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Link NCA: Participatory research informs a sustainable project design

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EQUITABLE AND SUSTAINABLE WASH SERVICES:
FUTURE CHALLENGES IN A RAPIDLY CHANGING WORLD

Link NCA: Participatory research informs a sustainable project design

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Background
Stunting is a chronic issue in Liberia, yet how to have a sustained impact on stunting is unclear. In October 2019- May 2020, the Liberia WASH Consortium (LWC), composed of Action Against Hunger, Concern Worldwide, Water Aid, Tearfund and Oxfam started a 5 year program respond to the question of stunting. The first year of the project was a formative assessment to complete a deep dive into stunting and desing a theory of change that builds on community priorities, an in-depth understanding of the context and a robust evidence base. The formative phase consisted of a three-assessment formative research package in Grand Bassa, Grand Cape Mount, Rural Montserrado, Rivercess and Sinoe Counties. This included a Nutrition Causal Analysis (Link NCA), Barrier Analysis (BA) and Cost of Diet (CoD) Assessment. This abstract focuses upon the Link NCA method.

Methods
All three assessments are mixed methods, including both qualitative and quantitative data collection. The Link NCA formed the backbone of the research, relying on the in-depth qualitative inquiry with over 1300 participants covering key aspects of community environment, including access to water, sanitation, and personal and environmental hygiene. The quantitative survey was deployed in 1094 households and covered 45 indicators and anthropometric measurements of children under 5 years of age. The qualitative inquiry made use of a great variety participatory tools designed to actively engage communities in the analyses of health-related concerns perceived in their milieu. The last of the data collection was dedicated to the validation of learnings, during which community members could propose solutions to these concerns, which they believed to be most suitable and appropriate for a given context.

Setting
Rural and peri-urban setting.

Results
The Link NCA study identified 19 risk factors, believed to have an impact on the incidence of undernutrition in the study zone. Two out of three risk factors classified as “major” were identified in the sector of water, sanitation and hygiene, namely low access to water and non-optimal sanitation practices. In addition, the calculation of statistical associations between individual risk factors and nutritional status of children in surveyed households allowed to identify the so-called causal pathways of undernutrition, which could explain higher vulnerability of certain individuals and/or households to undernutrition. Per available data, a dominant pathway to stunting takes its roots in a limited access to markets as the distance to market decreased the likelihood of a presence of soap in the household and increased a likelihood of child being unclean. The likelihood of child being unclean also increased in agricultural livelihood zones (while it decreased for

children living in peri-urban areas) and in households practicing open defecation. In addition, children of mothers who had their first pregnancy before 18 years of age were more likely to be observed unclean as well as children, in cases of which inappropriate child-caregiver interactions were observed during the data collection. As child cleanliness can be heavily dependent on environmental hygiene and sanitation, a child observed playing in dust or mud was significantly more likely to be stunted while a child living in a household owning a livestock, thus exposed to a contamination through the proximity to animals and/or their faeces, was potentially more likely to be stunted. In addition, a child living in a household more than 20 minutes away from the closest water point, was significantly more likely to be stunted, especially if living in one of agricultural livelihoods zones (potentially via increased odds of diarrhoea). An interesting statistical association was also detected among children wearing a washable diaper, particularly among children older than 18 months, living in agricultural livelihoods zones, who were significantly more likely to be stunted than children using a disposable diaper or a latrine. The likelihood of child being unclean increases his/her vulnerability to disease and to a growth retardation, as a consequence. This seems to be backed up the available data on the incidence of key childhood diseases as a child suffering from diarrhoea was potentially more likely to be stunted. A child suffering from diarrhoea was significantly more likely to be stunted if living in one of agricultural livelihoods zones or observed unclean. Water source at more than 20 minute distance from a household increased odds of child suffering from diarrhoea while the presence of soap decreased them. A child suffering from any of surveyed morbidities, i.e. fever of cough or diarrhoea, was more likely to be stunted if living in one of agricultural livelihoods zones or observed unclean.

Conclusions

The Link NCA study design gathered detailed qualitative and quantitative data, which were used to inform a 4-year project proposal, which was accepted by a donor for financing. The results enabled the LWC consortium to challenge the donor's strategy that considered insufficient evidence for WASH to address stunting.This formative research is therefore a promising example of using learnings specifically generated for the project to inform its design instead of relying on national or regional data produced for surveillance purposes. Furthermore, due to the multifaceted nature of findings, partners were forced to design a novel project and not repeat status quo programming. In-depth community consultation during the Link NCA meant recommendations reflected community priorities so that proposal activities could reflect those preferences. The MEAL strategy adapted from learnings of the various assessments will allow for active development of indicators as the program progresses, so the project can remain dynamic and flexible.

Key words

Malnutrition; Community engagement; Participatory Research; Participatory Project Design; Sustainability.

Thematic area 4

Rural water supply (e.g. approaches to sustainability and serving the hardest to reach communities and households).

Contact details

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