

Community-based cognitive and language stimulation through therapeutic group therapy for toddlers in an urban low-income area: a case report

Mawaddah¹, Budi Anna Keliat², Yudi Ariesta Chandra³, Novy H.C. Daulima⁴

Abstract

Purpose: Early childhood development is crucial for psychosocial growth, particularly in cognitive and language domains. In resource-limited areas, health promotion through community-based stimulation can bridge service gaps. A community-based approach involving parents and community health workers (CHWs) can effectively promote and prevent health issues in the community. **Program description:** A structured intervention using therapeutic group therapy (TGT) was implemented for toddlers aged 1–2 years in Batu Tulis Village, South Bogor, in December 2024. **Implementation process:** The program involved collaboration among mental health nursing students, mothers, health cadres, and local health workers. Activities focused on enhancing cognitive and language abilities. The intervention consisted of 30 to 45-minute stimulation sessions facilitated by mental health nursing students. **Outcomes and observations:** Improvements were observed in children's vocabulary, understanding of basic concepts, and social interaction. The evaluation was conducted through qualitative observation, structured interviews with parents, and the use of child development indicators based on the standards of the Indonesian Ministry of Health. Parents reported that their children's communication and independence in daily routines had increased. **Implications for health workers:** The case highlights the vital role of community health actors and mental health professionals in promoting early childhood development through straightforward and replicable interventions. This program is relevant for integration into primary health services and posyandu activities as part of the community's promotive and preventive strategy. **Conclusion:** Community-based cognitive and language stimulation intervention can potentially support young children's psychosocial development.

Keywords: children; community intervention; cognitive stimulation; language stimulation; psychosocial development; public health

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¹Faculty of Nursing,
University of Indonesia,
Jakarta, Indonesia

*Correspondence:

mawaddah31@ui.ac.id

INTRODUCTION

Childhood, particularly the first 2 years, is a critical period for achieving developmental milestones related to autonomy, cognition, and communication [1]. Childhood is a golden period for development. Early childhood development is critical. In low-resource settings, monitoring this stage of development and providing appropriate and timely feedback is challenging [2]. Childhood is the early stage of an individual's development, typically 18-36 months. The readiness for increased development at this age is evident when children exercise their independence by performing actions, such as learning about their surroundings and wanting to exert control over themselves.

Developmental tasks in childhood are autonomy or independence. If the child cannot achieve developmental tasks at this time, they will likely feel embarrassed, hesitant, and lack confidence [3]. Improvements in child development will affect the community's health in the future. The first two to three years of life are crucial for early child development, significantly impacting later life trajectories. Health interventions that focus on children, such as early developmental stimulation, are crucial to ensuring the health and well-being of children, which in turn will positively impact the community's overall health [4]. Community-based service providers play a key role in promoting early childhood development in areas where government services are weak. These community-based service providers are also tasked with collecting, monitoring, and evaluating data for donors and the local government [2]. Therefore, childhood is a crucial developmental stage for stimulating growth and development.

Improved childhood development can be stimulated through Therapeutic Group Therapy (TGT), which encompasses cognitive and language aspects. Cognitive and language aspects of children's development affect other elements, including motor and social factors [5]. Cognitive and language aspects significantly impact children's academic achievement and can be enhanced by stimulating these aspects [6]. Children's need to articulate thoughts and experiences through structured storytelling grows significantly with age. Communicating something in the form of a narrative requires good cognitive and language skills [7]. Children with good cognitive abilities will be able to respond effectively, as cognitive and language abilities are interrelated [8]. Childhood development can be supported by stimulating these areas of growth and development.

PROGRAM DESCRIPTION

This program was conducted in December 2024 in Batu Tulis Village, South Bogor. The subjects consisted of five children aged 1–2 years who had been identified as ready for psychosocial development enhancement through stimulation intervention. Enhancing child development, including through stimulation, requires mothers' involvement as a bridge connecting children with healthcare providers in the community. Because mothers play a vital role in their children's development, they must be educated about child development, including developmental stages, developmental tasks, stimulation methods, child development characteristics, and developmental monitoring [9].

Local governments and community-based programs can work together to raise awareness about the importance of early childhood development and educate caregivers, particularly mothers, on specific age-appropriate early stimulation activities that promote optimal growth. Mothers and families could benefit from the availability of friendly resources, such as homemade toys and children's books, as well as tailored messaging to support early stimulation activities for children [10]. It can be concluded that maternal involvement in stimulating child development is crucial.

This case study incorporates Erikson's and Piaget's developmental theories by providing stimulation targeting cognitive and language development in children. These domains are crucial in shaping children's social and emotional development, underscoring the importance of targeted support to promote overall well-being. Impaired social and emotional development can hinder the development of autonomy [1]. Additionally, cognitive and language skills in early childhood require consistent stimulation as children begin to use language to describe objects and express imagination [11]. Cognitive development significantly influences knowledge acquisition, progressing through interrelated and sequential stages [12]. Thus, cognitive and language development must be actively nurtured during early childhood.

IMPLEMENTATION PROCESS

The intervention was facilitated by mental health nursing students and supported by mothers and cadres. Activities included puzzles, color matching, naming objects, and sentence formation. Data were collected through direct observation, intervention records, pre-intervention developmental assessment results, and post-intervention evaluations. Developmental assessments were based on early

childhood developmental indicators as outlined in the Mental Health Promotion: Therapeutic Group Therapy book, which the Indonesian Ministry of Health has standardized.

This report describes the implementation of cognitive and language stimulation interventions as part of promotive and preventive efforts to enhance the psychosocial development of young children. The interventions were implemented using a community-based approach involving mothers, health cadres, and professional healthcare workers. The activities were guided by Master of Nursing students specializing in Mental Health Nursing and students from the Mental Health Nursing residency program.

Cognitive stimulation includes various activities, such as imitating the behavior and speech of others, following simple verbal commands, distinguishing colors, arranging objects vertically and horizontally, putting puzzles together, placing objects in their proper places, recognizing gender, and understanding basic counting concepts (1–5), shapes, colors, pictures, and positions.

Language stimulation includes naming more than 10 objects, speaking sentences consisting of 2–3 words, expressing desires through simple sentences, responding to conversations, asking and answering simple questions, stating one's name, and recounting simple daily events. The intervention was administered in a 30–45-minute session, and an evaluation was conducted the following week.

OUTCOMES AND OBSERVATIONS

The evaluation was conducted through qualitative observation of the children's responses during the session and structured interviews with parents to assess changes in the children's behavior at home. The following week, following one session of cognitive and language stimulation intervention and evaluation, several positive developmental findings were observed in five children aged 1–2 who were the subjects of this report. The observations revealed increased responses from children to verbal stimuli and cognitive activities.

After the intervention, children showed notable improvements in distinguishing colors, recognizing numbers, forming short sentences, and engaging in social play. These changes were reported in both clinical observations and parental feedback. Several children advanced from "needs stimulation" to "age-appropriate" categories based on the Ministry of Health's indicators.

Some progress indicators include:

1. Cognitive aspects: Children begin to distinguish colors, follow simple commands, arrange objects, and match shapes. Most children also start to show an ability to recognize numbers 1–5 and understand basic concepts of position (up, down, front, back).
2. Language aspects: Children show an increase in the number of words they use spontaneously, their ability to form simple sentences (2–3 words) and begin to express their desires verbally. Their responses to simple questions and participation in conversations also improve.
3. Social-emotional aspects: Children appear more active in interacting with facilitators and parents, begin to make eye contact when spoken to, and show interest in participating in games that involve social interaction.

After the intervention, the mother reported that the child had become more communicative at home and was easier to direct in daily activities. Evaluation based on early childhood development indicators showed improvement from the "needs stimulation" category to "age-appropriate" on some indicators.

DISCUSSION: IMPLICATIONS FOR HEALTH WORKERS

The findings in this report suggest that community-based cognitive and language stimulation interventions, when incorporated into therapeutic group therapy, can have a positive impact on young children's psychosocial development, even when administered in a single session. Even brief stimulation, if structured and involving parents and the child's immediate environment, can trigger more optimal developmental processes. The factors that influence child development can be categorized into two main groups: internal and external factors. Internal factors include genetics and hormonal influences, while external factors include the environment. Parents are included in the environmental factors, specifically the family environment because this is where parents first interact with their children to develop their abilities in accordance with their developmental stage [13]. There is a relationship between maternal involvement in parenting and child independence. Maternal involvement in parenting has been shown to have positive impacts on expectations and prosocial behavior in children [14]. Brief stimulation with parental involvement will yield more optimal results.

These results align with a promotive and preventive approach to public health, in which efforts to improve child development are initiated early through community-based interventions. The involvement of mothers, community health workers, and health personnel is a key factor in the success of stimulation, as they play a central role in the child's growth and development environment.

Increasing the achievement of child autonomy developmental tasks and the mother's ability to stimulate child development can be achieved across various aspects, including motoric, cognitive, language, emotional, personality, moral, spiritual, and psychosocial factors [3]. Therapeutic group therapy can stimulate child development by stimulating aspects of child development, such as cognitive and language aspects.

The intervention aligns with therapeutic group therapy (TGT) principles in community mental health nursing, emphasizing social interaction, verbal communication, and emotional support in promoting adaptive behavior in children. Activities such as arranging objects, matching colors and shapes, and expressing desires serve as cognitive and language stimulation while enhancing self-confidence and social skills. TGT is designed to support child development by involving parents in group-based learning and collaborating with others to stimulate their child's growth [3]. Psychosocial developmental tasks in early childhood include meeting basic needs independently, imitating others, expressing desires, enjoying independent activities, forming peer relationships, understanding social rules, participating in religious practices through imitation, and making simple decisions [3].

Although this intervention showed positive results, the short duration and the limited number of subjects were significant limitations in this report. Further research employing a quasi-experimental or longitudinal design is needed to assess the long-term effects of community-based stimulation programs on child development.

CONCLUSION AND NEXT STEPS

Cognitive and language stimulation interventions, such as those employed in Therapeutic Group Therapy through a community-based approach, have a positive impact on the psychosocial development of young children, even after just one session. Improvements were observed in cognitive, language, and social skills, indicating that simple, targeted stimulation can support children's overall growth and development.

These findings underscore the importance of active involvement by mothers, health cadres, and health

workers in implementing stimulation as part of promotive and preventive efforts. Therefore, implementing similar interventions in a sustainable and integrated manner in maternal and child health programs at the primary care level, such as community health centers and integrated health service posts, is highly recommended. Additionally, regular training and education for parents and health workers are needed to ensure the sustainability of stimulation in the home environment. Further research with a larger sample size and a longer intervention duration is also required to strengthen the evidence of the program's long-term effectiveness.

This community-based intervention successfully stimulated the cognitive and language development of toddlers in a rural setting. Future efforts should institutionalize this model into maternal and child health programs, provide continuous training to caregivers, and evaluate long-term outcomes through longitudinal research.

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