



Digital Technology and Rehabilitation: Bridging the Service Gap in India

By

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Discover Ability
AMAR SEVA SANGAM
Rehabilitation. Empowerment. Inclusion.

Bio-Data

Designation: Senior Physiotherapist

Affiliation/Institute: Amar Seva Sangam, Tamil Nadu, India

Background: A physiotherapist with expertise in disability management and a focus on rural rehabilitation. With five years of experience at Amar Seva Sangam,

Achievements: Supported and advanced early intervention strategies in rural settings; contributed to the development and delivery of innovative rehabilitation models for neuro and physical disabilities.

Special Interest: Focused on leveraging assistive technologies and community-based interventions to improve outcomes for individuals with neurological impairments



Background and Service Gap

- **Rehabilitation Service Disparities:** Shortage of physiotherapists, occupational therapists, speech therapists, psychologists, and special educators in underserved rural and urban slum areas in India, leaving children with disabilities without early intervention.
- **Objective:** Address the lack of resources and facilitate community-centered rehabilitation through digital solutions.



Enabling Inclusion[®] App – Overview and Goal

- **Objective:** To bridge rehabilitation service gaps by providing a digital, community-based, and family-centered solution.
- **Structure:** Connects community rehabilitation workers (CRWs), parents, and rehab specialists via the EI App for seamless, remote case management and rehabilitation support.





EI[®] APP

Screening Module

Assessment List(9)

- Physiotherapy Assessment - Substituted
- Vision Assessment - Substituted
- Psychosocial Assessment - Substituted
- Speech & Language Assessment - Substituted
- Functional Assessment for Hearing - Substituted
- General Assessment - Completed
- Special Education Assessment - Substituted
- Special Education Assessment - Substituted
- Physiotherapy Assessment - Substituted

General and Specialist Assessments & Child Outcome Evaluations

Goals

- Poor accessibility in school --> To facilitate suitable accessibility in school
- Negative attitude of school staff and poor acceptance on child with disability --> School staff understand right and needs of child with disability
- Peers do not cooperate with the child/division the child -->

CANCEL OK

Goal Setting and Intervention Plan

Calendar

Treatment Speech CHLD B
Learning Competencies
Rehabilitation Measures

Treatment Special education (ADHD) CHLD B
Learning Competencies
Rehabilitation Measures

Treatment Enrichment CHLD B
Learning Competencies
Rehabilitation Measures

Daily Scheduling and Advance Tour Plan

Regular Therapy Visits and Support Services



Awareness Programs and Capacity Building

Management Dashboard

Parents Feedback Chart

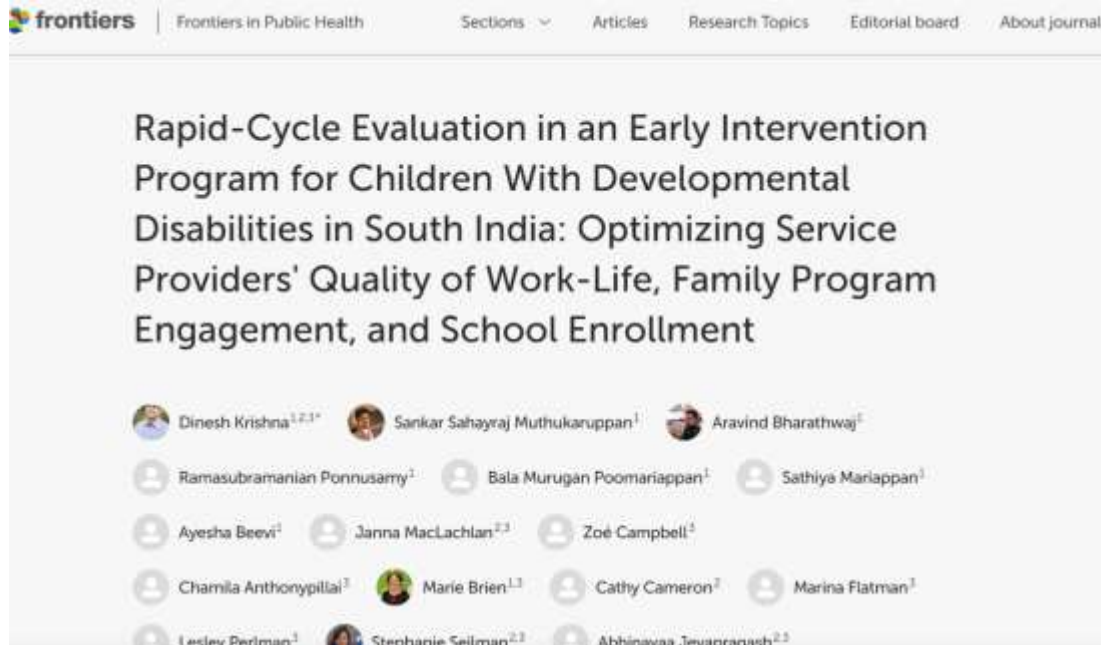
Tracking Family Outcomes

Enabling Inclusion[®] App - Core Features

- **Comprehensive Case Management:** Integrates assessment, treatment planning, follow-up, and feedback loops.
- **Remote Accessibility:** Enables real-time, location-independent updates.
- **Tailored Assessments and Intervention Plans:** Customizable for a wide range of disabilities, adapting to children's and families' needs.



Publications Related to Positive Child Outcomes



frontiers | Frontiers in Public Health | Sections | Articles | Research Topics | Editorial board | About journal

Rapid-Cycle Evaluation in an Early Intervention Program for Children With Developmental Disabilities in South India: Optimizing Service Providers' Quality of Work-Life, Family Program Engagement, and School Enrollment

Dinesh Krishna^{1,2,1*} Sankar Sahayraj Muthukaruppan¹ Aravind Bharathwaj¹
Ramasubramanian Ponnusamy¹ Bala Murugan Poomariappan¹ Sathiya Mariappan¹
Ayesha Beevi¹ Janna MacLachlan^{2,3} Zoé Campbell⁴
Chamila Anthonypillai¹ Marie Brien^{1,3} Cathy Cameron² Marina Flatman¹
Leslev Perلمان¹ Stephanie Seilman^{2,3} Abhinavaa Jeevaarajah^{2,3}



Research in Developmental Disabilities

Volume 154, November 2024, 104829



Motor development trajectories of children with cerebral palsy in a community-based early intervention program in rural South India

Marie Brien^{a b 1 2}  , Dinesh Krishna^{a b 2 3 4} , Ramasubramanian Ponnusamy^{a b 2 5} ,
Cathy Cameron^{b 6 7} , Rahim Moineddin^{c 6 8} , Franzina Coutinho^{a b d 2 9 10} 



Publications Related to Parent Outcomes



Research in Developmental Disabilities

Volume 150, July 2024, 104766

A capacity-building intervention for parents of children with disabilities in rural South India

Katie Proctor ^{a,1}, Meera Patel ^{a,1}, Dinesh Krishna ^{b,2,3},
Navamani Venkatchalapathy ^{b,4}, Marie Brien ^{b,4}, Sylvia Langlois ^{b,5}



ORIGINAL ARTICLE | [Open Access](#)

Social capital of families of children with neurodevelopmental disabilities in South India

Diana Banaru, Dana Boyd, Melanie Halevy, Angel Oliver, Kayla Orsat-Parker, Marie Brien, Dinesh Krishna, Franzina Coutinho, Tatiana Ggurtsova

First published: 02 May 2024 | <https://doi.org/10.1111/dmcn.15949> | Citations: 1

This original article is commented by Bänovčinová on pages 1539–1540 of this issue.



Publications Related to Positive Program Outcomes




Societal Impacts

Volume 3, June 2024, 100042



Digital technology to improve accessibility to rehabilitation services in India: The Enabling Inclusion® app

Franzina Coutinho^{a b e} ✉, Marie Brien^{a c}, Dinesh Krishna^{a c d}, Gauri Saxena^e,
Ramasubramanian Ponnusamy^a, Navamani Venkatachalapathy^a



frontiers | Frontiers in Public Health | Sections | Articles | Research Topics | Editorial board

Leveraging monitoring, evaluation, and learning to scale the Enabling Inclusion® program for children with disabilities in India and globally

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Joost de Laat³ Sankara Raman Srinivasan¹ Navamani Venkatachalapathy¹

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³ Utrecht Centre for Global Challenges, Utrecht School of Economics, Utrecht University, Utrecht, Netherlands



Impact

- **Developmental Progress:** Significant improvement in motor, cognitive, and social skills.
- **Family Empowerment:** Increase in caregiver confidence and skills in supporting children's rehabilitation.
- **Feedback from Parents and CRWs:** High satisfaction and enhanced engagement in the child's development.
- **Community Impact:** Increased awareness of disability rights, fostering more inclusive communities.

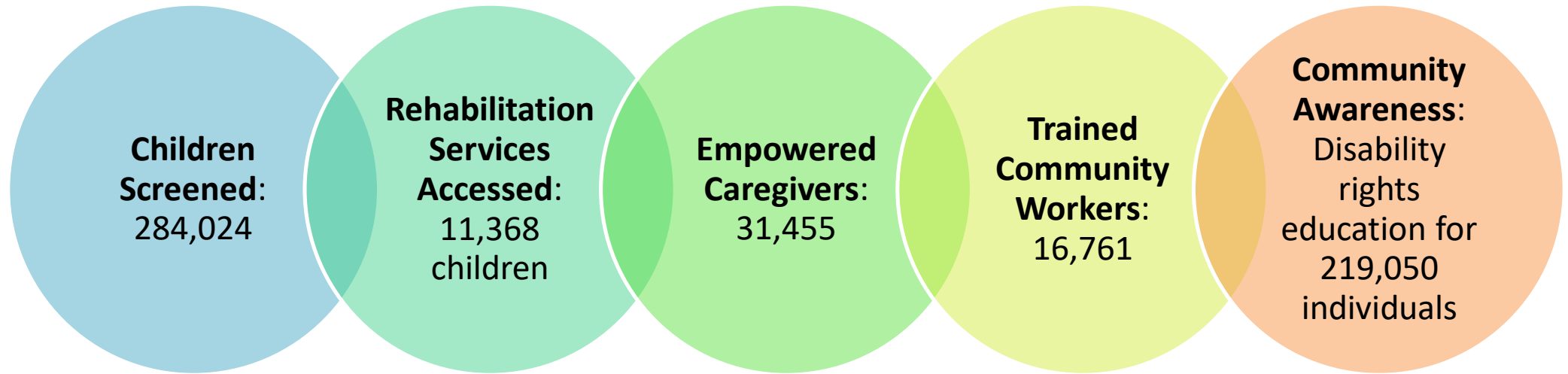


Enabling Inclusion® programs across India & Globally

- 23 NGOs across India (7 states), 3 in Africa have licensed the EI® app
- 5 Govt agencies have used EI® app



Impact - Reach Across India



Advantages of Digital Rehabilitation in India

- **Digital Infrastructure:** Leveraging India's strong mobile connectivity to reach rural and underserved areas.
- **Scalability:** Remote capabilities allow expansion without geographical limitations.
- **Sustainability:** Cost-effective solution enabling widespread impact without over-reliance on in-person specialists.



Awards and Recognitions



2023 Zero Project Award for Independent Living
presented at United Nations (Vienna, Austria)



The Spindle's 2020 Most Inspiring Digital Innovation
(Netherlands)



2020 Project Management Institute Award
(India)



2020 Zero Project Inclusive Education Award
(Vienna, Austria)



2019 World Cerebral Palsy Day Major Award: Medical/Therapeutic
(Australia)



2019 MIT Solve Award for Early Childhood Development
(New York, USA)



2019 Microsoft Equal Opportunities Award
(India)



2016 Vodafone Mobile for Good Award
(India)



2022 ATF Award for Best Assistive Technology Initiative for NGOs
(India)



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Thank you

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Tamil Nadu, India

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