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TURBO TALK: Integration of psychosocial stimulation for children with severe acute malnutrition (aged 6–23 months) into a nutrition programme in Koutiala, Mali: the STIMNUT study

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Introduction

Poor maternal mental health may exacerbate the risk of death and developmental delays in children with severe acute malnutrition (SAM), as it can hinder appropriate child care, nutrition, and psychosocial stimulation during the first 1000 days of life. In Mali, the prevalence of global acute malnutrition reached 11.1% in 2023, while SAM prevalence was 2.1%. Between February and May 2023, MSF implemented a psychosocial stimulation intervention to enhance childcare practices targeting children aged 6–23 months with SAM and their primary caregivers in Koutiala, Mali. The intervention included five sessions on communication and play, breastfeeding and feeding practices, massage, bathing, and sleep and relaxation needs. We aimed to assess the feasibility and acceptability of this intervention to inform future nutritional strategies.

Methods

We applied a mixed-methods approach. We used two pre- and post-intervention tools: (1) the Dusukasi tool to assess a local perinatal depression-like syndrome and (2) an adapted version of the Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO) tool to evaluate caregivers-to-child interactions. We also monitored the child's weight. We calculated Cohen's d effect sizes to assess changes (before vs. after intervention) and used a bootstrap resampling approach (10,000 iterations) to estimate 95% CIs. To evaluate the acceptability of the intervention, we collected qualitative data through semi-structured interviews with caregivers and healthcare staff. These data were analysed using a combination of an inductive approach, guided by Sekhon acceptability model, and a deductive approach informed by critical discursive psychology.

Ethics

This study was approved by the Médecins Sans Frontières Ethics Review Board (Protocol ID: 2210) and the National Ethics Committee for Health and Life Sciences of Bamako in Mali (Protocol ID: 2022097).

Results

This analysis included 36 children aged 6–23 months with SAM (14 male and 22 female, median age 12 months) and 36 primary caregivers (34 mothers and 2 grandmothers, median age of mothers 28 years). After the intervention, the score for perinatal depression-like syndrome (Dusukasi tool Cohen's d = −0.69, 95% CI −1.19 to −0.22), and PICCOLO scores (Cohen's d=0.97, 0.55 to 1.40) indicated a large effect size, suggesting substantial improvement in caregivers-to-child interactions. Child's weight increased significantly (Cohen's d=1.61, 1.28 to 2.12), with a post-intervention mean gain of 880 g. Qualitative findings suggested stronger emotional bonds between mothers and children, increased self-confidence and autonomy among caregivers, greater family involvement, and enhanced trust between caregivers and healthcare staff.

Conclusion

Integrating psychosocial stimulation into SAM treatment programmes benefitted maternal mental health, improved caregivers-to-child relationships, and supported the child's recovery, thus addressing critical early development needs. These findings advocate for broader adoption of such approaches to mitigate the long-term consequences of SAM and promote sustainable health and development outcomes in resource-limited settings.

Conflicts of interest

All authors declare no competing interests.