



A Multiple Family Group-based intervention (SMART-Africa) to promote child and adolescent mental health in Uganda: A costing study

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Background

- Evidence-based practices (EBPs) for the treatment and prevention of child mental health disorders exist;
- BUT**, introduction and scale-up of EBPs in low-resource settings, including in Uganda, face challenges:
 - Shortage of mental health professionals and other resources
 - Lack of streamlined policies, norms & guidelines
 - Knowledge gaps/limited data on:
 - Uptake, implementation, integration, and sustainability of child mental health EPBs
 - Costs and cost-effectiveness of child mental health interventions**

Aims

To assess and compare the **costs** of a **Multiple Family Group (MFG) family-strengthening intervention** aimed at improving child behavioral health outcomes through task-shifting strategies to standard mental health care promotion in Uganda

Study Context

- In Uganda, **children** make up over 50% of population
- Chronic poverty & violence put children at risk for **mental health disorders**
- Children in Uganda also bear high **infectious disease** burden (e.g., malaria & HIV/AIDs) and face **educational** challenges



Methodology

SMART Africa trial

- Sample:** 2931 children (aged 8-13 years) and caregivers, at 26 primary schools in SW Uganda. Randomized school-level trial allocation
- Trial:** Three-arm cluster RCT over 48 months
 - Bolstered Standard of Care (BSOC) arm:** Provision of mental health wellness materials developed by Ministry of Health
 - MFG-PP arm:** MFG delivered by trained PPs
 - MFG-CHW arm:** MFG delivered by trained CHWs
- MFG intervention:**
 - 16 sessions
 - Guided by the 4Rs (Rules, Responsibility, Relationships, Respectful Communication) and the 2Ss (Stress and Social Support)
 - Delivered by Community Health Workers (CHWs) or Parent Peers (PP)
 - Supervised by ICHAD Research Assistants
 - Implemented in a school setting

Cost Analysis

Outcome

- Total per-child costs by study arm over 48 months

Method

- Prospective micro-costing analysis
- Provider perspective
- Treatment-on-the-treated (TOT) sample (conservative estimates based on actual participation)
- Adjusted for inflation, discounted at 3%, expressed in 2018 USD

Results

- Per-child cost was **\$138, \$346, and \$328** for BSOC, MFG-PP and MFG-CHW, respectively, using the TOT sample
- Per-child cost difference between two intervention arms and BSOC was **US\$208 and US\$190**, respectively
- Per-child cost was \$122, \$254, and \$255 for BSOC, MFG-PP and MFG-CHW, respectively, using the Intention-to-treat sample

Table 1. Total per-child costs by study arm using TOT sample (all costs in 2018 Ugandan Shillings unless otherwise noted)

Cost categories	Control arm	MFG-PP arm	MFG-CHW arm
Personnel (salaries)	378,352	908,457	855,911
Identification of schools and school visits	15,582	18,790	17,625
Screening and recruitment of study participants	25,582	29,542	26,902
Provision of school lunches	25,795	39,696	33,911
BSOC: Mental health promotion (control)	1,783	2,141	2,017
Training of MFG facilitators	-	11,688	12,785
Delivery of MFG sessions	-	120,550	125,226
Donated resources	14,174	32,313	30,444
Overheads	46,520	111,698	105,237
Stakeholder engagement and dissemination	2,400	5,761	5,428
Capital costs	3,642	8,744	8,239
Total costs	513,829	1,289,380	1,223,725
Total costs (in 2018 USD)	138	346	328

Discussion & Implications

- Personnel costs were the key cost driver, accounting for about 70% of total costs, because of intensive supervision and support provided to MFG facilitators and intervention quality assurance efforts.
- Compared to other family-based interventions, the MFG intervention had a much lower per-participant costs; however, few comparisons are available in the literature.
- This is the first micro-costing analysis of an evidence-based MFG family-strengthening intervention in a low-resource environment
- There is an urgent need for more costing and cost-effectiveness studies to inform programming and policy

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