe food insecurity among households with PWDs.

As a result, comprehensive policies must be developed to identify disabled individuals and households and better understand ways of responding to their needs. Nutrition and food assistance policies, nutrition education, and dietary counseling aimed at disabled women, children with disabilities, and people with specific disability types, for example, could increase the number of PWDs eligible for benefits. Disability restricts economic access to food and creates significant difficulties in diet-related activities such as meal planning, transportation to grocery stores, shopping, and meal preparation; thus, additional and more flexible benefits may be required.

Limitations

Despite its contributions to the advancement of the role of safety net programs, disability, and food insecurity, this study has some limitations. For starters, the NGHS does not question the severity, duration, origin, and etiology of disability, all of which may reduce the accuracy of the data reported. Second, the study's data were self-reported, making them susceptible to recall and social desirability bias, which could lead to misclassification. Third, the study looked at how the composition of households with disabilities affected food insecurity by accounting for sociodemographic and other economic factors. While we accounted for education as a determinant of food insecurity, we didn't include the influence of informal education and training. Food insecurity may also be impacted by other economic factors that we didn't include, including farmland size, region of the country, house animals, economic shocks, etc. Future research should look at the effect of these factors as well as the dual causality between household disability and food insecurity. Finally, while relating to individual household members, many of the measures used (including those for food insecurity, household assets, and safety net program participation) may vary depending on resource allocation patterns in each household.

Recommendation

To enhance the inclusivity and effectiveness of policies, it is imperative to develop policies and strategies that identify disabled individuals and households, thoroughly understanding their unique needs. The National Social Safety Nets Coordinating Office (NASSCO) should refine its data collection instruments to integrate disability-related information, utilizing tools such as the Washington Group's Short Set of Questions. This integration will facilitate a more nuanced approach to providing assistance, addressing the extra costs associated with disabilities.

Moreover, establishing a dedicated disability social protection scheme is recognized as a best practice internationally. Such a program should be implemented universally, providing targeted support to adults with disabilities and parents of children with disabilities to alleviate the additional financial burdens they face.

Conclusion

We found that the likelihood of experiencing severe food insecurity was over three times among households with PWDs compared to households without PWDs. The results of the interaction term between participation in a safety net program and household disability composition on the likelihood of food

insecurity showed that the moderating effect of social benefits on household food insecurity was minimal.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This research is funded by a grant from the United States' National Institute on Disability, Independent Living, and Rehabilitation Research [NIDILRR], grant number 90AR5024. The authors declare no financial conflict of interest relevant to this research.

Availability of data and materials

The datasets generated during and/or analyzed during the current study are available on the World Bank's Living Standards Measurement Study (LSMS) website, [<https://microdata.worldbank.org/index.php/catalog/3557>].

Authorship

H.Z., S.K., and A.H. designed the study. All authors participated in the data analysis, drafting of the manuscript, and writing the final article.

Ethics approval and consent to participate

Because data were de-identified and publicly available, the Institutional Review Board approval was not required. All methods were carried out in accordance with relevant guidelines and regulations.

References

- Akerele, D., S. Momoh, A. B. Aromolaran, R. B. Oguntona, and A. M. Shittu. 2013. Food insecurity and coping strategies in South-West Nigeria. *Food Security* 5 (3):407–14. doi:10.1007/s12571-013-0264-x.
- Arimoro, A. E. 2019. Are they not Nigerians? The obligation of the state to end discriminatory practices against persons with disabilities. *International Journal of Discrimination and the Law* 19 (2):89–109. doi:10.1177/1358229119846764.
- Bank, W. June 2020. Disability Inclusion in Nigeria. *Disability Inclusion in Nigeria*. doi:10.1596/34073.
- Dejene, M., and L. Cochrane. 2021. Safety nets as a means of tackling chronic food insecurity in rural Southern Ethiopia: what is constraining programme contributions? *Canadian Journal of Development Studies / Revue canadienne d'études du développement* 43 (2):157–75. doi:10.1080/02255189.2021.1914559.

- Ekechukwu, E., J. O. Ikrecheru, A. O. Ezeukwu, A. V. Egwuonwu, L. Umar, and U. M. Badaru. 2017. Determinants of quality of life among community-dwelling persons with spinal cord injury: a path analysis. *Nigerian Journal of Clinical Practice* 20 (2):163. doi:10.4103/1119-3077.187328.
- Hume-Nixon, M., and H. Kuper. 2018. The association between malnutrition and childhood disability in low- and middle- income countries: systematic review and meta-analysis of observational studies. *Tropical Medicine & International Health: TM & IH* 23 (11):1158–75. doi:10.1111/TMI.13139.
- Iriarte, E. G., R. McConkey, and R. Gilligan. 2016. Disability and human rights: global perspectives. https://books.google.com.my/books?id=KyYpCwAAQBAJ&pg=PA88&lpg=PA88&dq=disability+marginalization+poverty&source=bl&ots=rrsRo2yuaJ&sig=Jp1GAU0paU8q1iMUzwcRsZna2cI&hl=en&sa=X&redir_esc=y#v=onepage&q=disability.marginalization+poverty&f=false.
- Kabalo, B. Y., S. Hagos Gebreyesus, E. Loha, and B. Lindtjörn. 2019. Performance of an adapted household food insecurity access scale in measuring seasonality in household food insecurity in Rural Ethiopia: a cohort analysis. *BMC Nutrition* 5 (1):1–10. doi:10.1186/S40795-019-0323-6.
- Kassy, W. C., A. C. Ndu, C. Cecilia Okeke, and E. Chwike Aniwada. 2021. Food security status and factors affecting household food security in Enugu State, Nigeria. *Journal of Health Care for the Poor and Underserved* 32 (1):565–81. doi:10.1353/hpu.2021.0041.
- Khanam, M., G. Ara, A. Shafiqur Rahman, Z. Islam, S. Farhad, S. Sadat Khan, K. Istiaque Sanin, M. Mahbobor Rahman, H. Majoor, and T. Ahmed. 2020. Factors affecting food security in women enrolled in a program for vulnerable group development. *Current Developments in Nutrition* 4 (4). doi:10.1093/CDN/NZAA037.
- Kim, J., P. Stevens, C. PS, and K. B. Jones. 2020. Health care use and spending of pediatric patients with an intellectual or developmental disability. *Medical Care* 58 (5):468–73. doi:10.1097/MLR.0000000000001293.
- Madans, J., M. Loeb, and A. H. Eide. 2017. Measuring disability and inclusion in relation to the 2030 agenda on sustainable development. *Open Access* 4 (1):1164–79. www.dgsjournal.org.
- Mitra, S., M. Palmer, H. Kim, D. Mont, and N. Groce. 2017. Extra costs of living with a disability: a review and agenda for research. *Disability and Health Journal* 10 (4):475–84. Elsevier Inc. doi:10.1016/j.dhjo.2017.04.007.
- Natalie, S. 2011. The face of disability in Nigeria: a disability survey in kogi and niger states | Smith | Disability, CBR & Inclusive Development. *Disability, CBR & Inclusive Development* 22 (1):35. <http://dcidj.org/article/view/11/27>.
- National Bureau of Statistics. 2016. Nigeria general household survey 2015-2016: data and documentation now available | the data blog. Abuja. <https://blogs.worldbank.org/opendata/nigeria-general-household-survey-2015-2016-data-and-documentation-now-available>.
- National Social Safety -net Coordinating Office (NASSCO). 2016. National Cash Transfer Programme. <http://nassp.gov.ng/national-cash-transfer-programme/>.
- NSIP. 2018. National social investment programme - the statehouse, Abuja. National social investment program. <https://statehouse.gov.ng/policy/economy/national-social-investment-programme/>.
- Ogunniyi, A. I., S. Opeyemi Omotoso, K. Kayode Salman, A. Olusola Omotayo, K. Oluseyi Olagunju, and A. Oladapo Aremu. 2021. Socio-economic drivers of food security among rural households in Nigeria: evidence from smallholder maize farmers. *Social Indicators Research* 155 (2):583–99. doi:10.1007/s11205-020-02590-7.
- Palmer, M., J. Williams, and B. Mcpake. 2016. The cost of disability in a low income country. *SSRN Electronic Journal*. doi:10.2139/ssrn.2856285.

- Pinilla-Roncancio, M. 2018. The reality of disability: multidimensional poverty of people with disability and their families in Latin America. *Disability and Health Journal* 11 (3):398–404. doi:10.1016/j.dhjo.2017.12.007.
- Pinilla-Roncancio, M., and S. Alkire. 2020, May. How poor are people with disabilities? Evidence based on the global multidimensional poverty index. *Journal of Disability Policy Studies* 31(4):206–16. doi:10.1177/1044207320919942.
- Save the Children. 2021. *Social protection situation analysis: Inclusion of persons with disabilities in social protection*. Inclusive Friends & CDGP, UK aid. <https://socialprotection.org/discover/publications/situation-analysis-inclusion-persons-disabilities-social-protection-nigeria>.
- Schwartz, N., V. Tarasuk, R. Buliung, and K. Wilson. 2019. Mobility impairments and geographic variation in vulnerability to household food insecurity. *Social Science and Medicine* 243 (December):112636. doi:10.1016/j.socscimed.2019.112636.
- Sophie, M., P. A. Findley, and U. Sambamoorthi. 2009. Health care expenditures of living with a disability: total expenditures, out-of-pocket expenses, and burden, 1996 to 2004. *Archives of Physical Medicine and Rehabilitation* 90 (9):1532–40. doi:10.1016/j.apmr.2009.02.020.
- Trani, J. F., P. Bakhshi, D. Brown, D. Lopez, and F. Gall. 2018. Disability as deprivation of capabilities: estimation using a large-scale survey in morocco and Tunisia and an instrumental variable approach. *Social Science and Medicine* 211 (August):48–60. doi:10.1016/j.socscimed.2018.05.033.
- Trani, J. F., P. Bakhshi, A. A. Noor, D. Lopez, and A. Mashkoor. 2010. Poverty, vulnerability, and provision of healthcare in Afghanistan. *Social Science and Medicine* 70 (11):1745–55. doi:10.1016/j.socscimed.2010.02.007.
- Walsham, M., H. Kuper, L. Morgon Banks, and K. Blanchet. 2019. Social protection for people with disabilities in Africa and Asia: a review of programmes for low- and middle-income countries. *Oxford Development Studies* 47 (1):97–112. doi:10.1080/13600818.2018.1515903.
- Washington Group. 2006. Overview of implementation protocols for testing the Washington group short set of questions on disability. 1–21. https://www.cdc.gov/nchs/data/washington_group/meeting6/main_implementation_protocol.pdf.
- World Bank. 2019. Advancing social protection in a dynamic Nigeria. [Report ASA P165426]. <https://documents1.worldbank.org/curated/en/612461580272758131/pdf/Advancing-SocialProtection-in-a-Dynamic-Nigeria.pdf>.
- Zandam, H., and M. Hanafiah Juni. 2019. Equity analysis of health system accessibility from perspective of people with disability. *International Journal of Health Governance* 24 (4):298–309. doi:10.1108/IJHG-11-2018-0067.