


Structured Play Integration into Nutritional Rehabilitation for Acute Malnutrition in Uganda: An Assessment from Ugandan Referral Hospitals

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Background: Play and stimulation are essential in treatment of acute malnutrition. However, the extent to which they are implemented in Uganda is unknown. We assessed the status of structured play integration into management of acute malnutrition in three referral hospitals, as well as facilitators and barriers to this integration in Uganda.

Methods: This cross-sectional study took place between November and December 2023, using both qualitative and quantitative methods. We conducted 11 Focus Group Discussions (FGDs) with 86 caregivers of children under five years with acute malnutrition, and 25 Key Informant Interviews (KIIs) with various stakeholders. Quantitative data was obtained electronically using a Health Facility Assessment tool adapted from the National Nutrition Service Quality Assessment (NSQA) tool. Each section of the tool has scores, and the total score obtained was changed into a percentage. The study involved three conveniently sampled referral hospitals; Mulago National Referral Hospital (NRH), Mbarara and Moroto Regional Referral Hospitals (RRHs).

Results: The scores of integration of structured play into nutrition services were 62% of the expected scores at Moroto RRH, while Mulago and Mbarara hospitals scored 32% and 36%, respectively. Facilitators of integration included funding, a supportive policy environment, training of health workers, and supportive infrastructure at the health facilities among others. The main barriers to integration were funding gaps, lack of data, human resource gaps and lack of policies. Data gaps included lack of research evidence and lack of play indicators in the data capture tools to monitor play. Policy barriers included lack of clarity on implementation of play, planning, coordination and finances. The absence of a designated cadre to lead play coupled with over-worked health workers also hinders structured play integration.

Conclusion: Structured play integration into nutritional rehabilitation is very low, calling for urgent need to address the policy, data, health facility infrastructure and human resource gaps identified.

Keywords: structured play, acute malnutrition, early childhood development

Introduction

Globally, approximately 45 million children under five years were wasted in 2022, of whom 43% were in Africa. In addition, an estimated 6.8% of children under 5 were affected by wasting, of which 13.6 million (2.1%) suffered from severe wasting.¹ The majority of children suffering from severe acute malnutrition (SAM) live in sub-Saharan Africa, accounting for 11% of all children under the age of five in the region.² Uganda, in particular, faces high prevalence rates of malnutrition, with 3.5% of children under five years of age having wasting, 29% of children aged 0–59 months experiencing stunted growth and 11% being underweight.³ Moreover, children with SAM are nine times more likely to die from common childhood illnesses, with case fatality rates of SAM ranging from 20% to 60%.⁴ In fact, UNICEF

statistics indicate that 1 in 5 deaths among children under the age of 5 globally is attributed to severe acute malnutrition, making it one of the top threats to child survival, and taking the lives of more than 1 million children each year.⁵ In addition, degrees of malnutrition are associated with increased risk of all-cause mortality.⁶ Those who survive SAM also have other consequences, one of them being developmental delay.⁷

Children are mainly affected by SAM in the first 1000 days of life, which is also the period when they undergo over 80% of brain development. During this period, evidence shows that there is rapid development of the four domains; gross motor, fine motor, speech and language and social development. SAM in early childhood therefore increases the risk of impaired motor, cognitive, and psychosocial development.⁷ In addition, evidence suggests that inadequate psychosocial stimulation (physical, sensory, language, and/or emotional input) inhibits infants from achieving their full development potential. Malnutrition combined with psychosocial deprivation have considerable implications on child development that lasts throughout life including reduced intellectual capacity, and at a larger scale, this can result in reduced societal contribution.^{8,9} Fortunately, recent studies done in Ethiopia and India have found that structured play improves development domains.^{10,11} Physical play helps the children to refine locomotion, hand-eye coordination and manipulation skills.¹² Play therapy is used to achieve optimal arousal and to develop cognitive and social skills. This is particularly important for children with SAM who have been found to have reduced physical activity due to reductive adaptation. This physical activity takes long to recover as reported by a study at MNU by Babirekere et al.¹³ In this study, children with SAM had very low physical activity at discharge from hospital, and this was worse among those with prolonged hospitalization. This underscores the need for stimulation in this population. Children with complicated SAM receive phased treatment according to “the 10 steps” which are the general principles of routine care as guided by the WHO.¹⁴ They include management of medical complications, routine intravenous antibiotics, therapeutic feeds, sensory stimulation and preparation for discharge among others. Of the 10 steps, step 9 addresses psychosocial stimulation using structured play. These guidelines recommend that the children with SAM receive at least 15–30 minutes of structured play, sensory and psychosocial stimulation per day as part of the nutritional rehabilitation.¹⁴ This is aimed at maximizing the treatment outcomes and supporting the development of the four Early Childhood Development (ECD) domains (cognitive, physical, language and speech, and socio-emotional domains). This structured play is also clearly spelled out in the Uganda national guidelines for integrated management of acute malnutrition.² These guidelines are adapted from the WHO guidelines and training has been widely rolled out in Uganda. However, many children with SAM are enrolled in care at government-owned health facilities which do not provide play materials for children. The lack of materials and toys to be used in play therapy at health facilities is a possible major hindrance in Uganda. In addition, there is lack of data on play therapy in health facilities in general, but more specifically on structured play during nutritional rehabilitation where it is part of treatment.

Although the national guidelines are clear about play being part of treatment, there is no published data to describe how WHO step 9 is implemented in Uganda. It is therefore paramount to study the current practices in order to design interventions to strengthen it in the health facilities. In this study, structured play referred to regular 30 minutes of supervised play by a trained person being part of routine care of severe acute malnutrition as per the WHO guidelines.¹⁴ The objective of this study was to assess the current structured-play practices and activities by health workers and caregivers of children under 5 years with acute malnutrition in selected health facilities in Uganda. In addition, we identified the barriers and facilitators of implementation of structured play and stimulation into routine nutrition service delivery.

Methods

Design and Setting

This mixed methods study involved a cross-sectional survey of three referral hospitals and qualitative study involving KIIs and FGDs. The three facilities were conveniently sampled to represent high volume facilities and regional balance. Mwanamugimu Nutrition Unit (MNU) in Mulago National Referral Hospital MNU was selected because it is a high-volume facility which admits about 100 children with SAM per month, while Moroto Regional Referral Hospital was selected because it is located within the highest SAM case-load region in the country. Mbarara Regional Referral Hospital is located in a region with lower case load of acute malnutrition. The services offered at the 3 sites include; in-

patient therapeutic care, out-patient therapeutic care, teaching, training, and community support. Only Moroto RRH provides Supplementary Feeding Program (SFP) for children with moderate acute malnutrition (MAM).

Participants

Eligible participants for the qualitative aspects were those who provided written informed consent, were health workers working on Nutrition units or were caregivers of children with SAM or MAM who had received services for at least one week or had received one previous OTC visit. At a national and regional level, we involved stakeholders involved with nutrition services. We excluded health workers who had worked at the units for less than 3 months and caregivers of children who were too sick.

Sample Size

To understand the barriers and facilitators of integration of structured play, we used a sample size of 25 KIIs and 11 FGDs. We involved 86 respondents in the FGDs. Of the 25 KIIs, 13 KIIs were health workers at health facilities and 12 were national and regional level stakeholders as shown in Table 1. The 12 national level KII respondents included policy makers, development partners, donors, academia and relevant non-governmental organizations (NGOs). At district level, we involved administrators and Regional Nutritionists. At facility level, we varied the cadres to involve administrators, nurses, doctors and nutritionists working with children with acute malnutrition. The 11 FGD with primary caregivers involved 6–10 members, and we did 3–4 per site. Of the FGDs, 6 involved caregivers in ITC, 4 caregivers in OTC and 1 with caregivers in SFP at Moroto RRH. The sample size was enough to reach data saturation.

The dependent variable is integration of structured play into nutrition services. The independent variables include health worker factors like training, cadre, numbers, workload and attitude. Health system factors included financing, partners, policies, structures, patient load, facility level, leadership. At family level, factors like caregiver relationship, level of education, socio-economic status, family size among others. For the qualitative aspects, we used KII guides and FGD guides for the caregivers of children with SAM. The study tools were pre-tested in a health centre around Kampala and then revised before data collection.

Data Collection

We used a pre-coded, pretested study tool to collect data on integration of ECD services within nutrition service delivery at the 3 Nutrition units. The components of the tool included policies along the six-health system strengthening blocks, structures, training and financing of ECD services. It is adapted from the NSQA tool, which is validated and is used to assess quality of nutrition services at health facilities in Uganda. However, the tool was revised to reflect ECD components that should be integrated in Nutrition services. Each of the six building blocks had a set of appropriate questions which assess the quality of ECD integrations according to the expected standards. Each response has a score, and we obtained total scores for each section and these were added to obtain total scores. We changed the total scores into

Table 1 Distribution of KIIs and FGDs

Distribution of KIIs (N=25)				
National level	Mulago	Moroto	Mbarara	Total
12	5	4	4	25
Distribution of FGDs (N=11)				
	Mulago	Moroto	Mbarara	Total
ITC	2	2	2	6
OTC	2	1	1	4
SFC	N/A	1	N/A	1

percentages by determining the scores of the facilities out of the total possible scores and multiplying by 100. Data collection for this tool was by direct observations, interviews with records clerks, administrators and facility heads, and it was administered by the research assistants. On the scheduled days for the hospital visits, the research assistants collected electronic data using the tools on the tablets. All quantitative data was extracted from the facility registers and study tools and entered in Kobo tools software. The software was programmed with internal checks to ensure completeness and logical entries. The data was backed up on a server (password protected) and external drive. Preliminary data was transferred to Stata V.18 for analysis. Qualitative assessments started after Facility assessments.

Data Management and Analysis

All the norms of KIIs were observed during data collection. Some interviews were physical while others were virtual on Zoom or phone calls. The KIIs lasted about 30 minutes, anonymity was maintained, and all interviews were audio-recorded. Paper transcripts, files of data and audio recordings from field interviews were kept securely under key and lock. Audio recordings were downloaded and stored in a password protected a computer and flash disc. This was followed by transcription of the recordings. Transcripts from FGDs in local languages were translated to English. When all transcripts were in English, analysis began. A code-book with code definitions and a data analysis plan was developed before the coding exercise started. We used electronic analysis. During the process, extra codes that were identified from text were defined and added to the code-book while other pre-determined codes and/or their definitions were changed to reflect what the text indicated in the data. The various codes were then grouped into categories, and themes were based on the objectives of the study.

As a quality control measure, about 5 primary documents were double-coded (manually and electronically). When all qualitative data was collected, transcripts were exported into Atlas-ti 7.0.83 for electronic coding and analysis using content thematic approach guided by the Social Ecological Model (SEM) model to locate barriers and facilitators of integration of ECD into nutrition services in Uganda. Selected quotes were identified and used in the write-up of study findings.

To ensure data quality, we hired experienced and multi-disciplinary research team including nurses, nutritionists and play therapists who had prior experience in data collection and SAM management. In addition, all the research assistants were trained on the proper data collection using the data collection instruments before data collection. Interview guides/questionnaires were translated into local languages. We used 2 independent raters during qualitative analysis. Data collection was supervised by the investigators. Finally, data collection instruments and procedures were pretested and revised before actual data collection.

The study protocol was approved by Makerere University School of Public Health Research and Ethics Committee (SPH-2023-514). Clearance was obtained from the Uganda National Council for Science and Technology, Mulago National Referral Hospital, Mbarara RRH, Moroto RRH administration and the Moroto District Health Officer before data collection. Written informed consent was obtained from all study participants. In addition, the study was conducted in accordance with ethical principles as per the Declaration of Helsinki.

Results

Status of Structured Play Integration at the Three Health Facilities

Overall, structured play integration into nutrition services was very low. Scores for each facility according to the building blocks assessed are summarized in [Table 2](#). The table shows that Moroto had much better scores than the other 2 facilities especially in the sections of nutrition service delivery and health information systems. All sites had very poor scores in the sections of leadership and governance, human resources and financing for nutrition programming.

Funding was the biggest gap at all sites as noted from the scores in [Table 2](#). We found that none of the health facilities allocated funds for ECD in their budget. However, all the 3 facilities have partners who donate in-kind support for ECD. There are no skilled personnel for play at any of the three health facilities. Play materials and space are present in Mulago and Moroto hospitals but there was no designated play area in Mbarara RRH. The supplemental feeding program site in Moroto did not have space or play materials. Although community departments exist in all the facilities, only in Moroto RRH does this department actively participate in ECD services. Furthermore, only Moroto RRH reported having

Table 2 Scores on ECD Integration from the Different Building Blocks (%)

Section	Moroto RRH	MNU	Mbarara RRH
Section A: Leadership & Governance	44.4	33.3	0.0
Section B: Human Resource trained	28.6	25.0	25.0
Section C: Financing for Nutrition program	16.7	16.7	16.7
Section D1: Facility ECD in nutrition service delivery	80.9	25.5	25.5
Section D2: Community Linkages for ECD in Nutrition	81.8	9.1	18.2
Section D: Nutrition Service delivery	81.0	22.4	24.1
Section E1A: Current guidelines/standards	83.3	66.7	33.3
Section E1B: Current Counselling cards/job aids	42.9	57.1	85.7
Section E1C: ECD in nutrition education materials for clients	66.7	0.0	0.0
Section E1D: ECD in growth monitoring and promotion charts	100.0	100.0	100.0
Section 2E: Storage of ECD in nutrition materials	100.0	25.0	100.0
Section 3E: Management for ECD in Nutrition Supplies	0.0	0.0	0.0
Section F: Health Information systems for ECD in Nutrition*	N/A	N/A	N/A
Total	61	32	36

Note: *Health information systems did not capture ECD at all.

a Continuing Medical Education activity on ECD. Nutrition registers (INR) were in place at the 3 facilities, and data was regularly reported. However, none of the health facilities captured Health Information systems for ECD in nutrition since there is no provision for this in the registers.

From the qualitative aspects, Moroto Regional Referral Hospital had fair scores as shown in Table 2 because they had a lot of support from UNICEF and other partners. They had received several training sessions on ECD, donations in terms of play materials and regular mentorship. In addition, they had the infrastructure at the facility to support play activities.

Respondents from the KIIs reported poor scores because of lack of funding, evidence that there is need for play activities in hospitals and heavy work loads by the health workers which leaves no time for play activities.

Barriers and Facilitators of Integration of Structured Play

The findings were generally similar across the three sites. However, some barriers were unique to the individual sites. For instance, national level stakeholders, health workers at facilities and caregivers all appreciated the value of play among children especially those with acute malnutrition. At the 3 sites, we found that play sessions in Moroto RRH are scheduled and regular, with play taking place about 3 times a week. However, in MNU, play only occurs when a volunteer offers to play with the children. Donated play materials are available and a play room is available, but it is always locked for fear of the play materials being lost. In Mbarara, play was not taking place.

The national and facility level barriers and facilitators of integration of structured play are summarized in Table 3.

National Level Facilitators

Uganda has a supportive policy environment to support ECD service delivery through the National Integrated ECD (NIECD) policy which has an integrated Strategy and multi-sectoral plan involving the three-line ministries; i.e Ministry of Health (MoH), Ministry of Education and Sports, and Ministry of Gender, Labour and Social Development (MoLGSD). The Uganda IMAM guidelines 2020 and the Maternal Infant Young Child and Adolescent Nutrition (MIYCAN) guidelines 2020 also clearly spell out the value of structured play and stimulation during nutritional rehabilitation. In addition, the presence of a community health structure supported by the village health team members (VHTs) is another facilitator for structured play integration into nutrition services. Involving the VHTs in ECD would be another facilitator as stated below;

Let us make sure we are doing a little more in the community than limiting ourselves in Health Facilities. (KII National level)

Furthermore, the interest and support from partners for ECD related activities enhances integration as demonstrated in Karamoja region.

Table 3 Barriers and Facilitators of Structured Play Integration into Nutritional Rehabilitation from Healthcare Providers

	Category	Barriers	Facilitators
	National level		
1	Policy level	<ul style="list-style-type: none"> • Lack of coordination • Nurturing care roll out was hindered by COVID-19 • The different sectors not developed their own operational plans • Lack of MoH strategy on ECD • Lack of data on basic package for ECD for MoH • No records on play activities to capture in HMIS • No Play therapists in the HR structure 	<ul style="list-style-type: none"> • National Integrated ECD policy Integrated Strategy-multisectoral and plan • Line Ministries involved • Lead ministry: MoLGSD • Adaptation of Nurturing Care Framework 2018 • Community Health workers/VHTs • IMAM and MIYCAN guidelines • ECD indicators in HMIS tools
2	Funding	<ul style="list-style-type: none"> • Lack of resources • Implementation of ECD is in projects with no sustainability plans • Partners who support ECD work in isolation 	<ul style="list-style-type: none"> • Partners like UNICEF, Action Against Hunger • Training on Caring for Carers by WHO • Locally available materials-not expensive/sustainable
	Health Facility Level		
3	Administration level	<ul style="list-style-type: none"> • No plans for ECD in the hospitals • No budget for play materials • Lack of knowledge or exposure to embrace the concept of ECD • No specification of play needs given to administration • No clear justification for play activities to be included in budget 	<ul style="list-style-type: none"> • Donations/funding to make buildings child-friendly-colours etc • Presence of partners • Presence of Play rooms/free spaces
4	Health workers	<ul style="list-style-type: none"> • Lack of training on Play/ECD • Priority is to save life • Focus on providing medical care and therapeutic feeds • Over worked – heavy work loads • No designated person to lead play • No Mindset of Play in hospitals • High turn-over of staff • Poor attitudes to work/patients 	<ul style="list-style-type: none"> • Presence of Play facilitators/therapists • Training on value of Play to Health workers • Health workers to prescribe play as part of treatment • If HWs love the children, more natural to play • Presence of more HWs so they have enough time to play
5	Facility characteristics	<ul style="list-style-type: none"> • Lower levels, rural setting • No space for play • Government facilities 	<ul style="list-style-type: none"> • Higher level facilities, urban setting • Private facilities • Presence of partners
6	Play materials	<ul style="list-style-type: none"> • No educational materials/guidance • No toys, especially for younger children • Children with disability not catered for • Caregivers steal donated toys 	<ul style="list-style-type: none"> • Presence of toys and volunteers • Local materials for play

Barriers

The main barriers reported include lack of planning, budgets and finances for ECD activities at national and district level. Lack of funding was highlighted as a major barrier as shown in the quote below;

Although we have so many nutrition partners, it is only few who are supporting this ECD into nutrition. (KII District leader Moroto)

Much as there is a NIECD, the different sectors have not developed their own operational plans. In addition, there is lack of coordination among the three line ministries implementing ECD services. Currently, there is a lack of clarity on guidance of implementation of ECD by MoH and hardly any data or guidance on the basic package for ECD implementation within the health system. In addition, the monitoring system for ECD activities is weak and the continued absence of ECD indicators within the District Health Information Systems (DHIS) hinders advocacy and planning for ECD implementation. Lack of ECD indicators was highlighted by one KII;

There is almost nothing that will help you pick some indicators that can capture aspects of ECD integration or structured play integration. (KII, National level)

Finally, the health structure lacks a specialized ECD cadre for example “Play therapist” who would spearhead ECD integration into service delivery and also provide specialized ECD services. The already over-worked health workers are left to take leadership of ECD with minimal or no training and lack of awareness about the value of play.

Health Facility Level

Facilitators

Facility characteristics which support structured play include higher level facilities, location in urban setting, privately owned facilities and presence of partners supporting ECD at the facilities. Where partners and well-wishers provide play materials, technical support and infrastructure to support play and stimulation, facilities are more likely to integrate play in the care of children with acute malnutrition. In addition, presence of play rooms and volunteers to play with the children was a main factor facilitating play.

Barriers

Barriers at administration level include lack of planning, budgets and knowledge about the value of play by the hospital administrators. The limited evidence on value of play makes it difficult to advocate for budget allocation to play at facility level. Hospital administrators indicated that they lack awareness of the specific requirements for integration of play in terms of play items, etc. Among health workers, barriers include lack of training, heavy workload, high turn-over of staff, poor attitudes to work/patients, and lack of leadership or designated personnel to support ECD activities. This is shown in the quote below;

We used to have play therapists on a project, but it ended so we focus on other activities; the medical and feeds. (KII, Health worker-MNU)

Caregiver Perspectives

Perspectives of caregivers on barriers and facilitators of play integration are summarized in [Table 4](#).

Facilitators

Caregivers believe that if play is scheduled just like the feeding and medicine time, play will be institutionalized at the facilities. This will involve setting a designated time allocated for all children at the facility to play. They also believe that if play materials are made from local materials which are locally available, then this would support play activities. Caregivers suggested that volunteers from among them should be entrusted with the responsibility for the toys to reduce on theft, boost toys production from locally and improve consistency of play.

Barriers

The caregivers highlighted the lack of knowledge/training about the value of play, limited skills to conduct appropriate play and stimulation, and limited access of play materials at the health facilities as hindrances to play. The lack of knowledge about play and stimulation for sick children was stated by a caregiver;

Me, I have never heard it anywhere that a child can play while sick. (FGD, Caregiver ITC Mbarara)

Table 4 Facilitators and Barriers of Play Integration Reported by Caregivers of Children with Acute Malnutrition

Category	Barriers	Facilitators
Children Characteristics	Children too sick to play	When children are better
Toys	Toys are expensive Toys are not available Toys not appropriate for age -young ones Toys not appropriate for disability Children fear some toys No source of local materials for toys Shy to bring local toys from home	Play is on the timetable Play materials which are locally made All children playing at the same time
Caregiver	Not aware about value of play Focus on healing then go home Worried about their children at admission Do not bring toys from home because they are too sick to play at admission to ITC Caregivers are hungry Caregivers are stressed because of being away from home	Volunteer from caregivers to be responsible for toys Supportive fathers buy toys and play with the children Money
Health facility Program	Health education to caregivers does not include play No time for play-busy with activities esp OTC No space Children make the place dirty	Scheduling of play activities Task-shifting; assigning responsibility of play activities to caregivers Accessibility of play materials

Caregivers also mentioned that some of the available materials were not appropriate for young infants under six months and those living with disabilities. Furthermore, it was explained that children fear some toys which are not culturally appropriate. Caregivers reported a lack of local materials to make toys while at the health facility and that they were ashamed to bring locally made toys from home to the hospital.

In addition, caregivers expressed anxiety about treatment outcomes when children were too sick at admission. Some caregivers from Moroto reported that they were hungry and stressed so they did not think about play. Time constraints were also described since the caregivers are fully engaged with activities at the facilities especially during Outpatient Therapeutic care (OTC), so there is no time to play. The lack of space to play and the fact that available space might be dirty for the children were also mentioned as barriers to play.

Discussion

Status of Integration of Structured Play at Baseline

Our baseline findings indicate that there is low integration of structured play at all study sites. Moroto was doing better than the other two sites because they have more support in terms of donors who keep training and re-training them and provide enough play materials. Moroto had the highest number who have been trained in ECD and other Nutrition packages. Moreover, they have a wider variety of cadres trained compared to other facilities which mainly trained Nutritionists. This explains why they are generally better. Since Karamoja region faces severe recurrent crises of child malnutrition, it has attracted attention of a number of donors. Availability of donor funding even in-kind has been noted to result good short term health outcomes.¹⁵ Despite the funding availability, Moroto RRH scores were very low in the areas of leadership and governance, financing and management of ECD in Nutrition supplies. This is not surprising since donors only work within the national framework. Currently, there is no clarity on the ECD package at health facilities, and there is no ECD data capture in the INR which would lead to improvement. Although MNU is a centre of excellence in management of acute malnutrition, it has neglected the psychosocial stimulation just as has been reported in a systematic review conducted by Daniel et al in 2017.¹⁶ Most nutrition units focus on the medical care and feeds and have not put emphasis on ECD.

Barriers and Facilitators of Play Integration into Nutrition Services

We found numerous barriers and facilitators to the integration of structured play into nutrition services. The barriers and facilitators were grouped according to the Socio-Ecological Model which reflected the occurrence of different factors at different levels. Barriers and facilitators were identified at individual, interpersonal, community and society levels including policies.

At individual level, the key facilitators include lack of appropriate toys and play materials which ranged from the actual absence of toys and materials to make toys but also encompassed the lack of culturally acceptable toys. Where toys are not culturally acceptable to children, they are unable to use the toys for play. At the interpersonal level, parents felt worried and anxious because of the illness of their child and therefore were unable to institute play. This is closely linked to the lack of knowledge both on the value of play as well as the possible strategies for play in children recovering from illness. Specific to the Karamoja region, hunger and stress were major barriers to integration of play in nutrition service. This finding is similar to a multi-country mixed methods study involving 18 countries revealed that lack of knowledge, space and funding were major barriers to the implementation of psycho-social interventions in children with SAM.¹⁷

At community level, facilitators such as interest and support from partners as well as VHTs who were able to support play. In contrast, the barriers at community level stemmed from a lack of sensitization and omission of play from the routine health education provided. Societal, regulatory and policy related facilitators included the presence of a policy at national level. Where policies exist, the possibility of implementing increases. However, the plans for ECD at national level are not reflected at the community and health facility level with the health facilities lacking both the plans and finances for ECD. Where support was present in the form of partners, implementation of play was more likely. Partners provide funding for training health workers, supporting volunteers, providing play materials and mentorship which ensure that play takes place at health facilities. This reflects the need to be intentional in planning for and instituting play as part of nutrition service delivery. The lack of dedicated staff trained on ECD in health facilities was reported as a major hindrance since health workers are usually very busy. They prioritize providing medical care for the children, and they are too tired after that to make time for play activities. This finding was also reported in a recent study.¹⁷

The strength of this study is that it is the first study in our setting to explore the practices of a WHO recommendation of provision of structured play during nutritional rehabilitation of children with acute malnutrition. This is especially important because there is scarcity of data in this field. The major limitation is the limited sample size where we involved only three health facilities. However, these few health facilities were strategically selected, and they enabled us to generate vital information that will help improve integration of structured play as per the WHO and national guidelines.

Conclusion

Our study found that structured play integration was very poor at the 3 facilities, but Moroto RRH was doing better because of the support it receives in terms of training and in-kind donations of play materials. Although some policies and guidelines are in place to support integration of structured play, barriers exist at different levels including lack of clarity of policies, implementation plans and guidelines, lack of coordination, funding gaps, monitoring, and data to aid advocacy. At facility level, lack of play materials, heavy work loads and lack of a designated person came out strong. There were demand side barriers where caregivers are unaware about the value of play.

Efforts to improve structured play are needed at national, district and facility level. At the national level, the Uganda Ministry of Health should engage partners to provide funding for play materials and training on structured play at all nutrition units. The next revision of national guidelines should emphasize the role of structured play activities in nutritional services. In the short term, the MoH should include ECD indicators in the national data capture registers to help with monitoring progress and improving coverage of structured play integration. In the long term, Uganda should establish a “play therapy” post in the Public Service structures so that they take leadership of structured play at health facilities. Districts and health facilities should plan, budget and monitor play activities in the nutrition services in their health facilities.

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors declare that they have no competing interest in this work.

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