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Implementation Research Compendium: A systematic presentation of the learnings from nine countries

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Introduction to implementation research and the case compendium

This case compendium provides summaries of nine implementation research studies carried out around the globe by UNICEF, its partners and other research teams.

UNICEF defines implementation research as: "The integration of research within existing programme implementation and policymaking to improve outcomes and overcome implementation bottlenecks."

Implementation research helps to improve the delivery of innovations or programmes, so that they achieve better results for children. It examines the effectiveness of implementation strategies (rather than the effectiveness of programmes themselves). It aims to identify solutions to delivery challenges in specific contexts, and to support more equitable, sustainable and scalable programming. Decision-makers and stakeholders are often closely involved in implementation research. UNICEF defines implementation research as: "The integration of research within existing programme implementation and policymaking to improve outcomes and overcome implementation bottlenecks."[1]

Implementation research is being used across many sectors, particularly in health and now increasingly in other policy areas such as early childhood development and education. Implementation research methods vary, but they **can produce insights in close to realtime and at a relatively low cost**. It is about demonstrating value in understanding how to improve results for children, through better design and transfer of programmes, increased uptake and coverage, and system strengthening.

UNICEF is committed to implementation research as a key difference-maker in accelerating outcomes for children and meeting Sustainable Development Goals. In early 2022, UNICEF held a four-day workshop to share learnings from implementation research and promote its use. The background paper is available here.[2]

Purpose of the case compendium

The purpose of the case compendium is to **summarize selected implementation research studies in a consistent format**, so that similarities and differences across studies, sectors and geographies can support cross-sector lesson learning. The case compendium is intended to enrich understanding of global implementation challenges and solutions, consolidate and accelerate learnings, improve implementation practice, and encourage wider use of implementation research to improve results for children.

How the project summaries are organized

The project summaries follow the same structure, covering:

- Country and topic
- Intervention implementation phase, type of study and implementation outcomes
- Background to the research, aims and objectives
- Equity considerations
- Context of the implementation research
- Research methods
- Other information about the implementation research
- Research findings:
  - implementation outcomes
  - implementation processes, strategies and mechanisms
  - implementation barriers and facilitators
- Recommendations and research impacts
- Discussion
  - summary
  - limitations
  - implications
- Case compendium editorial comments
- Reference links to available publications and external dissemination.

Implementation outcomes are the intended aims of implementation that were the focus of the research. To aid comparison between studies and highlight cross-sectoral similarities and differences, the compendium draws on existing implementation outcome classifications, which include:[3]

- Appropriateness: The perceived fit of the intervention for a given setting/population/problem
- Acceptability: The perception that an intervention is agreeable or satisfactory
- Feasibility: How successfully an intervention can be used within a given setting
- Adoption: The intention among stakeholders to employ an intervention

- Fidelity: The degree to which an intervention was delivered as intended
- Reach (coverage): The integration of an intervention within a community, organization or system
- Sustainability: The extent to which the intervention is maintained over time
- Cost: The cost impact of an implementation effort.

Similarly, the compendium describes implementation barriers and facilitators using an existing framework (tested and validated for implementation research in low- and middle-income countries),[4, 5 & 6] which classifies them under the following headings:

- The programme itself: Features of the intervention or programme that act as barriers or facilitators, such as low complexity, adaptability and having a clear relative advantage
- The individuals involved in implementation: Characteristics that act as barriers and facilitators, such as levels of motivation
- The organizational setting: Where implementation happens
- The wider context: Recipients' needs and resources, the local community conditions, policy, legislation, etc.

This structure provides a consistent, evidence-informed approach to the case summaries, which will aid consolidation of learning and its application to new implementation challenges, supporting improved results for children.

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3 Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., Griffey, R. and Hensley, M. (2011). Outcomes for implementation research: Conceptual distinctions, measurement challenges, and research agenda. *Administration and Policy in Mental Health Services Research, 38*(2), 65–76.

4 Damschroder, L.J., Aron, D.C., Keith, R.E., Kirsh, S.R., Alexander, J.A. and Lowery, J.C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science, 4*(1), 1–15.

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Overview of the case compendium and key learnings

This overview presents a description of nine implementation research studies with relevance for children and child rights. It outlines the inclusion criteria used to select the studies and summarizes key messages and learnings from across the studies.

The objective of the compendium was to present a balanced range of examples of IR with relevance for children across a diversity of sectors and contexts. The nine included studies were selected based on relevance for UNICEF priorities and diversity in the following characteristics: country income status; geographic region; sectoral focus; stage and scale of implementation; and research methods.

1 Study coverage

1.1 Focus

Most of the studies focussed on the implementation of a programme or set of programmes. These programmes had generally either been specifically developed for the country context or had originated elsewhere and been adapted to the country context. One study (Bangladesh) also explored the feasibility of undertaking implementation research in a humanitarian setting, and one (Ethiopia) described a wide-ranging initiative to build implementation research capacity.

1.2 Context

The country contexts included two low-income countries, two lower middle-income countries, five upper middle-income countries and one high-income country. The studies were often carried out in a particularly disadvantaged community within the country. The contexts included humanitarian (Bangladesh) and other fragile settings (Lebanon), and support for displaced communities (Greece/Lebanon), demonstrating the feasibility and importance of implementation research in these contexts.

1.3 Equity

Equity was a central focus of all the studies, either because equity was a focus of the programme (which, for example, provided support to populations or communities experiencing inequity) or addressed an underlying cause of inequity, or a practice or need particularly associated with inequity.

Equity may be under-utilized as a focus of implementation research.

Equity was less often an explicit focus of the implementation research itself, although one study addressed the conceptualization of inequity (Lesotho) and two considered reach to priority equity groups within the intended beneficiary group (Bangladesh and Serbia). This suggests that equity may be underutilized as a focus of implementation research, for example examining the reach to, acceptability to or appropriateness for priority equity groups within the intended beneficiary group.

1.4 Implementation stages

None of the studies were described by authors with reference to a specific model of implementation phase or stage.[1] Most addressed programmes that appeared to be at full implementation (including Malawi, which aimed to identify issues for the adaptation of an existing programme to a new population), with two at the initial implementation stage (Lebanon and South Africa). This may be indicative of **underutilization of implementation research at early stages of programme development**.

1.5 Implementation issues

1.5.1 Implementation outcomes

Surprisingly few studies were explicit about the implementation outcomes addressed and none referenced an existing classification or set of implementation outcomes,[2] although the terms 'acceptability', 'fidelity' or 'feasibility' were used in several papers.

The most common implementation outcomes explored (even if not explicitly referenced) were acceptability and feasibility, both of which were addressed by six of the nine studies. Four studies had findings that could be viewed as relating to appropriateness (Greece/Lebanon, Lebanon, Malawi and South Africa). Three studies measured fidelity (Greece/Lebanon, Lebanon and South Africa), and three addressed sustainment and/or scale (Greece/Lebanon, Jamaica and Serbia). Adoption, reach and institutionalization were more sporadically addressed. Implementation costs were not addressed in any of the studies, although this was part of the wider research project in the case of South Africa.

Overall, **studies would be strengthened by more explicit reference to specific implementation outcomes and by fuller coverage across them. The absence of findings relating to implementation costs is striking**.

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1.5.2 Implementation strategies

Studies generated learnings and recommendations relating to implementation strategies and processes (see further below). However, none of the studies tested or compared specific implementation strategies (for example, comparing the implementation outcomes of different training dosages or types, or of training versus learning collaborations). The strongest focus on implementation strategies was on studies describing implementation research capacity-building (Ethiopia) or the effectiveness of approaches to scaling (Serbia). There were no references to existing classifications of implementation strategies or the use of these in describing strategies used or not used. This suggests **there is scope for more purposeful and specific examination and testing of implementation strategies**.

1.5.3 Use of implementation frameworks

Only three studies referenced the use of an implementation framework or model. Two used the Consolidated Framework for Implementation Research[3] in the analysis of effective implementation factors (Bangladesh and Serbia), one used the Theoretical Domains Framework[4] and the Behaviour Change Wheel[5] (Jamaica) in developing programme content and approaches, and one used a synthesis of scaling-up frameworks to develop a specific framework for understanding scaling-up that was used in the study (Serbia). This suggests there may be scope to make fuller and more explicit use of implementation theory, frameworks and models in implementation studies to structure

investigation, analysis and reporting; achieve greater depth and acuity; and support the generalizability of findings.[6]

1.5.4 Implementation barriers and enablers

The implementation topic most extensively addressed across the nine studies was that of implementation barriers and enablers, where there was rich coverage of how features relating to programme characteristics, individuals involved, organizational setting and the broader context influence implementation. These findings are summarized below.

The nine studies thoroughly examined how implementation barriers and enablers, including programme characteristics, individuals, the organizational setting and the broader context, actively influence the implementation process.

1.6 Study methods

Seven of the nine studies used qualitative methods either alone (four studies) or in combination with quantitative data (three studies). One further study used quantitative data alone. Three studies were undertaken alongside an impact/effectiveness evaluation (Jamaica, Lebanon and South Africa), all of these involving a randomized controlled trial. Only one study (South Africa) reported on the interaction between implementation and effectiveness data, using a hybrid type 2 trial model,[7] although this terminology was not used.

Qualitative methodologies are powerful methods for implementation research,[8] particularly for exploring issues such as acceptability, feasibility, and implementation enablers and barriers. However, there may be more scope to incorporate quantitative methods, and particularly more scope for hybrid type 2 trials that explore the interaction between implementation effectiveness and programme effectiveness.

1.7 Stakeholder engagement

Stakeholder engagement was a strong feature of many of the studies, particularly three (Ethiopia, Jamaica and Malawi), and was the core focus of the study about capacity-building for implementation research (Ethiopia). Policy and practice stakeholders had been involved in programme development, the framing and prioritization of study aims and research questions, oversight, receiving ongoing findings, the interpretation and development of recommendations, and the dissemination of findings, as well as utilization. **Stakeholders were also involved as study participants** (and in four studies were involved only in this capacity). Members of the communities targeted by programmes were included in only three of the implementation research studies (Greece/Lebanon, Lebanon and Malawi). Here, they were mainly involved as study participants. The Lebanon study reported that community leaders contributed to the design and adaptation of the evaluation framework, but there were no other examples of community members being involved in shaping or steering the study, interpretation or dissemination.

Stakeholder engagement appeared to be an important aid to study findings being taken up and utilized. Several of the studies act as positive exemplars of the ways in which stakeholders can be more fully involved and the support this provides to using implementation findings in practice. The apparently limited involvement of the groups who are intended to be served by programmes (children, families and wider communities) is striking.

The key features of these studies are summarized in Table 1.

Table 1: Implementation research case study summary characteristics

Country	Sector(s)	Topic	Implementation phase				Implementation outcomes (explicit/ implicit)	Type of implementation research study	Methods	Author institutions
			Exploration	Installation	Initial imple-mentation	Full imple-mentation				
Bangladesh	Health (maternal, newborn and child health)	Barriers and facilitators to the implementation of maternal, newborn and child health programmes in emergency settings		x	x		Acceptability, adoption, feasibility, sustainability	Formative	Qualitative	University/research institute
Ethiopia	Health	Capacity-building in implementation research to strengthen a national health system and its response			x		Acceptability, fidelity	Evaluation (embedded in a randomized controlled trial)	Quantitative (supplemented with qualitative implementation studies)	University/research institute, UNICEF
Greece/ Lebanon	Education	Development and implementation of digital learning programmes		x	x		Acceptability, adoption, feasibility	Formative	Mixed methods	UNICEF
Jamaica	Early childhood development	Developing a school-based violence prevention programme for early years				x	Reach, feasibility, adoption	Exploratory	Qualitative	University/research institute, UNICEF
Lebanon	Parenting support	Piloting the implementation of a parenting programme in a fragile context				x	Acceptability, appropriateness	Formative	Qualitative	University/research institute, UNICEF, government
Lesotho	Social protection, health	Defining and operationalizing economic empowerment and health equity in cash transfer programming			x		N/a	Descriptive	Qualitative, quantitative, mixed methods	University/research institute, UNICEF, government
Malawi	Health (prevention of mother-to-child transmission of HIV)	Strengthening the implementation of a prevention of mother-to-child transmission of HIV programme for adolescent mothers in Malawi				x	Acceptability, appropriateness, adoption, fidelity, coverage, feasibility, sustainability	Evaluation	Mixed methods	University/research institute, UNICEF
Serbia	Child protection, early childhood development, education	How to accelerate the scale-up of UNICEF programmes for children and families		x	x		Acceptability, fidelity	Evaluation (conducted alongside a randomized controlled trial)	Qualitative (conducted alongside a randomized controlled trial)	University/ research institute, non-governmental organizations, UNICEF
South Africa	Parenting support	Implementing a parenting programme in a low-resource setting				x	Fidelity, acceptability, reach, sustainability	Descriptive	Qualitative	University/research institute, UNICEF

2 Key learnings from the implementation research

The key learnings from the implementation research are summarized by programme characteristics, individuals involved, organizational setting, broader context, and implementation processes and strategies.

2.1 Learnings related to programme characteristics

Across the studies, the findings pointed to programmes being positively received, and regarded as acceptable and feasible. Features that were viewed as supporting implementation included: programme content that was aligned with needs, interests and preferences; flexibility for those involved in delivery; and the inclusion of peer support. Several programmes included specific components to address anticipated barriers to engagement, for example providing transport, meals, childcare and home visits.

The main way in which programme characteristics presented barriers to implementation was the demand the programme placed on either participants or those involved in delivery, or both. For example, the programme might have been too intensive so that participants were not able to attend all sessions, or too onerous or complex for delivery as anticipated.

There were many detailed findings and recommendations for programme development and adaptation, including reducing intensity, complexity and demand.

2.2 Learnings related to individuals involved in implementation

Individuals involved in implementation includes both implementers and programme participants (i.e., service users). Several studies highlighted the important support for implementation stemming from programme-delivery staff's motivation, enthusiasm, commitment and engagement, and the positive and supportive relationships they appeared to build with programme participants. Only one study (Malawi) described the motivation of programme participants (i.e., those participating in the programme as service users; in this case, young mothers with HIV) as being an enabler, noting the self-efficacy, determination and resilience of the young women involved. Two studies involved lay workers (Malawi and South Africa) and one used a peer mentor approach (Malawi), which were viewed as positive aspects of the programmes.

The **main barriers to implementation** which were of concern to the staff involved in implementation were: programmes not being effectively aligned with skills and training levels (linked to the point above about complexity); professional norms, expectations and cultures hindering implementation (at both organizational and individual staff levels); and low retention of staff.

2.3 Learnings relating to organizational contexts

Features of organizational contexts tended to be discussed as barriers rather than enablers across the studies. These were:

- **Constraints relating to staff capacity**, including the number of available staff, the breadth of demands on their time, and their expertise and training

- **Constraints relating to physical conditions in programme delivery settings**, including overcrowding, lack of space, limits on confidentiality and privacy, insufficient equipment storage space and the distance of the location

- **Constraints relating to other aspects of organizational infrastructure**, including data and information systems, connectivity, hardware and other resources.

2.4 Learnings related to broader contexts

A key enabler noted by several studies was programme alignment with current policy frameworks, priorities and goals.

A key enabler noted by several studies was programme alignment with current policy frameworks, priorities and goals. Alignment with and reinforcement by other services was also noted as an enabler. However, as with organizational settings, **broader context factors were more frequently described as barriers to implementation**. These were:

- The **social circumstances of programme participants** and the stressors they faced, which acted as barriers to their engagement with, and full participation in, the programmes. These stressors included poverty, unemployment, food insecurity, lack of access to transport, lack of physical safety, overcrowding, ill health, loss, trauma, hopelessness and the demands on their time from domestic and employment commitments. At a community level, inter-ethnic tension and lack of community cohesion were also noted as stressors.

- **Social norms, expectations and stigmas**, which created barriers to people engaging with services.

- **Professional norms, expectations and cultures**, which obstructed engagement in implementation and the use of programmes, and the absence of professional incentives to engage in implementation research (Ethiopia).

- At an institutional level, **institutional distrust** (by programme participants and between institutional partners); poor partnership working, coordination or connectivity between services and institutions; and gaps in service availability, which constrained interagency working or meant that the individual stressors inhibiting participants' engagement were not addressed.

- **Physical conditions and infrastructure challenges**, such as poor transport systems, poor information connectivity and high data costs, and security risks arising from conflict and natural disasters.

- **Lack of alignment with policies, priorities or goals**; lack of support from policymakers or governments; and constrained public funding.

3 Uptake of learnings and recommendations

The implementation research studies generated a wide range of recommendations and proposed actions, relating both to programme development or refinement and to strengthening aspects of the broader context in which they operate.

Every implementation research study was able to point to ways in which the implementation research findings had been taken forward. These included:

- **Strengthening, refinement and adaptation of programmes**: This was the area where most take-up was described (Greece/Lebanon, Jamaica, Lebanon, Malawi and South Africa).
- **Programmes being adopted by the government or scaled up nationally** in the country of the study (Jamaica, Malawi and South Africa), or stimulating wider practice change elsewhere (South Africa).
- **Improved capacity for implementation research**: The development of a critical mass of expertise, new academic centres, and implementation research now being on government agendas and in university curricula (Ethiopia).
- **Informing or stimulating further implementation research activity** (Greece/Lebanon and Serbia).
- **Improvements to the service, policy and physical infrastructure needed to support programmes** – although very few improvements were reported here by implementation research teams.

None of the teams described the enactment of recommendations relating to the social circumstances of programme participant communities, social or professional norms, or institutional relationships, all of which had been described as significant barriers to implementation, nor did they describe actions being planned or taken to stimulate change in these areas. They are, of course, particularly entrenched aspects of the programming environment which require long-term and concerted change efforts, and which are more distant from the control or influence of the study authors.

Despite this, **it is clear from the nine examples that implementation research is being used to stimulate and achieve important change**.

4 Concluding comments

Overall, these nine instances of implementation research, demonstrate the power and utility of implementation research. They show implementation research learnings being taken up in practical ways for programme and service improvement, and the value of stakeholder engagement to support this. They demonstrate that projects that are modest in scale and methods can generate important learnings for practice.

They also point to ways in which the growing body of implementation research studies might be developed and strengthened as the field moves forward, so that the full potential of implementation research is realized and leveraged for the benefit of children and families.

The design of future implementation research studies could be strengthened by fuller and more explicit use of implementation theory, frameworks and models.

The design of future implementation research studies could be strengthened by fuller and more explicit use of implementation theory, frameworks and models. Moreover, studies could be strengthened by fuller coverage across implementation outcomes, more purposeful and specific examination and testing of implementation strategies, and greater incorporation of quantitative methods. Reporting on implementation research could be improved by more explicitly referencing implementation outcomes, the relevant implementation phase or stage, and classifications of implementation strategies.

There is also **scope to develop the ways in which programmes and implementation research address the wider (e.g., social and political) contexts in which programmes operate**. These are highlighted recurrently as barriers to implementation. The studies described demonstrate that implementation research can illuminate these contexts and their practical meaning for programmes. A future direction would be to put more emphasis in programmes on active strategies and work to change wider contexts, and to put more emphasis in implementation research on the effectiveness of these strategies.

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Bangladesh: Maternal, newborn and child health programmes in emergency settings

Findings from:

Embedded implementation research on health system strengthening for maternal, newborn and child health (MNCH) programme among Rohingya refugees in Cox's Bazar, Bangladesh

Introduction

In August 2017, the Rohingya people were forcibly displaced from neighbouring Myanmar and at the time of the research, over 706,000 Rohingyas had cumulatively arrived in Bangladesh, rising up to 774,000 displaced Rohingya people in June 2022.[1] As a non-signatory to the 1951 Refugee Convention, the Government of Bangladesh officially refers to them as forcibly displaced Myanmar nationals. The displacement, coupled with a previous influx, has created some of the largest and most densely populated camps in the world, with over 900,000 Rohingya refugees living at the Kutupalong and Nayapara camps in Cox's Bazar. Despite substantial progress during the past years, many Rohingya refugees in Bangladesh remain in a precarious situation due to many reasons, including poor living conditions, lack of safe water and sanitation, lack of support for education, poor health care and lack of livelihoods, among others.

Together with the Government of Bangladesh, more than 100 national and international non-governmental organizations (NGOs), United Nations organizations, and several donor agencies have been providing both preventive and clinical care, including health promotion, for the Rohingya refugees since the start of the influx. Maternal, newborn and child health (MNCH) services are the primary focus of the interventions. The high number and density of the population, the severity of the emergency, the broad range of activities underway by various organizations, lack of coordination among different actors and absence of a long-term plan for the population make the situation in Cox's Bazar unique and complex.

Intervention implementation phase, type of study and implementation outcomes

The study is exploratory and focusses on the implementation phase of the MNCH programmes. Although implementation outcomes were not specified, the study implicitly explores the implementation outcomes of adoption, feasibility and coverage/reach.

Aims and objectives of the implementation research

The research aimed to identify and address key challenges in implementing MNCH programmes, explore potential solutions, and actively engage decision-makers and implementers for effective utilization in camp settings.

UNICEF, in collaboration with BRAC University in Bangladesh, undertook embedded implementation research with the aim of strengthening MNCH programmes in Cox's Bazar District. The key objectives of the research were to identify key implementation challenges of MNCH programmes, explore potential solutions and ensure utilization of those solutions for effective implementation of MNCH programmes in the camps through the engagement of decision-makers and programme implementers. The research aims to help expand the limited scientific evidence base of the challenges that organizations are facing during service delivery and of strategies to address them.

There is still a knowledge gap regarding the challenges of conducting embedded implementation research in humanitarian settings. In recognition of this gap, an additional objective of the initiative was to document the methodological and operational challenges of conducting embedded implementation research in humanitarian settings.

The research therefore involved two complementary studies. The first focussed on exploring challenges and solutions relating to effective programme delivery, and the second on the experience of conducting such embedded implementation research in a humanitarian context.

Equity considerations

Utilization of MNCH services is very low among the Rohingya refugees. The majority of women give birth at home with traditional birth attendants or female family members and, as of February 2018, only 22 per cent of all births within Rohingya refugee camps in Cox's Bazar were facility-based. Coverage of immunization and services to prevent and treat other child health illnesses are also low in the camps. Adolescent married girls are less likely to receive reproductive health services. The contraceptive prevalence rate is 34 per cent among the currently married adolescents aged 10–19 years.[2] This research was designed to contribute to improving the delivery of programmes that aim to address inequities in access to and utilization of MNCH services among Rohingya refugees.

Context of the implementation research

This research was conducted in the Cox's Bazar District in Bangladesh. It specifically investigated the MNCH programme implemented among Rohingya refugees living in the Ukhiya Subdistrict (*Upazila*) of Cox's Bazar District in Bangladesh, with a particular focus on those Rohingyas living in the Kutupalong refugee camp. The context of the Rohingya refugee camps is complex, with multiple organizations providing MNCH services and playing key roles in formulating programmatic and policy decisions for the Rohingya refugees.

Rohingya refugees receive health care services from the primary health centres and health posts located within the camps. Health centres and posts offer a variety of MNCH services, including antenatal care, postnatal care, referral, normal deliveries, and counselling on infant and young child feeding indicators. Apart from the facility-based services, more than 1,200 community health workers provide community-based counselling and other services, and assist with referrals to different facilities.

Key study participants included MNCH programme managers working with local NGOs, international NGOs and United Nations organizations; service providers in health posts and primary health care centres (i.e., doctors, nurses) run by public and private sectors; and community health workers involved in providing MNCH services to the Rohingya community.

Methods for the implementation research

The implementation research involved two studies:

- First study: A qualitative study to explore the challenges and potential solutions for effective implementation of MNCH programmes. This study involved in-depth interviews (n=19) and key informant interviews (n=15) with purposively selected respondents from different organizations working on MNCH service delivery to Rohingya refugees in the camps in order to represent maximum variation. Interviews were conducted until there was no more new information being generated from them. Data analysis involved framework analysis with inductive and deductive coding. The Consolidated Framework for Implementation Research was used to guide the thematic analysis and presentation of the data.

- Second study: A qualitative study to explore challenges and key lessons learned relating to the design, implementation and management of the implementation research. This study involved observation in a primary health care centre and a health post within the Kutupalong camp, interviews with representatives from stakeholders supporting and implementing health programmes in Cox's Bazar (n=7), and interviews with purposively selected members of BRAC University who were engaged with data collection and analysis in the implementation research (n=5). Data were analysed using a thematic analysis approach.

Other information about the research

- **Funder:** The first study was funded by UNICEF Bangladesh. Open access publication of the study is supported by UNICEF through funding provided by a United States Agency for International Development (USAID) grant. The second study was funded by the Evaluation Section of UNICEF's Regional Office for South Asia (ROSA), Nepal.

- **Timescale:** The research was conducted between January 2019 and September 2019. Data collection for the second study took place in two phases between January and July 2019.

- **Stakeholder involvement:** A steering committee was formed to guide the research, which was composed of representatives of government and other key organizations (United Nations agencies, NGOs and international NGOs).

  The research questions were framed in collaboration with the relevant stakeholders in a consultative workshop, and hence reflected problems and issues faced on the ground. Research questions were selected through a prioritization exercise with relevant stakeholders. Staff from the UNICEF Cox's Bazar Field Office provided support to the research team to access the camps, and to identify and contact study participants.

  Staff from the Implementation Research and Delivery Science Unit (now part of the Primary Health Care – Health System Strengthening Unit) in UNICEF's New York headquarters were involved in the design, supervision and analysis of the studies. The first study was conducted by the James P Grant School of Public Health, BRAC University. For the second study, data collection and analysis were carried out by the Implementation Research and Delivery Science Unit in collaboration with the James P Grant School of Public Health, BRAC University.

Implementation research results

The studies identified a set of challenging factors and potential solutions related to MNCH service delivery.

Findings relating to implementation outcomes

The study explored barriers and facilitators to the implementation of MNCH programmes, and implicitly addressed the implementation outcomes of adoption, feasibility and coverage/reach.

Findings relating to implementation costs

The study did not explore the costs of implementation.

Findings relating to implementation processes, strategies and mechanisms

Many organizations offer MNCH services inside the camps, and so the overlapping of services is a challenge, e.g., with regards to the targeting of beneficiaries and the allocation of funds. Coordinated task-shifting at the field level has helped to reduce the high workload at health facilities and was recommended by study participants as a potential solution to tackle the high patient load.

The referral mechanism in the camp setting is weak due to – among others – poor coordination and lack of capacity. Potential solutions identified by study participants include the employment and training of referral managers, the creation of a rotational duty, forming partnerships with private facilities and better communication with the existing referral clinics in the camps. The study notes that the situation has improved after the introduction of a dedicated vehicle service and referral managers.

Findings relating to implementation barriers and facilitators

Programme characteristics

The specific features and characteristics of the MNCH programmes were not an area of focus in the study.

Individuals involved in implementation

Providing MNCH services within refugee camps demands collaboration between community-level staff and health facility personnel. Challenges arise, particularly in emergencies, due to untrained traditional birth attendants within the Rohingya community and occasionally inexperienced midwives or nurses.

Providing MNCH services inside the refugee camps requires unified efforts between the staff who are working at the community level and at the health facilities inside the camp. However, due to the presence of untrained, traditional birth attendants from the Rohingya community and sometimes inexperienced midwives or nurses, handling of emergency cases becomes complicated. While training for new recruits is common to boost their knowledge and skills, refresher training or post-training supervision is usually rare. Strategies used to motivate overburdened staff include the introduction of performance-based incentives (both in-kind and cash), provision of health insurance and supportive supervision.

Organizational setting

MNCH service provision is hampered by frequent staff turnover – especially among doctors, nurses and management information system officers. The loss of experienced and trained personnel at different levels contributes to reduced quality of care, as well as additional use of resources and funds for the capacity development of new and often inexperienced recruits. Other challenges relate to a lack of rational distribution and the limited availability of specialized staff, a shortage of female doctors and midwives, and a need for more field monitoring staff.

Supply chain management of medical supplies is challenged by the lack of qualified logisticians in some of the warehouses, absence of a functional cooling system or air conditioning, and shortage of certain supplies and medicines. Furthermore, procurement takes more time as most international organizations procure their medical supplies from abroad due to their unavailability in the local market and to maintain a good standard. The gradual increase of validated, locally manufactured medications was identified as a potential way to help reduce the burden of international procurement and to save time.

Challenges relating to the health information system include inaccuracies in the data, the inconsistency of data uploaded on the system and over-reporting, the absence of an individual patient tracking system, and data-sharing opportunities being hindered by differences in organizational reporting and requirements.

Wider context

As noted, the context of the Rohingya refugee camps is complex, with multiple organizations providing MNCH services. Health service delivery modalities and policies and related implementation challenges in the camps have changed continuously since the start of the crisis.

The lack of proper transportation channels complicates the delivery of supplies to the camps. The poor network of roads, especially damaged roads, makes it hard to transport supplies without damaging the supply.

Implementing the MNCH programme is becoming more difficult not only because of the gradual shrinkage of the funding, but also due to the pressure from donor agencies to cut down expenditure. Retaining highly qualified Bangladeshi personnel requires higher salaries as few staff members are adequately qualified for working in humanitarian crisis settings – especially in higher-level positions. Shortage of funding also affects the organizations' ability to employ qualified international staff.

Security concerns and the lack of safety of service providers is a big constraint for the effective implementation of MNCH programmes (e.g., verbal assault of service providers, health care providers not feeling safe). Another significant barrier to access of health care services is the risk of landslides triggered by soil erosion and heavy rains.

RECOMMENDATIONS AND IMPACTS

The research has provided an in-depth understanding of the barriers to implementing MNCH programmes in a challenging humanitarian context such as the Rohingya refugee camps in Cox's Bazar. Authors of the first study conclude that several of the identified barriers and challenges align with those mentioned in other reports and previous studies done in Rohingya refugee camps.

Recommendations for strengthening the implementation of MNCH programmes for Rohingya refugees residing in camps in Cox's Bazar include:

- Rational distribution of health care staff to reduce staff shortages and overburdening of health facilities
- Capacity-building of midwives on basic emergency obstetric care to help avoid serious complications and ensure timely referrals
- Training of traditional birth attendants and community health workers on pregnancy-related danger signs and motivating attendants to make early referrals
- Capacity-building of mid-line managers and health care workers and strengthening of the referral system
- Increased recognition of the security issues faced by field-level workers and introduction of relevant security measures (e.g., a risk assessment for health care staff, and a planning and monitoring mechanism for service delivery)
- Selection of key indicators and the introduction of an e-tracker system to improve data quality and harmonize the health information system, and the creation of a unified reporting system to improve record-keeping.

Research findings and recommendations were shared and discussed in a workshop with the participation of key stakeholders (e.g., government, United Nations agencies, NGOs and international NGOs).

Progress on implementing the recommendations has been challenged by the impact of the COVID-19 pandemic and a gradual decrease of international funding. However, the introduction of a free-of-charge transport service by the United Nations Population Fund has helped to improve the accessibility and utilization of emergency obstetric services among the Rohingya refugee population.[3] In addition, community health workers were trained on pregnancy-related danger signs to support timely referrals. Many agencies, including the media, have been vocal about security issues in the camps, which has been pertinent given a deterioration in the security situation.

Discussion

The study authors highlight that embedded implementation research can help bridge the gap between research and practice by embedding relevant decision-makers and programme implementers (programme managers, frontline health workers, etc.) in the process of research, and by focussing on the questions identified by decision-makers and programme implementers to help ensure that the knowledge generated is relevant.

The consultative process through which the research questions were identified, formulated and prioritized helped to create ownership and a joint understanding between the research team and programme partners. This has helped to ensure that several of the recommendations were actioned, as is outlined in the previous section, contributing to improved MNCH services.

Effective embedded implementation research in humanitarian settings requires addressing challenges through in-country partners and strategies before initiating funding or research.

Findings indicate that embedded implementation research can be done effectively in humanitarian settings if appropriate in-country partners and strategies are put in place to address or mitigate challenges, before commencing the funding or starting the research. Key challenges highlighted include: a complex context with multiple actors, the need for ongoing adaptation due to a dynamic situation and changing service delivery modalities, difficulties accessing the camps and research participants, language and other barriers to accessing quality information, and the limited availability of local research collaborators. Lessons relating to the design, implementation and management of implementation research in humanitarian settings are:

- *Understanding the local context and analysing the role of relevant stakeholders* are prerequisites to mapping potential operational challenges and identifying key decision-makers to involve in the research, in order to ensure the uptake of findings and recommendations. The research also highlighted the importance of considering the most appropriate way to engage stakeholders in the research – based on what is feasible for them. For example, programme implementers were periodically consulted and given opportunities to provide input at critical stages in the research, rather than asked for direct and continuous involvement throughout the research, as it was difficult to have regular meetings with all members due to their heavy workloads caused by the emergency response.

- The *research approach should be flexible*, with research questions and methods that can be modified as needed. Because health service delivery modalities and policies and related implementation challenges for MNCH programmes for the refugees changed rapidly, the research approach had to be able to adapt to changes, with research questions and methods modified accordingly.

- Instead of using complex experimental designs, implementation research with *simple descriptive methods that are nonlinear and iterative* in nature may be most appropriate to answer real-time research questions and, thus, to tackle real-time implementation challenges in humanitarian contexts. Study participants also suggested that it is critical that the *approaches and methods used enable quick results*, to help fill immediate knowledge gaps in the MNCH programmes as they arise.

Simple, nonlinear and iterative descriptive methods are more suitable than complex, experimental designs for addressing real-time implementation challenges in humanitarian contexts.

- Planning needs to pay close attention to how *access to refugee camps and research participants* will be achieved.
- *Recruitment of researchers who can speak the language of*, and are acceptable to, the study population is key.
- *Working with local researchers or research institutes* with specific skill sets and prior experience conducting research in the humanitarian context may reduce costs and time spent, and help ensure the collection of better quality data that are relevant for local policy and practice. Investing in collaborations with in-country researchers or research institutes provides opportunities to build their capacity for implementation research in humanitarian contexts, which may help to institutionalize implementation research in emergency settings.

Limitations noted by the authors relate to possible constraints in applying the conclusions to other humanitarian settings, given the uniqueness of every emergency. Moreover, interviews were limited to the service providers in the largest camp, meaning that variation in the challenges experienced by providers working in other camps in Cox's Bazar was not captured.

Case compendium editorial comments

The studies make an important contribution to implementation research through detailed exploration of the challenges in conducting such research in humanitarian settings. So far there have been limited examples of embedded implementation research in humanitarian settings. The research also provides a useful example of applying the Consolidated Framework for Implementation Research to categorize issues related to MNCH service delivery in a humanitarian crisis setting. For future studies it would be recommended to specify key implementation outcomes of interest to the study, e.g., acceptability, adoption or feasibility of MNCH programmes.

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Other related dissemination:

- Barua, M., Saha, A., Chowdhury S., Chowdhury, S., Sajow, S.H. and Sarker, M. (2022). Implementation of a community-based referral project to improve access to emergency obstetric and newborn care in Rohingya population during COVID-19 pandemic in Bangladesh. *BMJ Innovations, 8*(4), 247–254.

Ethiopia: Strengthening national health systems with implementation research

Findings from:

Capacity-building in implementation research in Ethiopia: Strengthening health systems in immunization

Introduction

Ethiopia's health system has undergone significant reform in recent years to strengthen the sector's health information systems and to accelerate the achievement of primary health care goals. In 2015, Ethiopia's first Health Sector Transformation Plan (HSTP-I) was launched by the Ministry of Health (MOH).[1] This was revised in 2021 (HSTP-II),[2] with a strategy underpinned by the 'Information Revolution'. The Information Revolution was a priority area in which evidence-based decision-making, with strong, robust data systems was a key area of focus.

Alongside the HSTP-II and Information Revolution, in 2017 the MOH initiated a Capacity-Building and Mentorship Partnership project, aiming to utilize local universities as key contributors to health system strengthening activities through the training and mentorship of health workers at all levels. The project centre, formed through a partnership between the Alliance for Health Policy and Systems Research (AHPSR), UNICEF, Gavi, the Vaccine Alliance and the University of Gondar, is a centre of excellence in digital health and implementation sciences, and recognised as a World Health Organization (WHO), Technical Support Centre in Implementation Research (TSC). Founding members of the TSC saw the value of implementation research in enabling a strong systemic response to health care, as aimed for by the HSTP-II, through enabling key decision-makers to design or refine health programmes, and to make evidence-informed, accountable decisions about the fit of these programmes with the needs of the national context.[3]

The TSC has supported the generation and use of implementation research and its findings through a team comprised of key programme decision-makers, the MOH and researchers affiliated to local academic and research institutes. The TSC has also contributed to a wider, international initiative – known as Decision-Maker Led Implementation Research for Immunization (DELIR). DELIR supports the generation of new knowledge around immunization and immunization interventions in low- and middle-income countries (LMICs) to inform implementation and improve coverage or reach.

To date, the centre has conducted different implementation research projects in areas of health systems, immunization, the health workforce, neglected tropical diseases, digital health and others. One of the flagship projects, which was conducted in collaboration with UNICEF, the AHPSR and WHO, was in the area of immunization. Immunization is a fundamental component of primary health care service delivery; however, in Ethiopia, the full vaccination coverage rate has been below 45 per cent and less than half of the national target of 90 per cent.[4] Complex, multifaceted barriers and challenges to implementation contribute to the disparity between actual and desired national immunization coverage.[5] For example, historically, immunization data had not been accurately and systematically captured, limiting their use and applicability in decision-making at both a local and national level. Previous research found that perceptions existed among staff in health facilities that data were not considered a priority as they had little influence on programmatic decisions.

Immunization is a fundamental component of primary health care service delivery. In Ethiopia, however, the full vaccination coverage rate has been below 45 per cent: less than half of the national target of 90 per cent.

This summary describes the centre's activity to build capacity for implementation research in Ethiopia.

Aims and objectives of the Implementation Research for Immunization initiative

The primary objective of the collaboration and work of the TSC was to embed implementation research within initiatives such as immunization programmes to address and support the mitigation of systemic and contextual implementation barriers. This work prioritized the role of implementation research in involving health system leaders, local communities and their context-specific knowledge to identify and explain implementation barriers, and to provide insight into finding and testing strategies to address them.

In the Implementation Research for Immunization initiative, the TSC selected, mentored and supported 10 individual immunization-related implementation research projects undertaken across the country. The projects had the overarching aims of:

- Strengthening and accelerating primary health care efforts in Ethiopia, through the context of immunization
- Supporting the delivery of immunization programmes, through understanding practical implementation challenges and fidelity considerations in immunization service delivery (e.g., cold chain management)

- Understanding the specific implementation considerations that exist between urban and regional/remote areas with regards to immunization and delivery of immunization programmes.

Equity considerations

The low reach of vaccinations across Ethiopia is an equity issue, exacerbated by wider social, economic and environmental determinants of health. Specifically, these considerations include:

- Gender inequities: Household decision-making power is associated with child vaccination coverage, yet typically, women's household decision-making power is relatively low.

- Urban/regional considerations: In Ethiopia, specific and dedicated implementation efforts are made to address regional and remote populations, and improve vaccination reach. However, this is typically at the expense of the implementation of similar programmes among urban centres, which inadvertently leaves these populations at risk of being unable to access this service.

- Service delivery/reach in displaced communities: Security and lack of appropriate infrastructure adversely impacts the reach and accessibility of vaccination services.

Strengthening local capacity and community engagement aimed to address these equity concerns, aligned with the 2021 HSTP-II commitment to "ensuring equitable access to and uptake of health care and addressing differences in health status or outcomes that exist in Ethiopia"

The Implementation Research for Immunization initiative

The TSC provided embedded implementation research support to build the capacity of the MOH, regional health bureaus and local/community health care workers through a range of activities, including research protocol development, workshops/implementation research support, data collection, analysis support and peer-reviewed publications. The centre also aimed to improve and support the capacity of decision-makers and junior researchers to harness implementation science, deliver immunization programmes more effectively and build the local capacity in this regard. This was achieved by the development of research teams of four to six members, with representation from senior researchers, junior researchers, PhD fellows and programme delivery staff, both at ministry and district levels.

In the five years since the inception of the TSC, over 25 implementation research projects have been completed in the broader health system aspects, including immunization across the country, working together with the MOH and the eHealthlab Ethiopia, University of Gondar.[6] Projects occurred in settings including health centres and

hospitals, and have been collated into a special journal issue in the *Ethiopian Journal of Health Development*, exploring issues such as immunization data generation and quality, cold and supply chain management, and attitudes/behaviours toward vaccination.[7]

The studies presented in the special journal issue reflect varied methodological approaches, implementation indicators and outcomes of interest. These include a range of:

- Data collection methods: Qualitative, quantitative and mixed methods were used, including key informant interviews and focus groups, desktop document reviews, administrative data reviews and analyses.

- Implementation indicators and outcomes: Barriers and facilitators to building local capacity were identified to enhance immunization service delivery at different stages of implementation.

In 2021, DELIR developed a supplement published in BioMed Central *Health Research Policy and Systems,* which included publications from the TSC in the Ethiopian context.[8]

A key feature of the studies was the embedded implementation research approach used, through the involvement of specialist stakeholders who were responsible for designing and conducting implementation projects themselves and actioning their findings.

Implementation research support approaches

The implementation research support provided by the TSC was comprised of the following activities:

Implementation research protocol development workshop

Once the research topic was identified in collaboration with the MOH based on the actual programmatic challenges, a collaborative protocol development workshop was conducted. Lasting one week, the workshop included topics such as: how to select research questions, how to set research objectives, how to develop a methodology that can help achieve the objective and data analysis approaches. There was also a consultation with key policymakers at the MOH and districts to identify on-the-ground challenges in immunization programme implementation. The workshop was designed so that senior researchers could help research teams to develop their own protocol by the end of the workshop. After the workshop, teams submitted their protocol to their local institutional review board for approval. Once approved and timetables developed for activities, their project could commence.

Field mentorship during data collection

Senior researchers provided hands-on support during the data collection process and oversaw how the teams gathered consent, collected data and assisted in reviewing data quality. Researchers provided project review updates every one to two months until the end of the project.

Data analysis workshop

Following the data collection period of the project, a data analysis and writing workshop was conducted. In the workshop, the teams prepared and analysed their own data to assist the development of writing scientific reports and papers. Support was provided to teams via lectures and in-depth software guidance. By the end of the workshop, research teams were expected to have prepared a manuscript to be submitted for publication.

Evidence dissemination workshop

The final step in the TSC approach was a workshop to help research teams develop dissemination materials, including policy briefs, posters and blogs about their project and findings. Teams presented their final dissemination materials to other workshop participants and received feedback on their documents and presentations. They were also provided with insights and recommendations about how these could be most effectively communicated.

These capacity-building activities have contributed to an understanding of what facilitates or is required from researchers and decision-makers for successful implementation research.

The capacity-building activities undertaken by the TSC illustrate effective approaches to embedding implementation research capacity across different stakeholder groups, from ministry officials to researchers and frontline health care practitioners, and the importance of stakeholder and community engagement.

Barriers and facilitators to the capacity-building initiative

Characteristics of the initiative

A key feature of the capacity-building initiative, and seen as a significant facilitator, was community engagement. A perceived existing disconnect between priorities or goals at a national level and the low level of engagement of different community-level leaders, were identified as major challenges of implementing a capacity-building approach across the country. This meant that, in practice, local capacity-building efforts, as well as linking all local-level actors at the lower level, had been undertaken in a context in which data generation, data interpretation and synthesis of findings were not previously prioritized. In turn, this severely impacted the ability to understand implementation issues and offer solutions based on local, contextually appropriate knowledge and insight.

The TSC work was designed and presented in a way that encouraged significant, meaningful community engagement of the right community-level individuals in capacity-building activities.

Individuals involved in implementation

With over 50 experts being involved in the work undertaken by the TSC, a critical mass of implementation research expertise is being developed in both universities and the health system. This expertise was therefore able to be deployed in more areas, to reach more Ethiopian communities, children and families.

Organizational setting

The TSC and stakeholders were instrumental in both creating and nurturing an implementation climate that was conducive to capacity-building. At an early stage, using the findings of prior research, a shared understanding was developed by the TSC and stakeholders about the complexities in planning and adapting immunization programmes across the country. Understanding key barriers such as implementation fidelity (consistent vaccination practices), human resource (practitioner) development and capacity, as well as general resource and infrastructure availability, enabled defined areas of work in which goals to remove barriers could be set. This was referred to as a commitment to a common goal; common because both research and health system perspectives were embedded in the development of the goal.

Wider context

Forming and continuing local partnerships between the TSC, health system leaders at different levels, and local communities and community leaders has been integral to improving capacity and sustaining engagement with the implementation effort overall. Accessing, prioritizing and actioning local community insights enables responses that are fit for the context and the needs of children and families.

Accessing, prioritizing and actioning local community insights enables responses that are fit for the context and the needs of children and families.

Research institutions such as the University of Gondar have utilized their organizational standing and networks to embed implementation research in post-graduate curricula such as masters and PhD programmes. As key organizations in the local context, this has also enabled the further capacity-building of frontline health care workers and decision-makers in implementation research training, so that a critical mass of people with a blend of implementation expertise and local expertise is developed for the future.

The learning system approach of the TSC and its partnerships (i.e., with ministries, implementers, researchers, communities and community leaders) has enabled the production of contextually relevant findings related to immunization in Ethiopia, which have been actionable by key decision-makers in rapid time.

RECOMMENDATIONS AND IMPACTS

The research team has highlighted a series of recommendations about what is needed from researchers and health system leaders for effective implementation research:

1 As a starting point, shared commitment from health systems and researchers/research institutions is necessary. This coalition also requires a shared goal, shared processes (or at least an understanding of each other's processes) and development of the health system as a 'learning health system' (i.e., one that is open to improvement and willing to see these improvements through to completion).

2 For researchers and research and training institutions:

- Researchers should ensure their research goal is to inform practice, not just to be published or inform the scientific literature. They need to value contributing to an evidence base that is practical and easily transferable to health or social service organizations working at district or community level.
- As organizations responsible for training and building capacity, implementation research should be part of the key curricula for degrees in health or social sciences. This is important to ensure a critical mass of skilled researchers across all levels are able to sustain implementation research work and contribute to scaling it up, if appropriate and necessary.

3 Creating a flexible and supportive research environment is hugely important. Researchers must acknowledge that many frontline implementers, policymakers and decision-makers may not have the research skills or experience, and will require support to engage with this area. Similarly, researchers need to recognize and value the knowledge and experience that those within the health system or within local or community contexts have.

4 For health systems:

- Ensure decision-makers have time for research. It can be hard to find time for policymakers and key decision-makers within the system to engage with research. However, the experience of the Ethiopian MOH has shown that investing this time, as part of embedding the ministry and their staff within the implementation research effort, results in time savings down the track. For example, the embedded collaboration between the MOH and researchers in the TSC saw development of community health data guidance documents, in use nationally within three months.
- Preparedness for the health system to be/become a learning health system. Generating evidence is only part of system improvement; it is also vital that the evidence is deployable at all levels of service delivery. This requires a willingness to create and act upon evidence as part of ongoing learning, and practice improvement to benefit outcomes for children and families.

The workshops helped participants build implementation research skills in a project context that is familiar to them. Most participants who have completed the programme to date are now undertaking small-scale evidence generation activities to ensure their work is informed by evidence. In the future, the eHealthLab Ethiopia team plans to develop the activities led by the TSC into a short-term curriculum.

The team reports that the impacts of this embedded implementation research work are profound and wide-reaching across the Ethiopian health care system. In summary, these impacts include:

- Embedded implementation research has become a priority agenda within the MOH and its projects, not just those within immunization.

- A cultural shift towards implementation research has occurred within the MOH. This has been achieved in part through the involvement of over 115 experts in implementation research projects, creating a critical mass of expertise both from research (universities) and the health system (MOH) settings.
- Findings from locally produced implementation research have contributed to the development of community health data guidance documents, which are embedded and currently in use to verify community-level data. The tool, which is designed to verify data between facility registers and the actual health service recipients, is now in use, particularly in maternal, newborn and child health services.
- A focus on understanding implementation considerations at the community level has helped target capacity-building efforts locally to embed and sustain the work, though this is ongoing.
- The eHealthLab Ethiopia has been established at the University of Gondar. This research unit's mandate is to explore the application of innovative information technologies in the health sector and institutionalize embedded implementation research in the country. In 2018, the unit became a Centre of Excellence in Health Informatics.
- Implementation science research is now part of the curriculum in masters and PhD programmes at the University of Gondar in public health, health policy and health information systems. Work is being undertaken to expand this to other universities to provide a sustainable means of building a cohort of skilled implementation researchers across Ethiopia. Training and mentoring has also been provided to health staff at federal and district levels, to further expand and embed the reach of the implementation science culture.

Discussion

A strong, collaborative research culture now exists in Ethiopia between public universities and policymakers, notably in the MOH. This has enabled implementation research to be embedded in policy from district through to national levels in primary health care programming. Achieving this has required the identification of systemic barriers (which are often attributable to context), a significant commitment to prioritizing and addressing these barriers, and enormous implementation efforts from a range of stakeholders to develop such a culture, particularly in settings with limited resources.

The local commitment and collaboration within the Ethiopian MOH and research partners was significant. The input of funding and support from UNICEF and other partners including WHO, the AHPSR, Gavi and the Vaccine Alliance were also instrumental in the genesis of this initiative.

Case compendium editorial comments

The initiative provides a powerful and valuable example of practical implementation science research and capacity-building activity, contributing to systemic cultural change. It provides a rich example of how researchers and research institutes can work in partnership with health systems and ministries to achieve significant and timely results for health service improvement.

The initiative provides a powerful and valuable example of practical implementation science research and capacity-building activity, contributing to systemic cultural change.

The implementation research capacity-building work presented in this case is a prime example of the importance of understanding and responding to context. The capacity-building effort remains ongoing in Ethiopia, particularly at the lower levels (district/community level), to further embed local expertise, respond to local implementation barriers and ensure sustainability in the impacts achieved so far.

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Other linked dissemination:

- Alliance for Health Policy and Systems Research (2021). Building capacity to take embedded implementation research to scale in Ethiopia. <https://ahpsr.who.int/newsroom/news/item/04-08-2021-building-capacity-to-take-embedded-implementation-research-to-scale-in-ethiopia>

- Implementation research for immunization. <https://ahpsr.who.int/newsroom/news/item/11-08-2021-implementation-research-for-immunization>

Greece and Lebanon: Embedding implementation research in digital learning programmes

Findings from:

Unlocking learning: The implementation and impact of the Akelius digital learning application for marginalized children

Introduction

Learning in school remains out of reach for many refugee and migrant children, due in part to language barriers.

Close to half of all refugee, school-aged children are out of school, and only 37 per cent of refugees attend secondary school (UNHCR, 2022). Learning in school remains out of reach for many refugee and migrant children, due in part to language barriers.

For migrant and refugee children in Greece, learning in school is often constrained by their lack of knowledge of the Greek language, as understanding the curriculum requires a high level of proficiency in Greek. While Greek as a Second Language (GSL) classes are offered, these often consist of students from various linguistic backgrounds and learning levels, with a frequent turnover of students and new arrivals, which makes it challenging for teachers to teach children in a single classroom. Schools have limited capacity to provide additional support in classes and so non-native speakers often do not enrol or drop out early.

In Lebanon, the country's trilingual education system is a significant barrier to Syrian refugee children accessing and succeeding in schools. This system puts Syrian refugee students without a strong understanding of English or French at an extreme disadvantage, especially in the transition to secondary schooling.

In 2018, UNICEF and the Akelius Foundation Partnership embarked on the co-creation of a digital learning programme in Greece and subsequently expanded this to Albania, Bhutan, Bosnia and Herzegovina, Italy, Lebanon, Mauritania, Sao Tome and Principe, and Serbia. The goal of the Akelius digital learning application is to provide students and teachers with a tool to accelerate language learning. The interactive application is free and requires no prior user information to access. In each context, the content and

features of the course are developed through a co-creation approach with frequent communication and feedback from implementing teachers based on the real-world use of the course with students. Within the UNICEF–Akelius partnership there is a strong emphasis on evidence generation to track progress, learn, inform and improve implementation. This case study covers the research from Greece and Lebanon.

The Greek-language version of the Akelius digital language learning course was developed for use in GSL classes for refugee and migrant children in non-formal education (NFE) learning centres across Greece. It is implemented through a blended approach, whereby the use of the application on tablets is integrated by teachers within face-to-face classroom teaching. Teachers receive training on the tool and how they can successfully integrate use of the application into their lessons. In Lebanon, the digital language application was also introduced as a teaching tool within face-to-face in NFE classes that help Syrian refugee children to strengthen their English or French language learning. However, following school closures due to the COVID-19 pandemic, NFE partners transitioned to remote learning.

Research carried out by the UNICEF Innocenti team found that the use of the Akelius application was associated with an improvement in students' language skills in both Greece and Lebanon. Implementation of the digital language course in classes also encouraged attendance, increased the motivation of students and improved other classroom outcomes for both students and teachers.

Intervention implementation phase, type of study and implementation outcomes

The study is formative and was carried out during the installation and initial implementation phases of the Akelius digital language learning application. The study could be described as a hybrid effectiveness implementation study as it tested the effectiveness of the Akelius digital language learning course, while at the same time gathering information on implementation. The study implicitly addresses the implementation outcomes of acceptability, adoption and feasibility.

Aims and objectives of the implementation research

The research was carried out by the UNICEF Innocenti team in Greece and Lebanon, and examined the development, implementation and effectiveness of the Akelius digital language learning application. The research was carried out in tandem with the implementation of the programme, and aimed to provide insight into how the digital tool was integrated into the educational process and how its use evolved over time.

Specifically, it aimed to:

- Understand the co-creation, use and journey to scale of the Akelius digital learning programme, and identify implementation challenges
- Estimate the effectiveness of using the application in improving learning outcomes
- Inform improvements in programme development and implementation
- Inform the global evidence base on the use of technology in education, particularly for marginalized children in development/humanitarian settings.

This case study focusses on the implementation experience and the learning this has generated.

Equity considerations

Investments in the language skills of refugees and migrants are critical for improving their access to education in the host country. The UNICEF–Akelius partnership aims to help children learn languages to facilitate their inclusion into schools in host communities and societies more broadly.

Investments in the language skills of refugees and migrants are critical for improving their access to education in the host country.

Digital learning has the potential to offer interactive and personalized learning for children, both in and out of school. However, even as the promise of education technologies may be great in low-resource and humanitarian settings, such contexts are also most likely to lack the human resources and infrastructure needed to use education technologies effectively and at scale. Depending on their design, delivery and use, education technologies can also exacerbate learning inequalities. More research is therefore needed to understand how to effectively implement education technologies for marginalized children.

Context of the implementation research

In Greece, learning centres provide NFE and homework support to refugee and migrant children, as well as their parents, so as to facilitate integration into the formal education system. UNICEF supported the Ministry of Education, Institute for Education Policy and Greek Language Center in the development and implementation of a GSL curriculum to harmonize GSL teaching practices across non-governmental partners. Learning centres are run by different NGOs, and the Greek NGO ELIX was the first implementing partner for the Akelius digital learning application.

In Lebanon, to provide a pathway to bring out-of-school children into the formal education system, the Ministry of Education and Higher Education has developed the 'Reaching all Children with Education' five-year plans. These plans rely on local and international NGO partners to implement NFE programmes for Syrian refugee children and adolescents that are regulated by the ministry. In 2019, three NGO partners supported by UNICEF Lebanon began testing the use of the Akelius digital application for foreign language teaching (either English or French) in their classes.

Methods for the implementation research

Implementation findings are based on mixed methods combining both quantitative and qualitative data collection and analysis. Qualitative data were collected through interviews and focus group discussions with multiple stakeholder groups, including teachers and students, and classroom observations. In Greece, this involved five purposively selected NFE learning centres implementing GSL classes across Greece and a total of 85 individuals. In Lebanon, a total of 34 individuals participated in qualitative data collection. In Lebanon, education staff of 72 learning centres also responded to a short survey regarding the transition to remote learning, including both UNICEF partners and centres not affiliated with UNICEF. Thematic content analysis was employed to code and analyse transcribed interviews, focus group discussions and observational data. Teacher feedback data were gathered over the course of implementation to understand their perceptions of the benefits of the digital tool, challenges that they or their students faced and use of the course in classes over time. In both countries, quantitative data, including learning assessments and attendance data, were also collected to assess the effectiveness of the use of the digital learning application.

Other information about the research

- **Timescale:** The Akelius digital learning application was first introduced into classes in Greece in early 2018. The introduction of an offline functionality in February 2019 allowed for the expansion of the course to more implementing partners and learning centres beyond Athens. In May 2020, the Greek Ministry of Education's Institute of Educational Policy added the course as a recommended tool for refugee and migrant children on its official remote learning web portal. By July 2020, the course was being used in 36 sites (refugee camps/learning centres) and reaching a total of 6,412 learners across the country. Interviews and focus group discussions were carried out between December 2019 and January 2020.

  In Lebanon, the Akelius digital learning application was first introduced in June 2019 in three centres serving 246 students. In March 2020, due to the COVID-19 pandemic, all face-to-face classes were suspended in Lebanon and NFE partners transitioned to remote learning. The course then expanded across the country to over 60 NFE centres covering a total of 7,237 refugee students. Qualitative data were collected during July and August 2020 and a survey of all NFE centres was administered in June 2021.

- **Stakeholder involvement:** The digital learning application and the content for each language that it teaches were developed by a team of software engineers, academics and linguists from the Akelius Foundation. The content and features of the digital application were developed iteratively using a co-creation approach, where teachers provided regular feedback to the software development team based on their use of the application in classes with students, including feedback received from students. Feedback from UNICEF education staff, based on regular visits to the learning centres, also informed adaptations.

Implementation research results

Findings relating to implementation barriers and facilitators

Programme characteristics

Several features of the Akelius digital language application were identified as important in facilitating its use and impact. The interactive nature of the content, progressive difficulty levels for games, and instant feedback and scoring were particularly useful in keeping students motivated and engaged. The personalized and self-paced nature of the course increased students' autonomy and was found especially beneficial for children at the lower learning levels and students falling behind. As a result of feedback from implementation, several content-related updates, and additional games and activities were gradually incorporated into the course.

The flexibility of the application gave teachers the freedom to use the tool in their classrooms as they saw fit, in accordance with their teaching goals and lesson plans. The course also supported teachers in monitoring the individual progress of students and in tailoring their support to students. Initial challenges identified by teachers in engaging effectively with the technology to blend it into their classes were addressed.

With the introduction of offline capability, the course was able to be used in locations with poor internet connectivity. In addition, the introduction of the 'Mesh Net' function simplified the process of downloading course updates in low-connectivity contexts as it allows devices to synchronize with one another without an internet connection.

Individuals involved in implementation

In both face-to-face and remote settings, teachers remained the key to successful implementation of digital learning. When introducing the digital course within face-to-face classroom implementation, teachers over time worked towards more systematic integration of the course into their regular teaching practice and lesson plans, to reinforce and supplement learning.

Providing teachers with the skills and resources to troubleshoot technological issues is key when implementing digital learning in low-resource settings.

Dedicated IT staff are not available at most learning centres, so responsibilities for providing technical assistance fall largely on centre directors. Centre directors and teachers have varied levels of knowledge of IT when it comes to troubleshooting issues. Providing teachers with the skills and resources to troubleshoot technological issues is key when implementing digital learning in low-resource settings. This is especially true in areas with high teacher turnover and in locations where implementing the programme is a challenge, as was found in Greece.

In Lebanon, the implementation of digital learning during school closures varied between centres, partners and teachers. Often those differences were based on the capacities of teachers and various technological constraints in communities. Moreover, the course was provided on devices (tablets or mobiles) owned by the household.

When classrooms closed, teachers provided technological support, including providing guidance and practical support to families in communities.

Distrust of institutions made refugee families in Lebanon initially sceptical of remote learning programmes. This meant that building and maintaining trust and relationships with community-based NFE actors was extremely important to encourage families to pursue education for their children after schools were closed. At the same time, education coordinators in Lebanon noted that caregivers were more engaged in their children's learning while using the digital course at home.

Organizational context

Hardware and connectivity limitations were important obstacles to the effective use of the Akelius digital learning application. In Lebanon, there is strong indication that the NFE centres that adopted the digital course as part of their remote learning curriculum were already better able to transition to remote learning, based either on their capacity, community access to digital devices and connectivity, or likely a combination of the two. Learning centres that did not adopt the digital application reported higher rates of internet-related challenges, both for teachers and students.

Storing the tablets securely was a challenge in Greek refugee and migrant settings, where tablets represent a high-value item. Hardware storage protocols were developed in response, but require further adaptation to the specific context of each implementation site.

Wider context

As noted, electricity and connectivity infrastructure were crucial for successful delivery. Education partners across Lebanon cited connectivity as the major barrier faced when providing digital remote learning, compounded by the high cost of data. Education partners reported providing internet Wi-Fi hotspots, subsidized internet cards and internet top-ups to their students to facilitate access.

The Greek content on the Akelius digital learning application is aligned with the Ministry of Education's GSL curriculum, which facilitated its approval as a recommended tool for remote learning for refugee and migrant children on the ministry's official remote learning web portal.

Implementation strategies were adapted based on feedback from teachers.

Findings relating to implementation processes, strategies and mechanisms

Implementation strategies were adapted based on feedback from teachers. The implementation support model was amended in response to feedback from teachers regarding the need for refresher courses in Greece and Lebanon. Teachers identified initial challenges in engaging effectively with the technology to blend it into their classes and highlighted the need for refresher training, especially after the deployment of new versions with major updates. In addition, the high turnover of teachers meant that not all had received the induction training yet. A comprehensive teacher guidance manual and an online tutorial were therefore developed to respond to these needs, informed

by teacher experiences in Greece and Lebanon. The manual aims to enable teachers to prepare the classroom environment, and provides pedagogical strategies for blended learning and for adjusting their teaching style to classrooms with various learning levels.

Establishing better communication and feedback processes increased teacher satisfaction and expanded the use of the digital course in classrooms.

The process of co-development was also modified based on feedback. In the early stages of implementation, communication between software developers and implementing educators was unsystematic and time consuming. Setting up an improved process of regular communication and implementation feedback protocols gave visibility to changes requested and made, ultimately increasing teacher satisfaction with the digital course and expanding its use in the classroom.

Findings relating to implementation outcomes

As well as findings relating to coverage/reach and feasibility, the research provides insight into acceptability and adoption of the Akelius digital learning programme. Satisfaction with the course increased as its content and user interface were constantly improved based on feedback from implementation. With each new version, teachers reported higher rates of student satisfaction and increased duration of use within their classes, suggesting further integration of the tool into their teaching practices. As noted, adoption of the course as part of their remote learning curriculum by learning centres in Lebanon was influenced by community access to digital devices and connectivity.

The way teachers used the course in their classrooms also changed over time. While the initial version of the digital course was used in classes mainly for recreation and as a reward for students, subsequent iterations of the course were used for more substantial teaching purposes (e.g., to review key concepts or as main body of focus for a lesson). In Lebanon, during the COVID-19 remote learning response, there were variations in the use of the digital course: as an integral part of the remote classroom; for homework for students; or simply as a tool that students and families could use as needed.

Findings relating to implementation costs

The study did not explore the costs of implementation.

RECOMMENDATIONS AND IMPACTS

The study authors offer a set of recommendations addressed to education technology developers, educators, and international organizations and governments:

- To deliver on leaving no one behind, organizations developing education technology solutions should design and test their tools in low-connectivity settings, to reach marginalized groups. A balance between high-quality interactive content and optimizing applications to function in low-connectivity settings needs to be found. Testing the Akelius digital learning application in multiple low-connectivity settings has informed the content that is added to the software.

- Continuous teacher training in digital learning is essential, particularly in humanitarian settings. The use of technology in the classroom should be closely linked to the methods of teaching in the context. Investing in teachers' skills and giving them the time to explore how technology can be integrated in their lesson plans is critical, as shown in both Greece and Lebanon. To help achieve this, video modules on the use of the Akelius course in real classroom settings for teacher training are being developed by the Akelius Foundation and added to the application.

- The use of technology for learning requires much more than a device held by a student and an engaged teacher. Governments and education providers should cost and invest in the entire support system for digital learning, including human resources to alleviate technological and connectivity challenges, monitoring and evaluation systems, and implementation research to understand how digital learning works. Doing this would reduce the burden that falls on individual teachers or organizations to provide technological support on top of their regular teaching duties.

- Investment is needed in connectivity, which remains a major barrier, as well as in subsidizing internet access to make digital learning accessible to more children (e.g., through 'zero-rating').

- Continued investment in monitoring and evaluation systems, as well as implementation research to understand how digital learning works, is needed. Implementation research is currently underway in multiple additional settings where the Akelius digital learning programme is active for refugees, migrants and other marginalized groups, including in Bosnia and Herzegovina, Cabo Verde, Italy, Mauritania, and Sao Tome and Principe.

Discussion

The research contributes to a better understanding of how to effectively implement education technology for marginalized children in humanitarian settings. Continuous feedback from implementation research improved the digital language course's content, structure and user experience – leading to increased integration in classes. The research was co-created with relevant stakeholders, which increased the relevance of findings, and data and analysis were fed back to support decision-making on an ongoing basis.

Findings resonate with that of other research, notably that the provision of hardware alone is not enough to improve learning outcomes. The effectiveness of technologies depends on the teachers' practice and their ability to integrate ICT into their teaching. This means that a clear pedagogical approach supporting teachers and their practice is essential. Furthermore, collaboration with users and teachers prior to, and throughout, implementation is crucial for enhancing content relevance, cultural appropriateness and impact.

Case compendium editorial comments

The studies from Greece and Lebanon offer an excellent case for the significance of implementation research in education technology programmes to improve their design, delivery and use. It helped ensure that the tool was fit for the educational needs of migrant and refugee children in Greece and Lebanon, and that it was aligned with the national curricula. Findings were also used to strengthen teacher training and other areas of implementation support. The work has several strengths, including the focus on understanding how the course is being applied and used by teachers – insights that will be important to support sustainability.

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Jamaica: A school-based violence prevention programme for the early years

Findings from:

The Irie Classroom Toolbox: Developing a violence prevention, preschool teacher training programme using evidence, theory and practice

Introduction

Violence in and around schools is likely to affect over half a billion children each year and leads to long-term negative consequences, including increased risk of physical and mental health problems, low academic attainment, school drop-outs, behavioural difficulties, conduct problems, juvenile delinquency, and crime and violence in adulthood.

School-based violence prevention programmes are an important component of the primary prevention of violence and the early development of antisocial behaviour but have received less focus than parenting programmes in LMICs. The evidence for teacher training programmes in preschools is especially limited.

Violence prevention in schools is crucial for addressing early antisocial behaviour, yet it receives less attention than parenting programmes in LMICs.

The Irie Classroom Toolbox – a school-based, violence prevention, teacher training programme for use with children aged 3–8 years – was developed in response to this gap. The toolbox was developed and trialled in Jamaica where, despite a legal ban, corporal punishment is widely used in preschools. Preschool classrooms in Jamaica have significant numbers of children with behaviour and conduct problems, and there is a reported prevalence of 12 per cent of Jamaican children aged 5–6 years with externalizing disorders.

This summary describes the development of the Irie Classroom Toolbox. The resulting toolbox consists of twenty 90-minute training modules to be delivered over one school year (through full-day workshops, half-day workshops and/or after-school support sessions). Each teacher also receives one hour of in-class support every month for six to eight months to support them in applying the strategies in their classroom. Teachers

are given a classroom assignment after each session to encourage them to use the strategies and engage in reflective practice.

The toolbox was found to be effective in community preschools in Jamaica. A cluster-randomized controlled effectiveness trial (Baker-Henningham et al., 2021) found reductions in teachers' use of VAC and significant improvements in the classroom environment. Benefits were sustained at a one-year follow-up. Improvements were also seen in child behaviour, the professional well-being of teachers and teacher retention. However, no differences were found for class-wide aggression between intervention and control groups at post-intervention. The toolbox has also been tested in a small cluster-randomized controlled trial with teachers in grade one of primary school. Benefits included reduced violence by teachers, improvements in the quality of the classroom environment and improvements in aspects of child achievements (Baker-Henningham et al., 2019).

Intervention implementation phase, type of study and implementation outcomes

The study was carried out during the installation and initial implementation phases of the Irie Classroom Toolbox programme. It is a formative, qualitative implementation research study. The study explores the implementation outcomes of acceptability, adoption, feasibility and sustainability.

Aims and objectives of the implementation research

The objective of the study was to develop a teacher training programme that aims to (1) prevent violence against children by early childhood practitioners and (2) prevent the early development of antisocial behaviour in young children/children aged 3 to 8 years, and that could be used by undertrained teachers in low-resource contexts.

The study involved three phases:

- In phase 1, data from the qualitative and process evaluation of an efficacy trial (2009–2010) were used to identify preferred behaviour management strategies and training methodologies, and enablers and barriers to intervention implementation in the Jamaican context

- In phase 2, the data from phase 1 were integrated with theory to design the core intervention and core implementation components of the toolbox

- In phase 3, the data from phases 1 and 2 were used to develop a theory of change, and to design the intervention materials and structure.

This summary focusses on how findings from phase 1 and 2 have informed the design of core implementation components and the selection of implementation strategies.

Equity considerations

The toolbox was developed as a programme specifically for use in early childhood classrooms in low-resource contexts, to be integrated into the existing early childhood education services in Jamaica, and delivered and supervised by existing staff. Although violence prevention programmes are available, their costs are prohibitively high for wide scale use in LMICs. In addition, the programmes can be complex to deliver and have not been developed to match the context in early childhood classrooms in LMICs (e.g., large class sizes, high child/staff ratios, few resources and paraprofessional staff).

Over 98 per cent of preschool children in Jamaica participate in early childhood education, hence offering potential for population-level reach. The toolbox was trialled and evaluated in disadvantaged, inner-city, high crime neighbourhoods.

Context of the implementation research

The trials and linked qualitative and process evaluations were done in community preschools in disadvantaged areas of Kingston and St Andrew, Jamaica, which have high levels of community violence. Community preschools are run through community organizations, with government oversight, for children aged 3 to 6 years living in the locality. Parents pay a small fee and provide the necessary school supplies. The Early Childhood Commission (ECC) is the government organization responsible for setting standards and monitoring quality in early childhood institutions, and providing ongoing professional development for teachers.

The community preschools in this study had high child–staff ratios, few teaching and learning materials, and poor physical conditions, including overcrowding and high noise levels. The intervention was implemented through the existing educational services and involved training existing staff. Most teachers were paraprofessionals without formal teacher training.

Preschools involved in the 2009–2010 efficacy trial were schools with three to four classes of children, and at least 20 children per class (24 schools).

Methods for the implementation research

Phase 1 involved qualitative and process evaluation as part of a cluster-randomized efficacy trial in 24 community preschools. This trial evaluated an adapted version of the Incredible Years teacher training programme. The intervention was tailored for the Jamaican preschool context based on extensive piloting work.

As part of the qualitative evaluation, in-depth, semi-structured interviews were conducted with Jamaican preschool teachers who had participated in the training programme at the end of the intervention period (n=35). Five years later, a purposive sample of 20 of these teachers was interviewed, selected based on a proxy measure of teacher competence in the intervention. At post-intervention, the interview guide focussed on what aspects of the training content and process teachers liked best and were most effective, and on barriers and enablers affecting teachers' implementation

of the strategies. At the five-year follow-up, the main focus of the interviews was on the extent to which teachers continued to use the strategies over time and what factors affected the sustainability of teacher implementation. Interviews were recorded and transcribed, and the data were analysed using the framework approach.

The process evaluation drew on record forms completed by facilitators after each teacher training workshop and in-class support session that documented (1) teachers' challenges, questions and suggestions for modifying strategies; (2) facilitator perspectives on the barriers and enablers to implementation; and (3) how barriers were overcome. Facilitators also kept an ongoing log of their interactions with teachers and reflections on the training.

During phase 2, core intervention components were identified based on a review of evidence-based, behavioural interventions for use in early childhood classrooms. The toolbox was developed to include components and strategies that are (1) used across a range of evidence-based child behaviour modification interventions, and (2) acceptable, feasible and effective in the Jamaican preschool setting based on the data from the qualitative and process evaluation.

The identification of core implementation components was guided by behaviour change theoretical frameworks (Behaviour Change Wheel and Theoretical Domains Framework). The barriers to teachers' implementation of the strategies identified through the qualitative and process evaluation were categorized (skills, opportunity, motivation) and linked to factors influencing behaviour change (e.g., knowledge, skills, beliefs). Behaviour change techniques were then chosen to address each barrier, prioritizing teachers' preferred techniques where possible.

As noted, this summary focusses on how the analysis of barriers and facilitators informed the intervention content and implementation process.

Other information about the research

- **Funder:** The Irie Classroom Toolkit was developed and trialled with funding from the Medical Research Council, Wellcome Trust, UK Aid and the National Institute of Health Research, UK. The content of the key paper referenced in this summary was developed with support from the New York Academy of Sciences, and funding for open access came from UNICEF and the New Venture Fund.

- **Timescale:** The post-intervention qualitative interviews and process evaluation were carried out in 2009–2010, and follow-up interviews in 2014–2015.

- **Stakeholder involvement:** An advisory committee with representation from the ECC provided feedback and input into the intervention design and implementation of the toolbox on an ongoing basis. The committee also provided feedback on the programme's technical documents, and helped with the alignment of the toolbox with the ECC's policies and guidelines.

Implementation research results

Findings relating to implementation barriers and facilitators

The qualitative and process evaluation produced some comparable findings related to enablers and barriers to teacher implementation of the intervention, and to teachers' preferred (and less preferred) strategies.

Characteristics of the programme

Having a choice of different strategies to manage children's misbehaviour and engaging in collaborative problem-solving to select strategies were important enablers. Teachers were most likely to choose and adopt behaviour management strategies that they liked, found easy to use, and viewed as effective and offering benefits to the children and to themselves (at both post-intervention and the five-year follow-up). These commonly used strategies included paying attention to positive behaviour and explicitly teaching children the expected behaviour. Strategies not used included consequences and time-out, among others, because they were considered difficult to use and had unintended consequences.

Teacher preferences informed the selection of strategies for inclusion in the toolbox as part of phase 3. The toolbox provides teachers with a menu of strategies (both preferred and non-preferred), and teachers are able to choose strategies according to the needs of the children, their classroom context and their own personal preferences. There are five key components, repeated and reinforced throughout the programme. Time-out was omitted as a strategy based on its lack of acceptability, feasibility and perceived effectiveness in the Jamaican preschool context. Collaborative problem-solving on how to use appropriate behaviour management techniques was maintained as a key aspect of the intervention.

Individuals involved in implementation

Barriers related to the teachers themselves include it being difficult to change old habits and to adopt a new mindset, lack of motivation, having inappropriate expectations of young children, norms supporting the use of harsh punishment, lack of reflexivity and lack of confidence. During phase 2, specific behaviour change techniques were identified to address teacher motivation, including providing feedback, self-evaluation/self-monitoring, cognitive restructuring/reframing, action planning and goal setting. The barrier around norms supporting harsh punishment was addressed through feedback on the effect of the teachers' behaviour on the child(ren), and assigning teachers homework to record the effect of strategies on individual and class-wide child behaviour.

Teachers and facilitators recognized the importance of supportive relationships in motivating and encouraging teachers' sustained use of the strategies. Facilitators were also trained in how to form a therapeutic alliance with teachers and manage resistance.

Teachers' perceived barriers related to defiant child behaviour, children not engaging in learning activities and children not being socialized to positive discipline. Behaviour change techniques identified in response included the provision of activities (such as games, storybooks and songs) and support for action planning.

Organizational setting

Factors that prevented teachers' use of certain strategies also related to the school, e.g., high child/staff ratios and lack of space/overcrowded classrooms. For instance, several teachers found it difficult to use time-outs due to the lack of space in the classroom, a strategy which was consequently dropped.

Teachers also reported insufficient resources. In response, the toolbox provides the necessary resources (e.g., picture cards, storybooks, puppets) and engages teachers in collaborative problem-solving to overcome barriers to implementing the strategies.

Teachers also reported a lack of time to use strategies that require teaching and rehearsing skills, and playing games. It was identified that this could be mitigated by action planning, and the provision of lesson plans and activity guides to help teachers integrate the strategies into everyday teaching activities.

Wider context

Teacher-reported barriers related to government policies include the demands of the curriculum and the formal dress code for teachers not being conducive to working with young children (e.g., sitting on the floor, playing games outside).

The wider context also includes social norms supporting the use of harsh punishment, which influences teacher perceptions (e.g., a belief that some children can only be managed using corporal punishment and/or that some behaviours deserve corporal punishment). Selected behaviour change techniques are the social processes of encouragement, pressure and support (e.g., through group activities with teachers).

Findings relating to implementation processes, strategies and mechanisms

The selection of core implementation components during phase 2 was informed by behaviour change theoretical frameworks, findings from the qualitative and process evaluation, and practical considerations relating to feasibility. Teachers' preferred methods of training were prioritized when possible.

Teachers identified the most effective training strategies as practical and hands-on aspects (e.g., role-playing, rehearsal and practice); demonstrations/live modelling by the training facilitators; in-class and group support; the provision of necessary materials; and the use of fun, collaborative and supportive training methods to promote teacher motivation. Facilitators modelling the use of the strategies in interactions with teachers was found to be powerful and this became a core feature of training. This ensured that teachers have direct experience of how strategies lead to changes in behaviour and motivation.

Drawing on the implementation research data, the toolbox programme now involves training teachers in the core intervention components in facilitated workshops, individual in-class support sessions, and text messages.

Drawing on the implementation research data, the toolbox programme now involves training teachers in the core intervention components in facilitated workshops, individual in-class support sessions and text messages (to remind teachers to use the strategies). Teachers are given practical classroom assignments after each in-class support session, and receive intervention manuals and materials (picture cards and storybooks) to use with the children.

Training manuals are available for facilitators to deliver the training workshops and the in-class support sessions. Facilitators are first given training as participants to promote their understanding of the content and the rationale for the training techniques used, as well as to address beliefs and social norms relating to violence against children. Monitoring of implementation quality is integrated in programme delivery and includes the use of facilitator self-evaluation forms to promote reflective practice in supervision.

Selected implementation strategies (i.e., workshops, in-class support) are also widely used in government in-service training globally, thus increasing the feasibility of widescale dissemination of the toolbox through existing in-service teacher training initiatives.

Findings relating to implementation outcomes

This study collected data regarding acceptability and feasibility to inform the development of the toolbox for use in low-resource contexts. The programme was acceptable to teachers, as was indicated in the satisfaction ratings that teachers provided as part of the efficacy trial. Adaptations to the materials and methods used improved the cultural and contextual fit. The study also explored the adoption and sustainability of behaviour management strategies by teachers, with relevant observations noted above. Teachers reported sustained use of praise and explicitly teaching the expected behaviour. The majority did not use time-outs at the five-year follow-up, and this strategy was consequently omitted from the toolbox. Teachers were motivated to continue using strategies when they recognized the benefits to the children and to themselves.

Findings relating to implementation costs

The study did not explore the costs of implementation.

RECOMMENDATIONS AND IMPACTS

Findings from the qualitative and process evaluation have informed the design of the toolbox content, intervention materials and structure. The toolbox is designed to be integrated into the existing early childhood education services in Jamaica, and delivered and supervised by existing staff. The programme has been adopted by the Government of Jamaica, and training of ECC staff to implement the programme started in 2019. The research team's long-standing relationship with the ECC team, and support from external partners – including the Violence Prevention Alliance - Jamaica Chapter, and UNICEF Jamaica – were important in facilitating government adoption.

The next step for the toolbox will be sustained integration of the programme in routine activities of the ECC, including in ongoing teacher training initiatives, supervision and inspection. To this end, the research team has been working closely with the ECC to ensure alignment with the operational guidelines for early childhood institutions, and to advise on potential adaptations to the delivery model to fit with ECC structures and activities.

The toolbox is being made available through a Creative Commons licence to the international community, to contribute to the global agenda on violence prevention.

Discussion

Teachers' preferences were incorporated into the intervention design to increase acceptability and effectiveness.

The toolbox, which was developed by integrating user perspectives with theory, is grounded in the common core elements of effective behaviour management and uses evidence-based behaviour change techniques. Teachers' preferences were incorporated into the intervention design to increase acceptability and effectiveness. The toolbox programme highlighted that development and adaptation are an ongoing process; it is important to continue to evaluate the programme and integrate lessons learned into ongoing development.

The study findings align with common enablers of other early childhood development (ECD) programmes and aspects of implementation that have been found to be important, e.g., group support from peers, provision of intervention materials, ensuring benefits of intervention are made tangible to programme recipients and staff, and the importance of problem-solving skills as an implementation strategy.

Although the toolbox was developed for the Jamaican preschool context, the content and process of training is likely to be widely applicable to other LMICs with an established preschool network. The intervention is integrated into existing services and is relatively low cost, requiring few specialist resources. The toolbox can also be adapted for use in the early grades of primary school and an adapted version has already been used with grade one teachers in Jamaican primary schools.

The process of developing the toolbox also provides a framework for adapting it to early childhood settings in other LMICs. Adaptation would involve identifying to what extent the enablers and barriers to intervention implementation differ in the new context, and making changes to the content, structure, materials or process of delivery as needed. Multiple behaviour change techniques can be used to address each barrier to intervention implementation, as long as core intervention and implementation components remain intact. Adaptations would also need to be made to the visual aids used with the children to ensure that they reflect the cultural context.

Finally, the process followed for the toolbox – of integrating qualitative data with evidence-based theory and practice – could also be appropriate to develop, adapt and refine other ECD or public health interventions in LMICs. Several of the applied principles and processes are also relevant to other behaviourial change interventions in this area.

Case compendium editorial comments

This study is an example of rich implementation research informing intervention design and adaptation. The study applied implementation science principles in the design and implementation of the toolbox. It incorporated common core components of relevant evidence-based programmes and selected evidence-based implementation strategies to fit identified barriers. Careful consideration of fit to context, sustainment and scalability led to an intervention that is well adapted to the Jamaican context and that can be delivered through existing services. The study also offers a good example of how close collaboration with relevant government organizations can support buy-in and ultimately increase programme adoption.

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1 *Bangor University, United Kingdom of Great Britain and Northern Ireland; Caribbean Institute for Health Research, University of the West Indies, Jamaica*

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Lebanon: Parenting programmes in fragile contexts

Findings from:

Implementation evaluation of the mother child education programme among refugee and other vulnerable communities in Lebanon

Introduction

Poverty, war and displacement can drive instability within the family, compromising parental well-being and positive parenting practices, with detrimental effects on child development. Programmes that target responsive caregiving and foster holistic development during the early years can help reverse or attenuate these effects. Parenting programmes that focus on caregiver skills and well-being have, in particular, proved to be important because of the critical role that parents play in children's development, and in mitigating their exposure to risk and harm.

The Mother-Child Education Program (MOCEP) is a group-based intervention designed to foster positive parenting practices and to promote holistic early childhood development, with a focus on school readiness.

The Mother Child Education Program (MOCEP) is a group-based intervention designed to foster positive parenting practices and to promote holistic early childhood development, with a focus on school readiness. The programme was designed by the Mother Child Education Foundation (AÇEV) in Türkiye and has been disseminated in 15 countries to date.[1] Studies in Türkiye targeting low-income families have indicated that MOCEP improved parental knowledge and practice, and empowered mothers and their children.

MOCEP was implemented in a humanitarian context for the first time in Lebanon. This involved a pilot waitlist-randomized controlled trial and an implementation evaluation. The programme was trialled among two refugee communities and one other marginalized community in southern Beirut, Lebanon. The impact evaluation found that the programme had a positive impact on disciplinary practices and parenting stress in a context of high fragility. The positive impact of the programme was significantly greater for mothers who attended 14 or more of the 25 sessions. The trial did not detect any positive impact on behavioural or emotional outcomes among children, and the study

suggests that broader effects on maternal and child outcomes may be dependent on programme attendance and the availability of other services.

A train-the-trainer model was used during the pilot in Lebanon. Three trainers went through regular training organized by the local implementing organization, lasting 10 days, which covered the content of the topics delivered in MOCEP and the facilitation skills needed to work with parents. MOCEP was implemented over 25 sessions through group meetings that each lasted approximately three hours. The programme combines lectures, practical demonstrations and assignments to be completed in the home. The Mother Support Program component of MOCEP is a group-wide discussion at the start of each meeting, whereas the second component, the Cognitive Training Program, provides mothers with techniques to support several child development domains. Trainers conducted two home visits per household over the course of the programme to provide additional advice and support to participating mothers in their application of the programme's content.

Intervention implementation phase, type of study and implementation outcomes

The study is a qualitative evaluation conducted alongside a randomized controlled trial, carried out during the installation and initial implementation of MOCEP in Lebanon. The study explores the implementation outcomes of acceptability and fidelity.

Aims and objectives of the implementation research

The implementation evaluation was carried out alongside the randomized controlled trial and focussed on the identification of barriers and enablers of MOCEP's implementation in Lebanon. Specifically, this study aimed to systematically characterize the implementation and evaluation of MOCEP through four main processes: (1) characterizing key contextual factors among the target population; (2) describing the enablers of and challenges to programme enrolment and participation; (3) assessing the barriers to programme quality, attendance and adherence; and (4) exploring the opportunities for, and threats to, evaluating the programme through a waitlist-randomized controlled trial design.

Equity considerations

There is relatively good access to ECD programmes in Lebanon, including in vulnerable communities. In the communities targeted in the evaluation, families had access to services such as nurseries under the jurisdiction of the Ministry of Social Affairs. However, the quality of ECD programmes varies. MOCEP is implemented to support the existing system, and its premise is that parental engagement is key in driving the quality and impact of ECD programmes. In particular, MOCEP focusses on practical tools that parents can implement to strengthen quality child/parent interactions.

The implementation evaluation sought to enhance evidence on ECD programme implementation in humanitarian settings, with a focus on pre-programme conditions and contextual analysis.

The implementation evaluation aimed to contribute to strengthening the evidence on the implementation of ECD programmes – and MOCEP in particular – in humanitarian and fragile settings. The evaluation included a contextual analysis of conditions prior to the start of programme implementation, including with regard to the socioeconomic context and stressors.

Context of the implementation research

The Lebanese Ministry of Social Affairs generally supports ECD programmes, including parenting support. Implementation of ECD programmes, however, is led by national and international NGOs.

Staff members at the Arab Resource Collective (ARC), a Lebanese NGO, conducted and oversaw all aspects of the programme implementation. Three trainers were responsible for delivery of MOCEP, one in each site. Community-based organizations and community leaders facilitated recruitment for MOCEP and supported community engagement.

The target sites were selected based on existing partnerships between ARC and neighbourhood community centres, as well as on recommendations from Lebanon's Ministry of Social Affairs and the United Nations Relief and Works Agency for Palestine Refugees in the Near East. Sites included two of the largest refugee communities in Lebanon that have historically been home to Palestinian refugees (Bourj El Barajneh and Shatila), and a neighbourhood of primarily low-income Lebanese families in Beirut (Chiyah).

Eligibility for the MOCEP pilot and study was based on three inclusion criteria: The mother (or other female primary caregiver) should (1) be able to read and write in Arabic; (2) have a child between 2 and 7 years of age; and (3) be able to commit to participate in the complete 25-session MOCEP curriculum, to the best of her ability. Mothers were recruited from the catchment areas of the partner NGOs.

Methods for the implementation research

The evaluation framework for the implementation evaluation covered six overarching domains: (1) exploration of context; (2) enrolment; (3) quality of programme implementation; (4) attendance, adherence and perceived maternal engagement; (5) self-reported impacts, including acceptability of the programme's content; and (6) enablers of and barriers to the programme's evaluation. Implementation costs were not within the scope of the study.

The implementation evaluation used qualitative methods and involved the following data collection:

- Observations of sessions by the MOCEP master trainer/supervisor to monitor implementation fidelity (10 per cent of sessions)

- Self-reports completed by trainers to rate the level of engagement of mothers, and to record participant attendance and reasons for absenteeism, any observations, and perception of the progression of the sessions

- Focus group discussions with programme participants before (at baseline) and after (at endpoint) programme implementation (six in total); all participants of the pilot randomized controlled trial (n=106 at baseline) were offered the opportunity to participate in the focus discussion groups – and the groups ranged from three to seven participants

- In-depth interviews with husbands of women who had completed the programme (n=13), community leaders (n=2), trainers (n=2), the lead data collector from ARC and the MOCEP supervisor/master trainer.

The Mother Child Education Foundation has generated guidelines and forms to track session-by-session implementation to measure the fidelity of implementation – some of which were used in the evaluation.

Qualitative data were analysed using content analysis to identify emerging themes under the six domains of the evaluation framework.

Other information about the research

- **Funder:** UBS Optimus Foundation and the Open Road Alliance provided most of the funding for the implementation study, with additional financial support from the Mother Child Education Foundation, the Jacobs Foundation and Yale University's Global Health Leadership Institute.

- **Timescale:** The implementation and impact evaluation were carried out between May 2014 and September 2016.

- **Stakeholder involvement:** The framework for the implementation evaluation was designed and adapted with contributions from the ARC team and community leaders (such as directors of agencies who implement programmes in the communities). The latter also supported oversight of research ethics and practice. ARC was responsible for the on-the-ground data collection for the evaluation.

  Data collectors for the evaluation were trained on site and remotely by members of the Yale University research team, which provided technical support for research activities, analysis and reporting. Weekly calls were held between the ARC and Yale University teams during the implementation and evaluation of the programme.

Implementation research results

Key findings of the implementation evaluation are discussed below.

Findings relating to implementation barriers and facilitators

Programme characteristics

Positive characteristics of MOCEP as reported by study participants include: mothers' interest in skills-based training and the topics covered, delivery modalities (role-play, videos), and general acceptability of the programme content. Testimonies of former participants who expressed that the programme was useful to them were identified to be an enabling factor supporting participation.

Characteristics of MOCEP that were perceived as challenging include: the length of sessions and the time commitment required from mothers (including for home assignments), the level of comfort with some of the topics covered, and – for some mothers – the level of complexity of programme content. A barrier to enrolment was the way in which communities perceived the objective of MOCEP. There was an assumption by some that the programme aimed to 'teach mothers how to parent', rather than offering a set of skills to facilitate parenting functioning and support the development of their children.

Individuals involved in implementation

MOCEP requires modelling and coaching by experienced trainers. Mothers consistently noted a positive relationship with the trainers, across all sites. In many instances, the mothers established groups via social networking and communication apps/programmes (e.g., WhatsApp) so that they could continue to connect with one another following the completion of the study.

Organizational setting

The physical conditions of some of the facilities (combined with harsh weather conditions) and the lack of availability of materials were mentioned as notable barriers. The proximity of the NGOs to where the programme was held was an enabler.

While childcare was offered during the sessions, there were factors that made it challenging to keep the children outside of the sessions (due to e.g., a lack of familiarity with the person offering care and children wanting to be with their mothers while at the centres).

Wider context

Qualitative analysis of the context within which the target communities lived highlighted notable stressors for multiple stakeholders, which reportedly had an impact on daily life and community dynamics. These included: inter-ethnic tensions among the communities, a sense of insecurity and lack of safety, crowding in the homes, economic

With regard to perceptions of community cohesion, there was an overarching sense of mistrust, a lack of unity and challenges relating to socializing with the larger community.

need and unemployment, and a sense of loss and hopelessness. With regard to perceptions of community cohesion, there was an overarching sense of mistrust, a lack of unity and challenges relating to socializing with the larger community. Participation in programmes led by local agencies emerged as a mechanism through which some mothers were able to socialize. These stressors influenced perceptions of how the environment impacted on children's well-being, which included concerns around safety and the negative impact of experiences of displacement and war.

Enablers of and challenges to MOCEP enrolment included the reactions of friends, husbands and close relatives when mothers learned about the programme. Enabling and supportive reactions included openness and interest in new content and acceptability of exploring parenting strategies. A major point of resistance was the perception that parenting knowledge is innate and cannot be learned or developed. Community leaders identified their endorsement of MOCEP as an enabler of programme enrolment, given the trust that mothers and families place in them.

An enabler of programme participation was paternal support (and the lack thereof a challenge). This finding is consistent with literature in non-humanitarian contexts where spousal support contributed to maternal participation in parenting programmes.[2] The study's authors, however, note the limitation that interviews possibly included fathers who were already generally engaged and more supportive.

Reasons for early withdrawal from the programme included: change in employment status, programme burden, change in life circumstances, illness of family member or participant, and travel. Illness and travel were commonly reported reasons for non-attendance.

According to trainer reports, mothers often reported difficulty in applying the Cognitive Training Program components at home with their children, e.g., due to other responsibilities in the home and/or obligations children had to other programmes in which they were enrolled.

In some sessions, participants were eager to talk about their own lives, concerns and stressors. While this may have had unintended positive consequences with regard to socialization and the provision of additional support to the mothers, it also changed the flow and significantly reduced the time available for the intended delivery of MOCEP's content.

Findings relating to implementation processes, strategies and mechanisms

Qualitative contextual analysis prior to the start of implementation was key in understanding perceptions of community cohesion, security and safety concerns, major stressors on mothers, and perceptions of the impact of the context on participating children. Minimal adjustments were made to the implementation process in the light of early data on programme rollout and feasibility. At some sites, the frequency of sessions was increased from once to twice a week to accommodate the preferences

and availability of programme participants. In some contexts, transportation had to be provided to participants.

Continuous communication with community leaders and participants (e.g., through open house events), and capitalizing on the consenting process to inform and build trust were identified as enablers to support recruitment into the pilot programme. Working closely with the community leaders, given the trust that families place in them, was an important consideration with regard to promoting participation. Sessions offered a mix of delivery modalities, such as role-play and videos, which was rated positively by participants.

Findings relating to implementation outcomes

Acceptability of MOCEP was influenced by how communities perceived the objectives of the programme and what mothers valued in a programme (e.g., skills-based training). While the programme content was generally considered acceptable and of interest to participants, participants were reportedly less comfortable with some of the topics covered.

Attendance rates in the programme were relatively low and attrition rates were high, due to some of the barriers discussed, including new employment, programme burden, travel and illness. At some sites, implementation had to be interrupted for a period of time due to security concerns.

Fidelity was influenced by the length of the programme and the frequency of sessions – both of which were identified as challenging. Although MOCEP's supervisors' ratings of adherence to the programme content were high, there were also a number of changes to the delivery of the programme. As noted above, adherence to the delivery of the Cognitive Training Program content was, in some cases, affected by changes to the flow of the session, and mothers often reported difficulty in applying the components at home with their children (e.g., due to other responsibilities in the home). Children had to, at times, be present during group sessions that were intended originally for mothers only. In addition, the majority of participating children were enrolled in a nursery or an early childhood education programme, while MOCEP was originally designed to be delivered to (female caregivers of) children with no access to other programmes.

The quality of the programme was also affected by structural challenges related to the need to find reliable and efficient care for children during the sessions, and ensuring proper physical conditions and the availability of materials.

Findings relating to implementation costs

The evaluation did not explore the costs of implementation.

RECOMMENDATIONS AND IMPACTS

Recommendations for the programme made by the authors include:

- Explore the effect of reducing the number of MOCEP sessions, as well as the frequency of delivery. A revised and shortened MOCEP programme has been developed by the AÇEV team and has been evaluated in randomized controlled trials in both Brazil and Saudi Arabia (studies not yet published).

- The dissemination of information on the programme's scope should be informed by an understanding of what motivates parental participation. For example, in Lebanon, mothers expressed interest in programmes that would promote the development of their own skills. Therefore, communicating the skills-building components of MOCEP could be useful to promote enrolment and participation in the programme.

- Increase the engagement of fathers in the programme and more systematically explore paternal roles and impacts, as well as gender differences, upon participation in parenting interventions.

- Consider suitable childcare options to help ensure fidelity of implementation in future applications.

- Explore how enrolment of children in other programmes may have an impact on the efficacy of MOCEP with regard to boosting child development and school readiness. Mothers reported that children having obligations from other programmes in which they were enrolled made it more difficult for them to apply CTP components regularly with their children at home.

- More funding should be made available for follow-up activities of future evaluations to support the socializing of results, and to measure the impact of the research on community and government priorities. Activities could include community engagement and the development of policy briefs to disseminate findings to audiences outside the academic and practitioner community associated with the programme.

The evaluation framework developed for Lebanon has informed evaluative work in other countries.

ARC is currently engaged in a collaboration between academics and different organizations to formulate standards for nurseries that also include parental engagement and participation.

Discussion

The study authors emphasize the importance of conducting a systematic, in-depth contextual analysis prior to the start of a programme. The evaluation has highlighted contextual characteristics that should be considered in future programme adaptations and applications, including inter-ethnic relations, concerns around security and trust, and the importance of engaging community leaders in the dissemination of information about a programme's intent. Contextual analysis should inform cultural adaptation of the programme. A characterization of context can be applied to determine ways in which existing practices, beliefs and talents of the programme participants can be included to sustainably empower the communities.

Other lessons highlighted by the authors include:

- It is important to have committed and motivated practitioners willing to capture objective data on the process of implementation.

- The focus of the evaluation should reflect the stage of implementation and aim to understand enablers and barriers to participation, as well as issues that could challenge implementation fidelity. Future implementation research could explore potential pathways to scale.

- Implementation evaluations should match local data collection capacities. For this evaluation, the research team needed to consider local capacities to conduct reliable observations and qualitative data collection procedures. Local capacities were important in deciding what type of data and how the data could be feasibly collected.

Limitations of the evaluation mentioned by the study authors include that attrition rates in the randomized controlled trial were high, which had an impact on the implementation evaluation in terms of sample and potential bias. It was not possible for the study team to conduct focus group discussions at the baseline and endpoint with the same mothers due to – among other reasons – dropouts and lack of availability. Finally, as mentioned, interviews with fathers possibly included those that were more engaged with and supportive of the programme.

Case compendium editorial comments

This study contributes to the sparse body of literature on the implementation of ECD programmes in fragile contexts. It demonstrates that the delivery of a relatively intensive programme can be attempted in fragile contexts, and that rigorous evaluation and implementation research can be undertaken, including with a trained and supported local research team. The study provides a detailed overview of the barriers and enablers relating to MOCEP's implementation in Lebanon, and factors that influenced the programme's acceptability and fidelity, drawing on a range of data sources. The

contextual analysis completed prior to implementation highlighted changes needed to support programme uptake, e.g., adapting the frequency of sessions and offering support in overcoming transport barriers. Further ad hoc modifications were made during delivery.

The study shows that a programme developed elsewhere can be broadly acceptable locally. However, it also points to areas where further adaptability would be needed to be fully aligned with the local context and constraints in a fragile context, and to achieve better implementation including the application of learning at home. The study also highlights the importance of cross-country comparisons and opportunities to accelerate learning across countries, as it demonstrates that results from one country can inform further programme development and refinement in other countries.

1 AÇEV in Numbers. <https://ozsi.org/en/anne-cocuk-egitim-vakfi-acev/>

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The study has been presented in academic conferences and has been highlighted in communications of Yale University (e.g., Artukoglu, B. (2020). The promise of parent-child education programs on improving parenting practices and reducing stress in conflict-exposed families, *Yale School of Medicine*. <https://medicine.yale.edu/news-article/the-promise-of-parent-child-education-programs-on-improving-parenting-practices-and-reducing-stress-in-conflict-exposed-families/>

Lesotho: Economic empowerment and health equity through cash transfer programming

Findings from:

The Lesotho Child Grants Programme (CGP).

Introduction

Lesotho's Child Grant Programme (CGP) is an unconditional cash transfer targeting poor and vulnerable rural households with children. Starting in 2009, the CGP was designed as a response to address the multidimensional vulnerabilities affecting children in a context of widespread poverty, food insecurity and the HIV/AIDS epidemic. It aims to improve the living standards of orphans and vulnerable children between 0 and 17 years of age to reduce malnutrition, improve health status and increase school enrolment. Households with children categorized as 'ultra-poor' or 'poor' receive quarterly transfers of 300 to 750 maloti (around US$17–44), with the transfer indexed to the number of children in the household. In the last 13 years, the CGP has grown from about 2,000 households covered at inception to over 50,000 in 2022. Started as a donor-financed pilot programme, the cash grants to beneficiaries are now fully funded by the Government of Lesotho, with UNICEF Lesotho and the European Commission, historical partners of the programme, providing system-strengthening technical and financial support respectively. As one of the longest government cash transfer programmes in sub-Saharan Africa, the CGP has been presented as one of Lesotho's flagship programmes in developing the country's social safety net system.

The CGP was designed as a response to address the multidimensional vulnerabilities affecting children in a context of widespread poverty, food insecurity and the HIV/AIDS epidemic.

Cash transfers have been associated with many human development outcomes for beneficiary households, including increased use of child health services, improved child health and nutrition, improved school attendance, reduced monetary poverty or improved social capital. For example, the first evaluation of the CGP found promising effects among beneficiaries regarding selected economic and child health outcomes.

However, considerably less is known about the consequences and implications of these programmes for health equity and the empowerment of vulnerable groups.

Intervention implementation phase, type of study and implementation outcomes

The study focusses on the early phases of the Lesotho CGP when the programme was still expanding, but already in the full implementation phase. It is an exploratory, mixed methods implementation research study; only the qualitative component is reflected here. The implementation outcomes are not clearly defined; however, considering the study's objective, they can be inferred to relate to acceptability and fidelity (of the health equity and economic empowerment terms and definitions used), as well as reach and sustainability (of the overall CGP).

Aims and objectives of the implementation research

The Empowerment for Health Equity Lesotho (E4HE Lesotho) project aims to better understand the potential for cash transfer programmes to reduce child health disparities through the economic empowerment of vulnerable groups, especially women. Project findings are intended to help inform future phases of the CGP's health equity and economic empowerment approaches, as well as inform other cash transfer programmes in the region.

The E4HE Lesotho project included a qualitative study that examined how programme stakeholders understood and operationalized the concepts of 'health equity' and 'economic empowerment' (especially women's) across the programme cycle in the early phases of Lesotho's CGP (until 2014).

Equity considerations

Equity considerations are at the heart of this research project, as it aimed to improve understanding of how cash transfer can affect health inequalities through the economic empowerment of vulnerable groups. The research acknowledges the diversity of meanings that equity can have and the diversity of ways it can be reflected in a programme, as is outlined below. Hence, it aimed to explore how health equity was understood and operationalized by the CGP stakeholders responsible for programme implementation in the different phases and components of the programme. The E4HE Lesotho project also explored the role of some of the underlying factors of (in)equity through the study of economic empowerment, as understood and implemented by CGP stakeholders across the programme cycle.

Context of the implementation research

The CGP is led and managed by the Ministry of Social Development (MoSD) of the Government of Lesotho, with technical support from UNICEF Lesotho and funding from the European Commission. Cash transfers like the CGP are an important tool in the development of Lesotho's social protection system, and are core social assistance and poverty reduction instruments, particularly for children. The CGP was initiated following an assessment from the European Commission (2005–2009), responding particularly to the HIV/AIDS epidemic and the resulting rise in orphans and vulnerable

children. Although the CGP is not targeting women specifically, women's traditional role in childcare and their increased vulnerability in the Lesotho context make women key beneficiaries of cash transfer programmes like the CGP.

The study population consisted of CGP stakeholders, namely organizations that were involved in at least one of the programme cycles of the CGP in the early phases (strategic development and programme planning, resource mobilization, implementation, monitoring and evaluation, and/or research). These included United Nations agencies, the Government of Lesotho's MoSD, international donors, international NGOs, universities and research institutes, and consultancies. Based on the study objectives and available resources, and given that the study was carried out during the COVID-19 pandemic, it was not considered feasible to expand the scope to include the views of CGP beneficiaries.

Methods for the implementation research

A mapping of CGP stakeholders was carried out using programme evaluation documents to inform data collection. To help contextualize the study, relevant United Nations agencies in Lesotho were also consulted at the beginning of the data collection phase. The study involved a review of programme documents (n=51) and semi-structured key informant interviews (n=25) with programme stakeholders from the organizations involved in the early phases of the CGP. Interviewees were selected through purposive sampling and snowballing.

The programme documents were coded deductively using a conceptual framework based on the health equity and economic empowerment literature in the fields of health and social protection. The interview transcripts were coded inductively. Data were analysed thematically. Disagreements within each theme were explored individually to identify the determinants of these variations. The distribution of points of view was reviewed across organizations; types of stakeholders (according to role and programme cycle); whether informants belonged to an international, national or local team or entity; and the CGP chronology.

Other information about the research

- **Funder:** The E4HE Lesotho project received the support of the Norwegian University of Science and Technology's Department of Sociology and Political Science 'Småforsk' strategic research grant for the qualitative study.

- **Timescale:** Data collection for the qualitative study took place between November 2020 and August 2021, followed by coding and analysis between September and December 2021.

- **Stakeholder involvement:** The E4HE Lesotho project was a collaboration between the Centre for Global Health Inequalities Research (CHAIN, Department of Sociology

and Political Science, Norwegian University of Science and Technology), the UNICEF Lesotho Social Protection team and a researcher from the National University of Lesotho. The study was developed jointly by CHAIN and UNICEF Lesotho. The data collection, analysis and reporting was led by CHAIN, with facilitation, support and input from UNICEF Lesotho and the National University of Lesotho researcher.

To secure the support of national institutions, a proposal for the study was submitted for review to the MoSD. The MoSD focal point facilitated access to programme documents and key informants. Early findings were also made available to the focal point of the MoSD for review and validation.

All the stakeholders interviewed in this study were invited to workshops to discuss the results and suggested recommendations from the study. Key findings and recommendations were presented to stakeholders for discussion in March and April 2022.

Implementation research results

Findings relating to implementation barriers and facilitators

This study has identified barriers and facilitators for the CGP's implementation, relating to the understanding and integration of health equity and empowerment among programme stakeholders.

The concepts of health equity and empowerment were defined in different and multiple ways within the CGP and by different stakeholders. Agreeing on a definition matters, as the level of consensus between stakeholders on a particular definition of health equity and economic empowerment was linked to the integration of these concepts across the programme's objectives, mechanisms of action and effects.

Health equity, defined as community-wide spillovers, was primarily reflected in CGP mechanisms of action, but was absent from the programme's objectives.

The study identified four main definitions of health equity: focussing on the most disadvantaged part of the population, closing a gap between two groups, a universal approach and community-wide spillovers (defined as programme effects on non-beneficiaries through community mechanisms). Health equity was often defined as focussing on children's access to health services for the most disadvantaged households and this definition was the most integrated across the programme. It was reflected in the programme's strategic objectives, its mechanisms of action (e.g., in the choice of a targeted, unconditional cash transfer or the type of messaging to beneficiaries) and the way the programme's impact was evaluated. In contrast, health equity, defined as community-wide spillovers, was primarily reflected in CGP mechanisms of action, but was absent from the programme's objectives.

As for empowerment, the study identified five key definitions of economic empowerment: access to economic resources and opportunities, agency, social and economic inclusion, community empowerment, and lifting families out of poverty (or graduation). Access to economic resources and opportunities (for all beneficiaries or for women in particular) was the way most stakeholders understood and applied

this concept of economic empowerment. This definition of economic empowerment was reflected in the CGP's theory of change, and the messaging communicated to beneficiary families and explored in the first evaluation of the CGP. In contrast, economic empowerment as social and economic inclusion was present in certain features of the CGP's design (e.g., community engagement, beneficiary targeting, case management and programme evaluation) but was not an objective of the programme initially. Whether it was a field of interest for the evaluation and impact of the programme was disputed.

Even the most agreed upon definitions of concepts faced operationalization challenges. First, common definitions of relevant concepts were not fully operationalized throughout the programme. For example, in the early phases, economic empowerment as access to economic resources and opportunities was part of the strategic discussions relating to the CGP, and reflected in policies and strategies at the national level, but was not translated into operational objectives for CGP implementation teams to address. Similarly, the strategic objectives related to health equity defined as focussing on the most disadvantaged were not translated into operational targets or specific indicators implementation teams had to achieve or report on. These discrepancies in operationalization have highlighted more systematic divisions, particularly between the strategic and operational levels of the programme – pointing to operationalization gaps between different levels of responsibility and/or phases of the programme, as well as stakeholder-specific agendas and priorities.

Some definitions changed over time, also reflecting how the cash transfer strategies of individual organizations were evolving. This evolution was reflected in the emergence of alternative definitions of health equity, such as health equity as reducing the health gap between groups (which played a more minor role in the CGP's targeting and some aspects of the evaluation) or health equity understood as a universal approach (which was absent from the CGP in its early phases). These definitions were, however, much less agreed upon among CGP stakeholders. Some international CGP stakeholders seem to be moving away from focussing on the most disadvantaged in their approach to health equity and towards a more inclusive or even universal approach to child health and well-being in cash transfer programmes.

Evaluation played a key role in formally integrating and operationalizing some aspects of empowerment. For example, some dimensions of economic empowerment that were primarily present in the effects of the programme's early phases (such as social and economic inclusion or community empowerment) became explicit objectives following the first evaluation, with dedicated activities in the Cash Plus pilots. Gender issues and women's empowerment were not formally part of the CGP in its early phases. These issues seemed to have been formally integrated into the CGP primarily through programme evaluation exercises, through the influence of international organizations. However, the insufficient anchoring and adaptation of gender issues to the country's specificities meant that other context-specific, gender-based vulnerabilities risked being overlooked.

Findings relating to implementation processes, strategies and mechanisms

As outlined, implementation mechanisms and strategies – including monitoring and evaluation – were influenced by the level of consensus and operationalization of key concepts.

Findings relating to implementation outcomes

The study explored barriers to and facilitators of implementation, and implicitly addressed the implementation outcomes of acceptability and fidelity (of the terms and definitions used to define health equity and economic empowerment), reach and sustainability.

Findings relating to implementation costs

The study did not explore the costs of implementation.

RECOMMENDATIONS AND IMPACTS

Recommendations for programme design and management include:

- Agree on and prioritize specific definitions of key concepts, as some definitions and associated mechanisms of action may compete with one another (e.g., community empowerment and beneficiary agency).
- Address the gaps in the operationalization of the programme's strategic vision by:
  - (Re)building the consensus on the meaning and role of key concepts, in light of stakeholders' evolving approaches
  - Ensuring good communication across levels
  - Ensuring continuity in the programme's strategic vision, objectives, implementation and evaluation, in a context of staff turnover
  - Ensuring the integration of the priority issues agreed upon by stakeholders across the programme cycle and in every instrument
- Discussing and clarifying the role and meaning of gender in the Lesotho context, if it is to be further integrated into social protection programmes
- Supporting/advocating for better coordination with other institutions and programmes.

Workshops were organized with CGP stakeholders in March and April 2022 to present the results and discuss suggested recommendations. These workshops offered the opportunity to raise awareness about the discrepancies in definitions and operationalization identified in the study. These workshops also created a space for stakeholders to discuss the implications of these findings for the CGP and other similar programmes, as well as areas for future collaborations further to the gaps identified in this study. Finally, the findings from the E4HE Lesotho project helped inform the impact evaluation of the CGP (conducted in 2022).

Discussion

This study highlighted the need for clear agreement on key concept definitions and consensus-building to support implementation. Addressing operationalization gaps, particularly between strategic and operational levels, is crucial for effective program execution.

The CGP's ambitious strategic vision touches upon health equity and economic empowerment implicitly or explicitly. However, conflicting priorities, definitions and evolving strategies between stakeholders contributed to operationalization challenges and gaps, affecting the programme's implementation and impact. This study highlighted the importance of (upfront) agreement about definitions of key concepts and the role of consensus-building around key concepts for supporting their implementation and to address operationalization gaps, especially between the strategic and operational levels of the programme. It also underlined the need for the renewal of consensus when teams are changing and organizations are evolving.

This study identified a clear link between the level of agreement on a particular definition of a key concept between stakeholders and its level of integration into the programme. Disagreements and diverse views are not surprising given the variety and number of stakeholders involved in the CGP, as well as the period of time covered. However, this alerts practitioners to potential issues between stakeholders' competing and evolving priorities. As cash transfers are the fastest growing type of safety net programme on the African continent, lessons from the CGP on the importance of building and renewing the consensus amongst stakeholders as to the definitions and roles attributed to such issues in different aspects of cash transfers are important, especially in the global context of an evolving vision of social protection.

While operational challenges are likely to happen in ambitious programmes implemented in resource-constrained settings, this also signals potential issues in the transmission of information between the field and the strategic level, and between the organizations involved, especially those with regular staff turnover.

Many definitions of the concepts of interest were operationalized selectively throughout the programme, even those where there was consensus. While operational challenges are likely to happen in ambitious programmes implemented in resource-constrained settings, this also signals potential issues in the transmission of information between the field and the strategic level, and between the organizations involved, especially in organizations with regular staff turnover. Consensus-building will help address some of the operational challenges identified in the study. Yet, this study also highlights the need for all the strategic elements to be more systematically reflected across activities and monitoring targets. Given the constraints of the programme and the Lesotho context, implementation research into the bottlenecks and discrepancies that have led to this operationalization gap would help further ensure the fidelity and impact of the CGP.

The study also illustrates how evaluation and an openness to learning can help address some of these barriers. For example, the first CGP evaluation seems to have played a key role in progressively integrating empowerment and its different components into the CGP. Gender sensitivity and women's empowerment issues in particular were first formally included in the programme through the first evaluation, although further adaptation to local context may be necessary to adequately address the gender-related vulnerabilities found in Lesotho.

This study focussed on the points of view of stakeholders involved in the strategic development and programme planning, resource mobilization, implementation, monitoring and evaluation, and/or research of the CGP. In future research, integrating the points of view of recipients and their communities would also enrich the analysis presented here.

Case compendium editorial comments

This rich qualitative study highlights the importance of defining central concepts such as health equity and empowerment at an early stage, and creating and maintaining a shared understanding among all those involved in programme design and delivery. It also highlights how the interpretation of key concepts influences programme implementation, in particular in relation to targeting, and the focus of monitoring and evaluation. Clarity and consensus on intended objectives and programme strategies at programme onset is essential to enable an assessment of fidelity and adaptation during the implementation stage, and are also important for the feasibility of implementation.

This case study demonstrates the value of using implementation research to bring factors to the surface that influence effective operationalization. It also highlights the role that research and evaluation can play in supporting the operationalization of concepts, as was the case for the integration of gender issues and women's empowerment in the CGP following programme evaluations.

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Malawi: A prevention of mother-to-child transmission of HIV programme for adolescent mothers

Findings from:

Adapting the mothers2mothers mentor mother model for adolescent mothers living with HIV in Malawi

Introduction

Adolescent girls and young women experience worse pregnancy- and health-related outcomes than adult mothers, both in terms of maternal mortality and neonatal complications.

In Malawi, close to one in three adolescent girls and young women (AGYW) aged 15–19 years of age are either pregnant or have one or more children.[1] AGYW experience worse pregnancy and health outcomes compared to adult mothers both in terms of maternal mortality and neonatal complications. Many AGYW in Malawi who are pregnant either never enter or drop out of secondary school, limiting both educational and economic opportunities in the future. The rate of pregnancy among AGYW in the lowest socioeconomic strata in Malawi is close to one in two, meaning that health and social impacts may perpetuate existing poverty and gender inequality.

Similar social and structural risk factors influencing adolescent pregnancy are also seen to increase the risk of HIV acquisition among AGYW. Despite recent advancements toward goals and targets for HIV prevention, treatment and care (including the UNAIDS 90/90/90 targets), AGYW in sub-Saharan Africa living with HIV are less likely to experience positive therapeutic (anti-retroviral therapy (ART)) outcomes than women with HIV aged 25 years and older. Prevention of mother-to-child transmission of HIV (PMTCT) support programmes and services are integral in the prevention of HIV transmission to children during pregnancy, labour, delivery or via infant feeding. To be effective, PMTCT programmes typically involve sustained engagement with antenatal services, HIV testing and access to ART. Mentor mother model programmes such as mothers2mothers (m2m) are designed to help pregnant women access and engage with PMTCT support through tailored, peer-based support and lived experience (in the case of m2m, provided by women living with HIV with experiences of PMTCT services).

Since 2002, a national PMTCT/ART programme has existed in Malawi. It has taken a public health approach to HIV service delivery and scale-up within decentralized primary and secondary levels of the national health system. Malawi has offered universal HIV testing and treatment to all pregnant and breastfeeding women regardless of CD4 lymphocyte count or stage of clinical disease since 2011.

Despite the documented successes of these models in reducing mother-to-child transmission of HIV,[2] there are key risk factors threatening the engagement with and subsequent effectiveness of PMTCT programmes. In Malawi, and sub-Saharan Africa more broadly, a disparity exists in terms of uptake of PMTCT services, maternal health care utilization and HIV care retention among pregnant AGYW in comparison to their adult (over 25) counterparts.

Intervention implementation phase, type of study, and implementation outcomes

While the PMTCT/ART programme is of a national scale, the m2m programme is more local. The study is formative and exploratory in that it examines barriers to and facilitators of service access and preferences for service design (m2m versus non-m2m), and implicitly addresses implementation outcomes of acceptability and appropriateness.

Aims and objectives of the implementation research

The Malawi Ministry of Health implemented an Optimizing HIV Treatment Access initiative,[3] in partnership with UNICEF. An implementation research study was conducted to support and inform the adaptation of the m2m model to better serve adolescent mothers living with HIV in Malawi's national PMTCT programme, and to help improve PMTCT service uptake and retention in the AGYW population. To do so, the research explored specific service delivery-related needs, preferences and experiences of navigating the programme (e.g., barriers to and facilitators of service uptake and retention within the m2m programme). The study involved adolescent mothers living with HIV, who either had or did not have experience with the m2m programme.

Equity considerations

The m2m programme sits within a broader, systemic context of inequity, though these inequities are particularly pronounced for AGYW. Not only do AGYW face social and structural risk factors influencing pregnancy (e.g., those among the poorest, most disadvantaged and geographically isolated are more likely to experience adolescent pregnancy), these same risk factors also increase the risk of HIV acquisition (for every new male adolescent HIV infection in sub-Saharan Africa, there are almost three female HIV infections).

Structural barriers to service access inhibit the reach of PMTCT and other maternal health services for young mothers with HIV in Malawi. Experience of discrimination, stigmatization, economic marginalization and vulnerability contribute to reduced rates of viral suppression among adolescent girls and young women compared to those aged over 25. Understanding and exploring mechanisms to mitigate and remove these

barriers, and identify facilitators, was a critical component of this implementation research and its design.

PMTCT programmes inadequately serve HIV-positive adolescent mothers, heightening dropout risk among them.

PMTCT and associated programmes are not currently meeting the needs of adolescent mothers with HIV, and many do not offer services specifically tailored to this group. Young age is one of main reasons for PMTCT programme dropouts.

Context of the implementation research

The study was embedded within Malawi's PMTCT/ART programme. The programme relies on task-shifted HIV service delivery, provided by both health professionals and lay health providers such as mentor mothers.

The study took place in four districts throughout Malawi to reflect the differing context of the HIV epidemic in the country. Local health care workers assisted the study team in sampling and screening. The study involved women with and without experience of the m2m programme. To be eligible to participate in the study focus group discussions, individuals needed to:

- Have a documented HIV infection
- Be between 15 and 19 years of age
- Currently be pregnant, or post-partum and/or breastfeeding (up to two years post-delivery).

Methods for the implementation research

Study settings were purposively selected not only to reflect diversity (geographic, sociodemographic and epidemiological), but also to include at least two health facilities per region: one with an active m2m programme and one without. The intention of this design was to reflect a sample (and results) that was as accurately representative of the implementation context as possible, and provide insight into the possible added value of the m2m programme.

The study used a qualitative approach to explore the barriers to and facilitators of PMTCT service use, and preferences for m2m service design and delivery. Data were collected through focus group discussions with individuals who met the inclusion criteria. The mothers were categorized into two groups:

- Those who had experience with m2m programming (eight focus group discussions, n=38)
- Those who did not (eight focus group discussions, n=34).

Data analysis used a thematic approach to assess major and minor themes, and to compare these findings between groups. The study focussed on barriers and enablers to service uptake/retention – implementation outcomes were not explicitly explored.

Other information about the research

- **Funder:** Swedish International Development Cooperation Agency (SIDA) and the Norwegian Agency for Development Cooperation (NORAD)
- **Timescale:** Five months (protocol phase to final presentation), between July and December 2017; data collection occurred between September and November 2017
- **Stakeholder involvement:** Stakeholders were involved in all stages of the research, including identification of the research aims and objectives, identification of the study sites, interpretation of the results, and local dissemination of the study findings.

Implementation research results

Findings relating to implementation outcomes

The study explored barriers to and facilitators of service access and preferences for service design, and implicitly addressed implementation outcomes of acceptability and appropriateness.

Findings relating to implementation costs

Implementation costs were not within the scope of the study.

Findings relating to implementation processes, strategies and mechanisms

The study did not address implementation processes, although there were important findings relating to service preferences as discussed below.

Findings relating to implementation barriers and facilitators

Young mothers sought practical assistance, mentorship and relatable psychosocial support, including home visits.

Programme characteristics

Young mothers needed services that reflected their personal barriers, particularly providing pragmatic support with food, transport to the facility and livelihood assistance. They valued support from mentors and other services in the forms of encouragement, health education, adherence counselling and psychosocial support. They wanted to receive psychosocial support from someone to whom they could relate personally, who would encourage them, who was preferably of a similar age, and who had experience of HIV and navigating PMTCT programmes. They also expressed a desire for home visits as part of the service.

Individuals involved in implementation

As noted above, there were clear preferences concerning the characteristics of mentors.

Organizational setting

The critical importance of health care providers safeguarding the privacy and confidentiality of adolescent mothers affected by HIV was emphasized.

Wider context

Barriers to service use relating to young mothers' social contexts were particularly emphasised in the study:

Participants highlighted food insecurity, poverty and stigmatization as barriers to PMTCT service use. Financial aid, privacy measures and programme adjustments were suggested for improvement.

- Food insecurity: Participants frequently mentioned not having enough food to eat as a barrier to PMTCT service use, in particular to maintain strength and vitality during ART and to counteract side effects.
- Poverty: Mothers expressed needing assistance with transport or a need to forego work/study to access the programme, compromising their livelihood and increasing financial pressures. Financial assistance to mothers in need would help them to travel to health care facilities to collection medication, continue their education and/or start their own business to gain economic independence.
- Stigma: Despite the willingness and motivation to participate in the programme, fear of being stigmatized was deeply entrenched in mothers' desires for privacy and confidentiality during the programme. Indeed, the dual stigma from having HIV and being a young mother were commonly presented as barriers to programme engagement and sustainment. Components of the programme such as attending appointments, waiting at the clinic or meeting mentors in community settings that did not safeguard mothers' privacy and confidentiality were key areas of focus to improve the overall experience and mitigate stigma, according to study participants.
- Systematic Barriers: Gender inequity, discrimination, and structural obstacles impede service access and exacerbate economic marginalization. The study underscores the detrimental effects of non-patient-centered care, harsh treatment by healthcare workers, and insufficient attention to privacy, confidentiality, and structural barriers such as stigma and poverty. Conditional cash transfers and food assistance are identified as facilitators of healthcare engagement.

Self-efficacy and personal motivation helped adolescent mothers to engage with health care services and with m2m.

Key facilitators were:

- Self-efficacy and personal motivation helped adolescent mothers to engage with health care services and with m2m. Self-motivation, determination and resilience in response to significant identified barriers such as stigmatization, economic disempowerment and food insecurity were powerful facilitators among participants.
- Wider family support from partners, parents and extended family members was shown to be crucial.
- Participants also acknowledged the importance of support from other sources external to their immediate family or the m2m mentor mothers, including other health care workers, teen clubs and support groups, which offered additional opportunities for encouragement, health education, adherence counselling and psychosocial support.

RECOMMENDATIONS AND IMPACTS

Five recommendations were made for how PMTCT programming can be adapted to better meet the needs of adolescent and young mothers living with HIV:

- Prioritize, where possible, mentor mothers of a similar age to their mentees to be more relatable. M2m programming could incorporate recruitment, training and remuneration for 'adolescent peer' mentor mothers between the ages of 18 and 24 years to focus exclusively on engaging adolescent mothers as their clients.

- Emphasize real-life experience for peer mentor mothers. Participants had a strong preference for support from mentor mothers who had successfully navigated PMTCT programmes, sustained ART for at least two years and overcome the systemic, psychosocial and structural barriers that disproportionately affect adolescent mothers with HIV.

- Always ensure safeguarding of participant privacy and confidentiality. Some participants described concerns about maintaining the confidentiality of sensitive health information. Advancements in this space could be achieved through dedicated and integrated training, and supportive supervision by mentor mothers. Moreover, the first two recommendations here would contribute to a greater sense of empathy among mentors.

- Adolescent mentor mothers must offer support to participants both in the community as well as in the facility. A support network is an important factor in the success of PMTCT programmes, as described in the findings related to the inner context, outer context and wider system. Mentor mothers, by serving as a bridge between home and clinic, will effectively facilitate confidentiality, promote care navigation and provide psychosocial counselling.

- Increase opportunities for m2m and mentor mothers to link adolescent mothers to economic opportunities and interventions in their communities. Key barriers to PMTCT engagement, adherence and success from this study relate to poverty and gender inequality. Increased access for adolescent and young mothers to socioeconomic interventions, such as cash transfers, income-generating activities or other social protection approaches would pragmatically lower structural barriers to HIV care, promote their own health and that of their children, and assist in building livelihoods at such an important stage.

Progress has been made in adapting the m2m model in line with these recommendations through:

- The addition of *'adolescent champions'* (adolescent mentor mothers) to the m2m programme model in January 2018

- The Department of HIV & AIDS within the Ministry of Health has adopted the use of peer mentors as one of its models for adolescent care and support within HIV programmes.

Discussion

The research underscores the unmet need for a tailored PMTCT approach for adolescent and young adult mothers with HIV.

The study showed that there is a large unmet need for a differentiated approach to PMTCT service delivery that should be tailored to the experiences and unique needs of adolescent and young adult mothers living with HIV. This requires an approach that should engage with the wider social contexts of young mothers' lives, including through using peers as key supporters, allies and mentors. Involving young women who are mothers living with HIV themselves creates an environment that prioritizes relatability, while upholding privacy and confidentiality.

The study supports the adaptation of m2m to adolescent mothers and makes important recommendations concerning service design and content. Specifically, adaptations that should be made to the m2m model need to address structural and psychosocial barriers to engagement in the PMTCT cascade, not just biomedical ones. This means integrating services like socioeconomic interventions, such as cash transfers, income-generatingactivities or other social protections, and empowering these young women to have the agency to enhance their own livelihoods and meet their basic needs. The rationale for such adaptation is consistent with other research from sub-Saharan Africa that has documented gender inequality and economic disempowerment as important contextual factors.

Key strengths of the study were that it highlighted the lived experience perspectives of a highly representative sample (72 qualitative research participants) of adolescent mothers living with HIV, which is under-reported in the literature. Moreover, the sample recruited AGYW from two different groups – those with experience with the m2m programme and those without, and from various geographical contexts within Malawi. Studies that include the perspectives of those who have not been exposed to an intervention or programme are often not feasible in implementation research.

Limitations of the study include the generalizability of the findings beyond the study sample, notably in terms of capturing insights and information from those who have not been reached by or engaged with the service. As per the equity considerations presented in the study rationale and background, younger AGYW are more likely to experience barriers to service access, and by extension, participation in the study. This in turn meant that, potentially, the perspectives of the youngest adolescent mothers were not reflected in the findings.

Case compendium editorial comments

This study is an important example of the power of implementation research to illuminate the personal, everyday contexts of service users. Hearing directly from adolescent mothers was essential in understanding how the service needs to work. The study highlights the individual-, family- and community-level issues that must be taken into account to address a fundamental aspect of equity: ensuring that evidence-based programmes are not just available, but meaningfully reach and engage with those most needing them. It identifies competing day-to-day priorities, such as food and

transport, that affect engagement, as well as the importance of family and wider social support. It highlights that system-level issues such as poverty and health systems that are not patient-centred are also fundamental influences. In this study, stigmatization also plays a particularly important role and the powerful prism of lived experience shows how it plays out.

Issues highlighted, such as the need for peer approaches rooted in shared experience, sensitivity to stigmatization and the engagement of wider support, are likely to be of relevance to other low-income contexts and services.

Finally, the study also illustrates how a relatively small-scale implementation research study can provide clear, actionable recommendations for programming.

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Serbia: A UNICEF programme for children and families

Findings from:

Evaluation of models for scale-up potential in Serbia

Introduction

A strategic focus in UNICEF's country programme in Serbia is 'modelling', which describes an approach to testing programmes in new contexts to promote their embedding in national government policy. Between 2016 and 2020, the UNICEF Serbia Country Office developed and carried out early testing of programmes in the areas of health, child protection, education and adolescent well-being, and used modelling to extend their delivery to new settings, with the intention of scaling up through government adoption of the programmes.

Intervention implementation phase, type of study and implementation outcomes

Of the five models tested, one was in the early stage of testing, with appropriateness and acceptability as the implementation questions; one in the installation phase with, after withdrawal in a few sites and continuation in one, feasibility as the main implementation issue; one in the initial implementation stage with implementation concerns around adoption and fidelity; and two were enshrined in law and therefore considered to be at full implementation stage, with reaching full coverage and sustainability as the main implementation issues.

The study used a mixed methods approach and focussed on a near-full range of implementation outcomes: appropriateness, acceptability, feasibility, adoption, fidelity, coverage and sustainability.

Aims and objectives of the implementation research

The UNICEF Serbia Country Office commissioned the evaluation to assess approaches to modelling, identify barriers and enablers relating to scaling up, make recommendations to help the office to strengthen modelling, and to optimise or scale up the models. The overarching evaluation questions were:

- To what extent has the design and implementation of models led to national scale-up?
- How might UNICEF strengthen its approach to scaling up in modelling?
- Are the models sustainable and scalable?
- What approaches to the costing of models are needed to secure government support for scaling up?

Equity considerations

The most vulnerable children and families, those living in poverty, Roma children and children with disabilities are typically underrepresented in the reach of social services and model programmes.

The evaluation involved equity-focussed questions investigating:

- The extent to which gender perspectives and the achievement of equity- and child rights-based impact are evident in modelling, and what could be strengthened?
- Do the models have underlying equity-based hypotheses and equity-based outcomes?
- How efficient is modelling in achieving intended the equity- and child rights-based ambitions and results of the country programme?

Context of the implementation research

During the last two decades, Serbia has undergone significant reform to improve its legal and policy framework, and to combat discrimination, social exclusion and gender inequality. Despite efforts, including legislative change, to decentralize responsibility for social protection, education and health, the central government has by far the largest role in financing and resourcing these sectors. With low levels of transparency in fiscal decision-making and public participation, this has meant challenges remain for children and families in terms of access to education and the high use of institutionalized care.

With low levels of transparency in fiscal decision-making and public participation, this has meant challenges remain for children and families in terms of access to education and the high use of institutionalized care.

The evaluation focussed on five exemplar programmes

- Family Outreach Worker (FOW): This is an intensive family support service for families with children with multiple and complex needs, intended to improve the

capacity of families to support children's development and to avoid out-of-home care. It is delivered by individual professionals, supported by local social work centres. Delivery for modelling took place from 2013 to 2018, but delivery ceased after the end of the modelling period in all locations except for one.

- Intermittent Foster Care (IFC): This model provides family-based respite care for children with disabilities, to support families and improve care for children, and connect families and children with their local community. First implemented in 2015, the model operates within the social welfare system, and has continued to operate in one site despite regulatory and funding constraints.

- Diversionary Measures (DM): These are a form of restorative justice, diverting children from criminal sanctions to rehabilitative activity. Implemented within the legal system, they are intended to protect the best interests of children, reduce the reoffending rates and reduce the systemic burden. DM were enacted in law in 2006, but are not widely used.

- Early Childhood Intervention (ECI): This is a transdisciplinary, family-centred programme delivered by teams of professionals spanning the systems of public health, pre-school education and social welfare. It is intended to provide early identification of children with developmental delays and early intervention. It was at an early stage of testing at the time of the evaluation.

- Dropout Prevention Programme (DOP): This aims to maintain children's engagement with school. The risk of school dropout in Serbia is greater among girls than boys, children from poor/disadvantaged families, children from Roma communities, children in care and those with disabilities. Dropout prevention was a government education quality priority for the Strategy of Education Development in Serbia 2020. Dropout prevention activity has been adopted in law and is being implemented nationally through the coordinated work of schools and centres for social work.

Stakeholders involved in modelling

The models were delivered through the existing public service system, including the health, social protection, justice and education sectors. The relevant national government ministries were involved as partners in the modelling through actions including advisory work, the development and piloting of models, the evaluation of models and capacity building. Some models involved the coordinated involvement of multiple ministries. These included the Ministry of Labour, Employment, Veterans and Social Affairs (FOW, IFC and DM); Ministry of Justice (DM); Ministry of Health (ECI); Ministry of Education (ECI, DOP); and Ministry of Youth and Sport, and Ministry of Health (DOP, in an advisory capacity).

Modelling also involved individual practitioners, service providers, schools, research centres and other NGOs as key stakeholders.

Methods for the implementation research

The evaluation focussed on the process and outcomes of modelling as undertaken by the Serbia Country Office. It used a mixed methods approach and involved:

- An initial evidence synthesis and the development of an analytical framework for scaling up
- An extensive review of model documentation, as well as governance, planning and strategy documents
- Meetings with UNICEF teams and senior leaders
- Qualitative interviews with system- and local-level implementation stakeholders (n=54); participants were identified by the UNICEF teams and included representatives from ministries, national sector bodies, partner NGOs, research groups and local implementation partners
- A survey of staff in local implementation sites undertaking modelling (n=39); the sample was provided by the UNICEF teams and only covered models currently being delivered.

Other information about the research

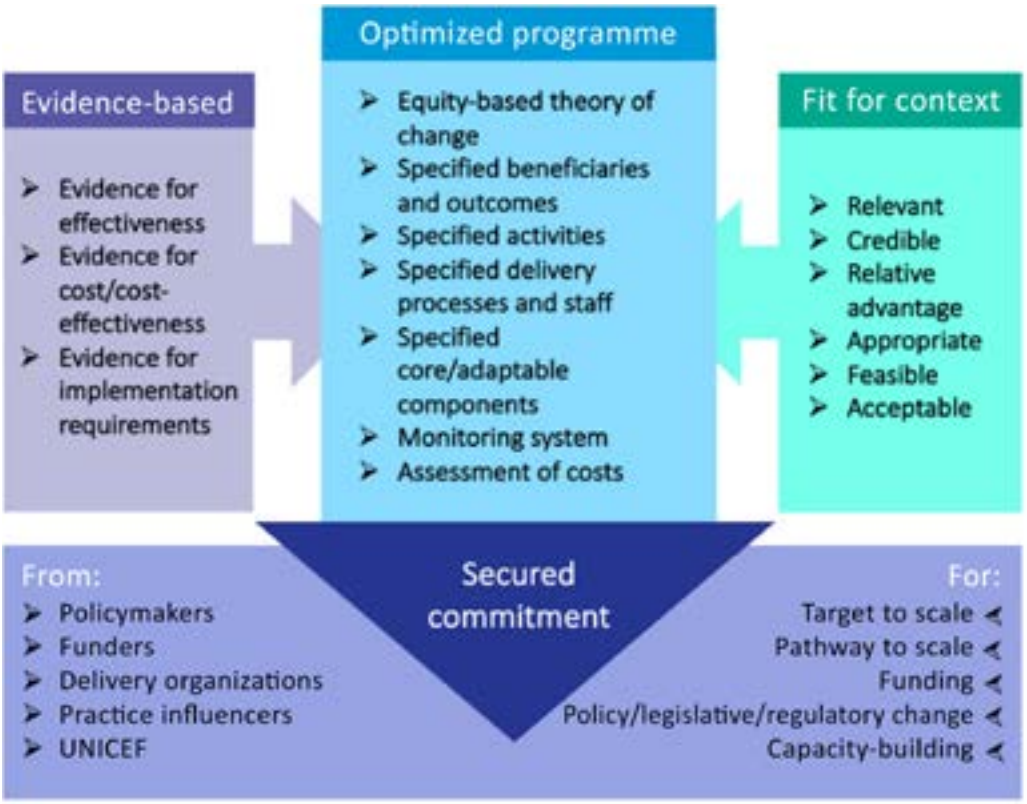
- **Funder:** UNICEF Serbia Country Office.
- **Timescale:** Implementation of the models occurred at varied intervals and durations between 2016 and 2019. The study took place between February 2020 and May 2021.
- **Stakeholder involvement:** Participants in the evaluation of scale-up activity and modelling were UNICEF practitioners and senior leaders, implementation partners at system-level (e.g., staff from key ministries or national centres) and local-level staff involved in implementation (e.g., primary health practitioners or teachers). Over 30 stakeholder organizations were represented.

Implementation research results

The 'UNICEF Scale-up Framework'

The UNICEF Scale-up Framework (Figure 1) was developed as a reference framework for the evaluation through a synthesis of evidence on strategies and determinants for effective scaling up. It sets out what is required for effective scaling up in four domains (an effective programme, which is fit for the delivery and systems context, for which there is supporting evidence, with secured commitment from key stakeholders to scale up). These domains formed the basis on which evaluation results and findings were assessed and reported.

Figure 1. UNICEF Scale-up Framework



Other key implementation-focussed findings of the evaluation are described below.

Findings relating to implementation outcomes

Scaling up (coverage)

Of the five models, DOP was most successfully scaled up, although in a less intensive form of programme than intended by UNICEF, with less comprehensive implementation support and resourcing for schools than UNICEF judged necessary for the DOP model to be fully effective. Amendments to legislation required to take the model to national scale have been drafted, but not adopted.

DM had been enacted in law, but still not fully scaled up. UNICEF and partners are working to promote the use of diversionary measures with ongoing capacity-building and training.

IFC and FOW had not been scaled up. The amendments to bylaws required for scaling up have been drafted for each model, but not enacted. The models continued to be used in one location and elsewhere, and some families from the modelling period continued to be supported.

ECI was at the earliest stage of implementation and had not been scaled up. Evaluation activities and work was being undertaken to determine the appropriate delivery service or services and pathway for scaling up.

Acceptability/appropriateness

While all five models aimed to reform systems, they lacked alignment with current operating contexts, presenting a mismatch between intention and reality.

All five models were considered to be acceptable and fit for context by stakeholders. They saw the programmes as relevant, addressing high-priority needs and having clear added value. However, as all five exemplar models were intended to improve, reform or change the system in which they operated, models were not fully aligned with current operating contexts. This created tension in terms of the fit of the models within existing delivery organizations and the wider system of e.g., policy, finance, legislation, regulations, other services, professional paradigms and established ways of working, and community cultures and preferences. This reflected the scale of ambition for the programming, rather than oversight in design or implementation.

Feasibility

Implementing the models seemed feasible, but their rationale often challenged professional and sociocultural norms.

The models were perceived to be feasible, though challenging to implement. While the work involved in actually delivering the models (e.g., for individual practitioners) appeared to be doable and relatively straightforward, in many cases, the rationale and intention behind the models were seen to be ahead of, or challenging, the professional and sociocultural status quo. This compromised the extent to which the models were perceived as 'possible' or 'implementable' in the current context, and/or without wider, systemic and sociocultural change to lay the foundation for modelling to take place most successfully. For example, DM represent a very different philosophical approach to juvenile justice for a system and society where there is a strong attachment to punitive rather than restorative approaches.

Findings relating to implementation processes, strategies and mechanisms

The evaluation found the following in terms of implementation processes, strategies and mechanisms to support implementation at scale:

- **Modelling has built upon the evidence base, though gaps remain.** With the exception of ECI, there is evaluation evidence generated for each of the models. The quality of evidence about outcomes was strongest for DOP, which was the only model where evaluation had involved a quasi-experimental design and objective outcome measures. Only FOW and IFC had evidence about cost-effectiveness and this was limited. These evaluations were conducted by external organizations.

- The design process should systematically acknowledge and plan for likely barriers to implementation and scaling up. **Development of key documents/manuals and training** were a strength of the design and approach to modelling, which is important when considering scale-up methods.

- More **focussed planning for modelling at a greater scale** was needed. It was not always clear what the intended delivery platform or mechanism for scaled-up delivery was for the models, nor was this information reflected in key UNICEF documents like communication and knowledge dissemination plans**.** Examples of these plans reviewed as part of the evaluation lacked descriptions about the overall vision or ambition for change, details about an analysis of the barriers to be addressed and information about shifts needed to implement modelling at a greater scale. Key documents such as theories of change for the models were not always available and needed to map out the activity required to achieve scale-up, as well as the advocacy and communication work involved.

- **Meaningfully engaging, partnering** and **collaborating with stakeholders** was an important process in modelling, and one that requires constant attention. Strong partnerships with stakeholders at national and local level were established by UNICEF, which facilitated commitment, momentum and enthusiasm, particularly from service provision organizations. Such engagement from government was also observed, though this tended to be evident in the early stages of modelling, **but was not sustained**, meaning commitment had waned by the time models were ready to consider and commence the scale-up process. This has important implications for successful scaling up in contexts like Serbia where there is a high degree of centralization in the health, education and social protection systems, and key decisions and funding are secured from government and respective ministries.

Findings relating to implementation costs

The study did not explore the costs of implementation. However, all the models faced a significant challenge in securing the financial resources to fund and sustain modelling at a larger scale from the government. Financial advocacy was identified as an area where UNICEF's modelling activity needs to be strengthened, including the formulation of budgets relating to modelling activities, the assessment of costs of modelling and cost-effectiveness analysis, to influence political decision-making regarding funding allocations to model programmes and scale-up projects.

Findings relating to implementation barriers and facilitators

Characteristics of the programme

All models were generally seen by stakeholders as being credible for issues faced by vulnerable children and families in Serbia. The models were based on a systematic and rigorous design approach to ensure their appropriateness for the local context, using, for example, situational analyses, discussions with families and professionals, reviews of international programmes and delivery systems, and UNICEF staff expertise. Detailed programme documentation had been developed and this aided implementation, though this was inconsistent across the models. For example, not all models had an equity-based theory of change, clearly specified essential and adaptable practices and fidelity criteria, and an assessment of costs.

A common implementation barrier was the complexity of the models in relation to the capabilities of their current system. The models generally aimed to highlight the need

to strengthen the relevant service systems and to demonstrate what a stronger system could achieve. However, without direct work to build system capacity, they remained too ambitious for the current service system, for example in the skills and demands required of staff, the intensity of work with families required by the models or the extent to which intersectoral cooperation was required (i.e., support from other services and organizations). The study recommended more iterative cycles of work to gradually build system capacity and increase the demand placed by programmes.

Individuals involved in implementation

Modelling generated high levels of enthusiasm among the stakeholders and partners involved. At a local implementation level, practitioners generally 'believed in' the models and shared UNICEF's enthusiasm for these interventions and their potential to scale up, though the evaluation did find that there were challenges in terms of ensuring the necessary skills and capacity were available at all implementation sites. UNICEF was viewed by the stakeholders as an energetic and active leader of modelling.

Organizational setting

Modelling highlighted the weaknesses or shortcomings within some services that would affect their operation at scale. These included the reduced human capacity in key organizations and professions such as the centres for social work, and the weaknesses of coordinated data systems within the justice system. The evaluation highlighted the need for more work to increase the readiness of delivery organizations as key actors in their wider systems for modelling.

Stakeholders from system and local implementation sites provided valuable insights about the structural and cultural fit of the models within their organizations. For example, educators involved with the DOP model perceived the model to be a good fit with their school's improvement agenda for inclusive education, but service capacity was severely constrained and data systems were partial. For ECI, the amount of training needed for local professionals to be ready to implement the programme was viewed as challenging, and the work was seen as much more complex and intensive than the usual work of the professionals involved, and the multidiscplinary nature of the model presented a fundamental shift in the focus of their role.

The evaluation found a need for UNICEF to better integrate modelling with policy, advocacy and communications, to help build support for these programmes among key decision-makers. The study highlighted the need for more adaptive, agile planning and monitoring processes that can accommodate iterative flexible work to support modelling.

Wider context

There were significant barriers to scale in the wider context of government policy, legislation and financing. There was not yet government commitment to funding the models and their support at scale. The necessary policy, legislation and regulation changes had been fully developed for some models and were at a draft stage for others. Stakeholders spoke of many key underpinnings of the exemplar models in the evaluation as 'being ahead of professional and sociocultural norms', and the need for changes to legislation or regulation to incorporate models into mandated and funded practice.

RECOMMENDATIONS AND IMPACTS

A set of eight recommendations for strengthening modelling and scaling up were developed through a participatory process between the evaluation team and UNICEF programme teams, country office representatives and the regional office. All eight of these have been accepted by UNICEF and actions in response have been outlined.

- Create a comprehensive and integrated scale-up plan for each area of system change: The wider system improvement and change ambition was not clearly set out nor visible in plans, and was not explicitly agreed with partners and stakeholders as the basis for implementing or scaling model programmes.

- Design models that are closer to the current system capacity: Because UNICEF's ambition is systemic reform, model programmes should be designed to be closer to the capacity of the current system (i.e., the professional, operational, organizational and strategic capacity of agencies involved in implementation).

- Identify where UNICEF's work needs to stimulate change in social norms and behaviours, and plan work to achieve this: For innovations 'in advance' of social attitudes, norms and behaviours, UNICEF needs to identify where such social changes are required to address root causes of problems addressed by models and create the conditions for sustainable change.

- Improve the monitoring of achievements against the scale-up plan: UNICEF's planning documents do not currently reflect the full range of work needed to secure scale-up, and monitoring is narrowly focussed on whether intended actions have been undertaken rather than monitoring progress towards scaling up. UNICEF needs to improve its monitoring to regularly assess whether the necessary conditions and capabilities for systemic change are being developed, and where barriers remain.

- Improve the robustness of evaluation and its use to improve modelling: Although UNICEF invests considerably in evidence generation, it needs to improve the robustness of both implementation evaluation and effectiveness evaluation. Implementation evaluation should involve more rigorous analysis of implementation strategies, barriers and enablers, and be focussed on the aspects of implementation that are known to be determinants of programme effectiveness.

- Strengthen political advocacy, skills and efforts: UNICEF needs to bring advocacy and modelling work into closer alignment so that they work towards the same objectives and plans. UNICEF should continue to develop the political analysis and influencing skills of country office staff in programme, advocacy and communications teams.

- Target and strengthen financial analysis and advocacy to influence the allocation of government and public financing: There is scope for UNICEF's financial advocacy to be better attuned to political financial strategies. UNICEF should strengthen its financial advocacy to influence the allocation of government and public funding, in support of models. This needs to be part of the work of country office leadership and programme and advocacy teams, and clearly represented in UNICEF's planning instruments. This also includes costed business cases for investment in modelling and scale-up projects.

- Strengthen the focus on gender in model development, piloting and planning for scaling up: UNICEF's modelling is strongly oriented towards addressing equity gaps and disadvantages, but scope remains to bring a stronger emphasis on gender, through better data on gender-related differences in terms of need, participation and outcomes.

RECOMMENDATIONS AND IMPACTS

Since the completion of the evaluation, UNICEF in Serbia has taken several steps to respond to the recommendations:

- Introduced a tool to systematically analyse and monitor its current and future modelling work, with routine six-monthly updates against the elements of successful modelling outlined by the evaluation. Selected models will be steered towards clear targets against specific indicators in each of the following domains:
  - evidence
  - optimization
  - fitness (or appropriateness) for context
  - secured (financial and other) commitment from key partners
  - motivational or social attitude factors.
- Invested in a review of and planning for monitoring the practices and systems of models, including their adequacy, to measure effectiveness at earlier stages of the modelling activity and enhance adaptive programming.
- Invested in advocacy and influencing training for its staff and compiled an advocacy strategy for the country office.
- Further invested in cost analyses of current modelling programmes to enable increased leveraging of government spending, particularly at a local level.
- Partially strengthened its staff capacities around social and behaviour change, and is seeking further opportunities to continue in this direction.

Further action is planned around influencing public financing and securing government commitment for the scaling up of models as soon as the external environment allows.

Discussion

UNICEF's approach to modelling in Serbia has led to a set of model programmes that are well-regarded and have the potential to improve children's outcomes through implementation at scale. Securing the involvement and participation of key stakeholders was vital in implementation. The evaluation found that weaknesses remain in terms of the fit of models to current operational and systemic capacity and that work to develop capacity is needed alongside modelling. Many models required changes to legislation to be incorporated into usual practice. Except for ECI where this work is ongoing, each model had an agreed target and pathway, though there was not yet government commitment to funding the models and their support at scale, and cooperation for models operating across sectors was not always available. Better integration of political and financial advocacy with modelling is needed to address bottlenecks when considering and securing the necessary commitments to scale up.

UNICEF can advocate for scaling up model programmes by addressing programme–system fit through integrated strategies and consistent alignment measures.

UNICEF is well-positioned to advocate for scaling up model programmes, though more targeted attention toward the fit between programmes and the current service system is vital. This evaluation found that to do so requires extended and integrated activity at model and system level, including a detailed scale-up plan for each model, capacity-building through advocacy, communication, soft influencing and political analysis. UNICEF should also ensure that the scale-up process is consistently reflected in equity-focussed theories of change, evaluation plans, budgets, communications and knowledge dissemination plans, annual work plans, and result assessment module monitoring, so that these set out an integrated and aligned programme of work oriented to the same objective of high-level change, with realistic timelines.

The evaluation design had some limitations:

- The evaluation did not include service users or beneficiary children and families, as this was not feasible within the project resources, although their perspectives were to some extent captured in existing model evaluation reports.

- Study participants were nominated by UNICEF so that those more relevant and involved in modelling could be interviewed, although this is likely to orient the sample to individuals with more favourable perceptions of modelling and of the models.

Case compendium editorial comments

The study is an example of the application of implementation research to address the challenges of ensuring that promising programmes reach communities at scale. The evaluation's use of evidence-based frameworks and concepts from implementation science to understand and explore the processes and determinants of scaling up enabled issues to be uncovered that had not been addressed in depth in previous evaluations. It specifically illuminates what is involved in, and required for, government adoption, a mechanism for scaling up that will be a common goal in global implementation research. Here, it highlights the intricate balance between working within the constraints of the current system and using programmes to press for the more ambitious system changes

required for impactful results. Designing a programme to fit the current system may not achieve wider ambitions – but if systemic change is needed to give the programme the best chance to flourish then this is an immediate challenge to scaling up. This dilemma is not unique to Serbia; it is faced by service systems, practitioners and policymakers globally.

The study highlights the need for iterative, multi-component work to address this, which will include shifting social norms and garnering support from both policymakers and the public.

The UNICEF Scale-up Framework may be a helpful tool of wider applicability to guide scaling endeavours where government adoption is the focus, and to understand where efforts should be prioritized.

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1 *Centre for Evidence and Implementation;* ***2*** *SeConS Development Initiative Group;* ***3*** *University of Belgrade and Foundation for the Advancement of Economics*

The evaluation report and management response from UNICEF can be viewed at: <https://www.unicef.org/evaluation/reports#/detail/16745/evaluation-of-models-for-scale-up-potential-in-serbia>

South Africa: Piloting parenting programmes in low-resource settings

Findings from:

Delivering a parenting programme in South Africa: The impact of implementation on outcomes

Introduction

While the number of parenting programme evaluations has been growing in LMICs, little is known about the implementation processes and their impact on participant outcomes in these settings.

Parenting interventions have been shown to improve child–caregiver relationships, promote positive parenting practices and reduce harsh parenting, as well as child maltreatment. Parenting support is seen as especially important for low- and middle-income countries (LMICs) as most of the world's children live in LMICs where maltreatment tends to occur at higher rates than in high-income countries. While the number of parenting programme evaluations has been growing in LMICs, little is known about the implementation processes and their impact on participant outcomes in these settings.

Sinovuyo Teen (Parenting for Lifelong Health for Parents and Teens) is a 14-week, manualized programme for families with adolescents aged 10–18 years. The Sinovuyo Teen parenting programme is part of the Parenting for Lifelong Health (PLH) initiative, a collaboration among UNICEF, WHO, NGOs and academics to develop and test evidence-based parenting programmes that are non-commercial and relevant to LMICs. The PLH suite of interventions also includes programmes for families with children in younger age groups, which were also originally developed and tested in South Africa.

The Sinovuyo Teen programme's intervention manual is based on social learning principles, and was developed by drawing on existing research, consultations with experts and piloting in South Africa. Two pilot studies were conducted during 2013–2014, including qualitative research with programme facilitators and participants to incorporate their feedback in the revised manual, and ensure programme acceptability and relevance.

Following this, Sinovuyo Teen was trialled in a cluster-randomized controlled trial in the Eastern Cape, South Africa, during 2015–2016.

As part of Sinovuyo Teen, adolescents and their primary caregivers participated in 14 weekly group sessions, with meetings taking place in a variety of community locations. Sessions were designed to be participatory and non-didactic, and they covered topics such as praise and relationship-building, managing emotions and keeping adolescents safe. In total, 10 sessions included both adolescents and their caregivers and 4 were separate, parallel sessions to promote an open discussion. Participants were given a home practice task after each session to practice new skills. Participants who were unable to attend a group session received a home visit from the facilitators so that they also received that week's content.

The 2015–2016 cluster-randomized controlled trial – in which the implementation evaluation discussed here was nested – found improvements across several family and individual outcomes (Cluver et al., 2018). Caregivers reported reduced physical and emotional maltreatment, reduced use of corporal punishment and poor monitoring, as well as an increase in positive and involved parenting. Adolescents reported reduced maltreatment at post-test, though not at follow-up, an increase in involved parenting and a decrease in inconsistent discipline. Overall, adolescents reported fewer intervention effects than their caregivers.

Intervention implementation phase, type of study and implementation outcomes

The study is a quantitative evaluation embedded in a cluster-randomized controlled trial, carried out during the initial implementation phase of Sinovuyo Teen. The study explores the implementation outcomes of acceptability and fidelity.

Aims and objectives of the implementation research

The research explored the implementation of Sinovuyo Teen within the 2015–2016 cluster-randomized controlled trial in the Eastern Cape, South Africa. It examined:

- The fidelity of programme delivery by facilitators, participant attendance and engagement
- The factors associated with variation in fidelity, attendance and engagement
- The associations of variation in fidelity, attendance and engagement on parenting behaviour and maltreatment reported by caregivers and adolescents.

The Sinovuyo Teen study was linked to a research project that aims to increase the evidence base of what works in lower-income contexts. Relevant findings of related qualitative implementation studies are referenced in this summary. Findings from studies under this research project are synthesized in a summary report (Loening-Voysey et al., 2018b), which includes reflections on the relevance and scalability of the Sinovuyo Teen parenting programme.

Equity considerations

South Africa has high levels of violence against adolescents in both home and community settings. The Eastern Cape province – where the programme was implemented and evaluated – is a historically disadvantaged part of South Africa, with poor infrastructure and high rates of poverty and unemployment.

In low-resource contexts like South Africa, proven parenting programmes from high-income countries are inaccessible due to cost and resource constraints.

Well-evidenced parenting programmes available in high-income countries are often inaccessible to those in low-resource contexts such as South Africa due to the prohibitive cost of materials, training and accreditation, and/or the need for qualified health professionals for implementation or the use of technological components (i.e., video or internet). Consequently, those most in need of parenting support globally are missing out. PLH programmes were designed so as to not require professionals, videos, equipment or participant literacy, with intervention manuals freely available. Moreover, partners committed to 'never-profit' open licenses for the programmes.

Context of the implementation research

The delivery of Sinovuyo Teen was led by a local NGO, called Clowns Without Borders South Africa (CWBSA). Community members and social workers from local government and other NGOs were recruited by CWBSA to deliver the intervention during the randomized controlled trial, and all but 2 of the 25 facilitators had no previous experience with implementing a parenting intervention. Facilitators received five days of training in collaborative facilitation methods and parenting principles from CWBSA, as well as ongoing, weekly, day-long supervision and training on session content. Several strategies, such as session observations by the facilitators' trainer and NGO staff, were used to maintain treatment fidelity and quality.

The cluster-randomized controlled trial was conducted in 40 communities (located in 34 rural villages and 3 large peri-urban townships) in the Eastern Cape province, involving 552 families reporting conflict with their adolescents (270 families in the intervention group and 282 in the control group). Families were identified through a range of sources, including self-referrals, local chieftains, community-selected representatives, schools, social services and door-to-door visits. To be eligible for the study, families had to respond positively to one of the screening questions on whether there were conflicts between the caregiver and adolescent in the household, and to complete the two rounds of baseline assessments. No exclusion criteria were applied, apart from learning difficulties too severe to allow consent. Local traditional and political leaders agreed to participation in the programme for their respective communities.

Methods for the implementation research

The main five quantitative implementation indicators examined in Sinovuyo Teen (n=270) are:

- Group session attendance: the total number of sessions attended by adolescents and caregivers (the sum of the sessions each attended)

- Home visits: the total number of home visits delivered by facilitators to each household after missed sessions

- Overall dosage: the total sum of group sessions and home visits the family received to examine an overall dose–response effect

- Family engagement: average of adolescent and caregiver engagement scores from all the sessions they attended, using a behaviourally-anchored three-point scale

- Facilitator fidelity: average rating of the facilitators in a cluster in the 14 sessions. Fidelity was assessed by measuring how well, according to research assistant observation, the facilitators implemented the core activities in a session, such as introducing, reinforcing and summarizing core lessons; performing and discussing role plays; and encouraging open and supportive discussions. The approach to measuring fidelity was focussed on the function of intervention activities, i.e., whether the purpose of the session activities was achieved rather than whether the activities were simply completed or not.

Implementation measures were collected through observations by 15 research assistants (RAs), and attendance was cross-checked with facilitator-recorded data. All RAs were from the local area and most of them had completed at least secondary education. RAs attended five days of training in observational research and data collection forms, and daily supervision was carried out to ensure consistency in completing the forms. The RAs observed 277 sessions, out of the total 279 sessions delivered, and 32 per cent of the sessions were double-coded by two RAs. Ratings were supplemented with comments that were reviewed during data analysis to validate and contextualize the quantitative trends. The information regarding home visits came from the records of the implementing NGO.

The intervention outcome measures (i.e., measuring family outcomes) used in this implementation study were the above-mentioned primary trial outcomes as specified in the randomized controlled trial protocol. Quantitative data were analysed using correlation and multi-level regression analyses.

Other information about the research

- **Funders (in alphabetical order):** Cambridge Commonwealth, European & International Trust; ESRC Impact Acceleration Account at the University of Oxford; European Research Council; Global TIES for Children at New York University; Hewlett Foundation; John Fell Fund; Leverhulme Trust; Smuts Memorial Fund; St John's College, Cambridge; UNICEF Innocenti Office of Research; UNICEF South Africa. In addition, further organizations provided funding to study members on related projects.

- **Timescale:** The implementation study was conducted between April 2015 and

August 2016. The broader research project took place between November 2014 and September 2016.

- **Stakeholder involvement:** The development and testing of Sinovuyo Teen was done through a partnership between academics (Oxford University and the University of Cape Town), local and international organizations (Clowns Without Borders South Africa, National Association of Child Care Workers South Africa, UNICEF South Africa, UNICEF Innocenti, Keiskamma Trust, World Health Organization) and government (national and provincial departments of social development and basic education). Regular meetings with multiple stakeholders were used to share research findings and gather feedback.

  Prior to the delivery of the Sinovuyo Teen programme, a team, led by a community member familiar with traditional practices and events, engaged with local government and traditional leaders, gaining their support and permission to use local facilities.

Implementation research results

Key findings of the implementation evaluation are discussed below.

Findings relating to implementation outcomes

The study found fidelity, attendance and participant engagement rates similar to those reported in high-income country studies.

The study found fidelity, attendance and participant engagement rates similar to those reported in high-income country studies.

- **Fidelity:** Average facilitator fidelity was 83 per cent of the possible maximum. It appears that the level of fidelity was sometimes influenced by the specific circumstances and the content of the session in a particular week.

- **Attendance:** The families received 91 per cent of the sessions in total either via group sessions or home visits. The average group session attendance, however, was only 58 per cent, which – as the study authors note – is lower than in some previous studies of other parenting programmes.

- **Participant engagement:** Family engagement in group sessions was, on average, 74 per cent. Average quality of implementation and adolescent engagement in a cluster were strongly correlated.

Neither family attendance and engagement, nor fidelity, displayed systematic change over time.

The study did not find a pattern among the effects of dosage or fidelity on the trial outcomes within the intervention group. The study authors suggest that this may be due to limited variation in dosage, as home visits were comprehensively provided when participants could not attend group sessions, and due to fidelity being monitored by the implementers and researchers. As a result of this limited variation, the statistical power to detect the effects of fidelity, attendance (dose) and engagement was low.

One exception was that higher fidelity was linked to increased adolescent-reported maltreatment at follow-up. Adolescents in clusters with higher-quality implementation reported an increase in maltreatment at follow-up, compared to adolescents in clusters with lower-quality implementation. Drawing also on findings from other studies, the authors suggest that the increased reporting of maltreatment by adolescents may reflect their increased confidence and willingness to disclose their experiences at home. Another interpretation offered by the authors is that higher fidelity in some clusters may have meant less flexibility to meet the specific needs of the participants. Thus, perhaps the manual was followed more closely to the detriment of addressing unexpected issues. However, since this relationship was present only for 1 of the 14 outcome indicators examined, further exploration and replication is needed.

Most participants reported improvements in their households, such as perceived reductions in violent discipline among caregivers and aggressive behaviours among children.

Acceptability was examined in a complementary qualitative implementation study, which found that participants had provided primarily positive feedback on the programme (Doubt et al., 2017). Most participants reported improvements in their households, such as perceived reductions in violent discipline among caregivers and aggressive behaviours among children. The liaison between researchers and community members was found to be one of the key reasons for the initial acceptance of the programme in the community, particularly by community leaders (Loening-Voysey et al., 2018b).

Findings relating to implementation barriers and facilitators

The barriers and facilitators highlighted in this section are those reported in the implementation evaluation, but also bringing in analysis by Shenderovich et al., (2018) on factors influencing participant attendance and engagement, and from the synthesis report (Loening-Voysey et al., 2018b).

Programme characteristics

Participants, facilitators and managers of the implementing NGO found the programme relevant and very enjoyable. The most common description of the programme was that it was 'fun' and that it supported participant engagement (Loening-Voysey et al., 2018b). Facilitators also appreciated the well-packaged, easy-to-use manual, the practical training and supervision sessions (Loening-Voysey et al., 2018b).

Based on the RAs' observations, some of the common challenges with regard to fidelity were with the adoption of participatory approaches (e.g., facilitators reading role plays instead of acting them out with participants), and facilitators missing or misunderstanding parts of the content. While adaptation of the Sinovuyo Teen programme was not measured systematically, RAs reported some common changes made by facilitators during implementation. In some groups, facilitators had to make adaptations for low attendance when activities were designed to be practiced in family dyads, but only one person from a dyad attended. On other occasions, instead of starting a new topic, facilitators continued with lessons from previous weeks when they felt something was not covered. The duration of some sessions was also shorter than prescribed, but session duration was not correlated with fidelity.

The offer of home visits following missed sessions as part of the programme may have reduced the incentive to attend group sessions.

Individuals involved in implementation

Nearly all facilitators delivered the intervention for the first time during the randomized controlled trial, immediately after the initial training and without any previous experience of working together. This can be viewed as a barrier to implementation since the facilitators were learning to deliver the programme immediately prior to and during the delivery. Facilitator competency often improves with repeated delivery of programmes. On the other hand, quality of delivery may also reduce over time without consistent support and booster training.

Organizational setting

Group sessions took place in a community location, such as a community hall or a school. Lack of physical space for separate sessions in some locations did not provide a quiet and confidential space separate for adolescents and caregivers.

Wider context

Children and caregivers cited other commitments as the most common reason for not attending sessions. These included community events (e.g., church group meetings and funerals), family obligations (e.g., housework), work and school commitments for children. In addition, sickness was an often-cited reason for not attending. Monthly drops in attendance seemed to coincide with the time when participants travelled to obtain their monthly government grants, and then shopped for food and other necessities.

The study by Shenderovich et al. (2018) found no evidence that family disadvantage and the level of stressors, such as poverty, were related to attendance and engagement. This may be due to the programme design including efforts to reduce known barriers to engagement, for instance, by providing meals and offering transport if needed, as well as limited variation in the sample.

There were several statistically significant factors associated with attendance. Fewer sessions were attended in peri-urban clusters compared to rural areas, and by employed caregivers and male caregivers. Time and logistics emerged as a major barrier to attendance, consistent with previous research on family programmes. Caregivers who were employed had lower attendance – likely because the sessions took place on workday afternoons. It was not feasible due to safety issues to conduct sessions in the evening, which could help working caregivers.

Children with higher rates of alcohol and substance use had lower attendance, although the difference for children did not reach statistical significance in the sensitivity analyses. Children from overcrowded households attended on average 1.2 more sessions than their peers.

Findings relating to implementation processes, strategies and mechanisms

A complementary qualitative study (Loening-Voysey et al., 2018a) – which examined the broader service delivery context – highlighted the need to embed Sinovuyo Teen in regular service provision, via either government or non-government social welfare services. Interviewed policymakers identified several service areas in child protection as potential entry points for Sinovuyo Teen, such as with foster parents or child and youth care workers in alternative/formal care, and early intervention for adolescents in conflict with the law and/or abusing substances (Loening-Voysey et al., 2018b). This requires common goals as well as clarity on programme beneficiaries, accredited or recognized facilitator training and organizational monitoring criteria (Loening-Voysey et al., 2018b).

Findings relating to implementation costs

A cost-effectiveness study was conducted and estimated that the intervention could lead to significant economic benefits by averting cases of child abuse (Redfern et al., 2019).

RECOMMENDATIONS AND IMPACTS

The study suggests that it was possible to deliver the Sinovuyo Teen programme with a level of implementation quality comparable to studies in high-income countries. This finding adds to the growing body of evidence from fields such as mental health that complex interventions can be delivered by lay staff with appropriate training and supervision. The authors offer a number of suggestions for Sinovuyo Teen and future research on parenting interventions:

- As parenting programmes are already implemented in ordinary service, it would be beneficial for future research to draw on routine monitoring, as well as study interventions implemented within established delivery systems. Researchers are examining the implementation of PLH programmes outside of controlled research contexts, including in South Africa (Shenderovich et al., 2023), South Sudan (Janowski et al., 2020), and a number of other LMICs (Shenderovich et al., 2021).

- Further examination of organizational factors in implementing parenting interventions in LMICs, such as facilitator recruitment, compensation incentives and work conditions, would be useful. Various organizational models of delivering parenting programmes could be compared in experiments as a way of improving fidelity, and helping to address facilitator burn-out and turnover. For example, ongoing research on PLH for young children in south-eastern Europe is examining the impact of facilitator supervision (Lachman et al., 2019).

- Future studies in LMICs could incorporate a more extensive subscale measuring facilitator skills. Ongoing PLH studies in south-eastern Europe and in the United Republic of Tanzania have examined psychometric properties for more detailed, competent adherence measures (Martin et al., 2022). Another promising area is understanding therapeutic alliance – the interpersonal processes between the facilitator and participant – in the context of interventions delivered by lay staff in different cultural settings.

- Finally, the field could benefit from planning how to systematically record and assess adaptations to evaluate their impact. It is important that funding and implementing agencies are considering the intervention theory of change and core principles to ensure interventions can be adapted without undermining the ideas behind the programme.

Following the evaluation, the Sinovuyo Teen programme has been implemented by a number of national governments, and international, regional and local NGOs across 20 countries. The intervention has been included in guidance documents, such as the multi-agency, violence-prevention INSPIRE package.

Research is ongoing into how to adapt, optimize and evaluate the remote, digital and hybrid delivery modalities of PLH interventions, delivered through chatbots, online chat groups (Lachman et al., forthcoming) and an offline-first app (Janowski et al., 2023). The intervention materials have been used to provide advice for families during the COVID-19 pandemic in 2020–2022, and in conflict and emergency settings, such as the Ukraine and Pakistan in 2022 (Cluver et al., 2020; 2022). The recently established Global Parenting Initiative is facilitating ongoing work on research, innovation and advocacy for the scale-up of evidence-based, playful parenting programmes in the global south.

Discussion

This study has contributed to improving understanding of the implementation processes of parenting interventions and their impact on participant outcomes. The fidelity, attendance and engagement levels within a randomized controlled trial may not be representative of all the replications in other settings by various agencies. However, these are helpful benchmarks that can be used for comparison and planning within the growing body of research examining parenting support in LMICs. Findings confirm that high-quality implementation can be achieved in programmes delivered by lay workers in a low-resource context.

Strengths of the study include that fidelity and engagement were observed by independent researchers rather than the implementers themselves, which provided a higher level of objectivity. In addition, data were collected from almost all intervention sessions rather than a limited sample.

Limitations as reported by the authors included:

- For simplicity, group sessions at community venues and individual home sessions were treated as equivalent. However, it is likely that the home sessions were not equivalent to the group sessions as the intervention relied on group interactions. In addition, the home sessions only lasted about 20 minutes each, which is about five times shorter than an average group session. Following missed sessions, close to a third of the sessions were delivered through these individual visits, but it was not feasible to systematically observe home visits as observations in the home were considered too intrusive.

- It was not possible to collect data on home practice completion, which is a programme feature that parenting interventions rely on in order to reinforce the learning between sessions.

- Due to a limited number of intervention clusters (20), statistical power was limited and it was not possible to explore predictors of fidelity, such as whether the effect of fidelity is mediated by participant engagement.

- Due to the relative brevity of the implementation measurement tool, the study did not examine facilitator fidelity and quality as two separate predictors, although they may have different effects on participant outcomes.

Case compendium editorial comments

The study is a high quality, type 2 hybrid effectiveness-implementation design that provided in-depth insight into key aspects of implementation. This is an emergent evaluation design with scope for rich learning and this study is a rare example of its application in a LMIC.

The research offers a robust measure of selected implementation outcomes. Observations were carried out by local research assistants, with acceptable interrater reliability. Complementary qualitative studies provided understanding of barriers and facilitators to implementation of the programme.

Sinovuyo Teen also offers a good example of how programme design considered potential barriers to participation where feasible, e.g., by offering transport, meals and home visits. In addition, also through complementary research, it provided insight into barriers and facilitators.

This study also highlights a good uptake of findings, which informed further research and, as part of the broader research project, supported the introduction of the programme across multiple countries and its inclusion in global guidance on violence prevention.

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