The Function of Cadres in Putting Child Development Stimulation, Detection, and Early Intervention Programs into Practice

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ABSTRACT

The East Java province's child health care coverage in 2020 was 83.3%, a decrease from 2019. In Surabaya, the coverage in 2019 was 91.59%, but it still did not meet the 2020 Minimum Service Standards (MSS) target of 100%. The inadequate implementation of programs for early detection, stimulation, and intervention in child growth and development (SDIDTK) is one factor contributing to the failure to meet this objective. For these initiatives to be successful at the Posyandu level, community health workers, or cadres, must be involved. The objective of this research is to look at how the SDIDTK programs use cadres. There were 71 respondents in the cross-sectional research, which used an observational analytic methodology. Out of the seven roles, only two were performed by all cadres (71 individuals): determining head circumference, weight, height, and upper arm circumference; providing the information into the early detection form for assessing newborn growth and creating a visual representation of the results. In the mother and child health book, two roles were not performed by any of the cadres. The first responsibility was to complete the Early Detection of Child Growth and Development form by providing the child's identity. The second role was to use the child development checklist to observe and mark the child's developmental abilities as appropriate (√) or not appropriate (-).

1. Introduction

There continues to be a huge problem with stunting in Indonesia's health system. The frequency of stunting in the nation is 21.6%, the National Nutrition Status Survey (SSGI) for 2022 states. Compared to the figure of 24.4% from the previous year, this result indicates a decrease. In contrast to the WHO norm of less than 20% and the 2024 aim of 14%, the percentage is still high despite this decline (Kementerian Kesehatan RI, 2023). In 2022, With 4.8% stunting, Surabaya has the lowest rate in Indonesia. Stunting was 19% in East Java. Even if the number of occurrences decreased, it is important to remain vigilant about the impacts of stunting, such as developmental delays. Research indicates that stunting can negatively impact children's intellectual intelligence, as brain development, especially in toddlers, is closely linked to intellectual capabilities (Sulochana Neranjani, (2020). Consequently, stunting can hinder the growth and development of the central nervous system, leading to reduced intellectual intelligence (Rahayu et al., 2018). Additionally, stunting adversely affects children's cognitive abilities, which can result in lower academic achievement (Daracantika, Ainin, and Besral, 2021). To support the monitoring of child development, the government has implemented stimulation, early detection, and intervention programs (SDIDTK) (Doris et al., 2023). There are 971 puskesmas in East Java, according to the data from the 2021 Health Profile. Of the toddlers, 77.8% are participating in growth and development monitoring, and 61.8% are getting assistance from SDIDTK. In 2020, the percentage of East Java residents who had access to health care for toddlers was 83.3%, a decrease from 2019. In Surabaya, the 2019 coverage was 91.59%, but it still did not meet the 2020 MSS target of 100%.

Examining infants and toddlers at posyandu services is an effort to prevent stunting. Widyawati (2021) lists weighing, assessing growth status, counseling, health examinations, vaccinations, and early growth and development detection as some of these services. To determine how well stimulation, detection, and early intervention programs (SDIDTK) are being implemented at analyzing the cadres' participation in this process is crucial at the posyandu level.

2. Methodology

Materials

The research was conducted using a cross-sectional methodology and an observed analytic design that was used. The sample included 71 individuals who held positions in 44 Posyandu centers for toddlers in Surabaya. These individuals were actively engaged in the implementation of programs aimed at

stimulating, detecting, and intervening early in child growth and development (SDIDTK) (Yolvi et al., 2023). These cadres were picked at random. The size of the sample was representative of the overall population.

Data collection procedures

The participation of cadres in the execution of SDIDTK was evaluated with the use of a specialized observation sheet that was devised for this purpose. This research employed this instrument. The roles observed were aligned with those outlined in the guidelines for these programs. Observations were conducted at toddler posyandus from June to July 2023.

Data analysis

A frequency distribution table was created to highlight the characteristics of the participants and the functions of the cadres was created after the data was analyzed using univariate analysis..

3. Results and discussion

Results

The following table displays the study's findings:

Table 1. Distribution of respondent frequency by age

Age (Years)	Frequency (n)	Percentage (%)
26-35	18	25,4
36-45	40	56,3
46-55	6	8,5
56-65	7	9,8
Amount	71	100

Source: Primary data, June - July 2023 the majority of respondents (56.3%), who fall between the ages of 36 and 45, come within the age bracket set by the Republic of Indonesia's Ministry of Health (Table 1), are classified as belonging to the late adult group.

Table 2. Distribution of respondent frequency by occupation

Work	Frequency (n)	Percentage (%)
Housewife (IRT)	62	87.3
Self-employed	9	12,7
Amount	71	100

Source: Primary data, June - July 2023 in Table 2, the data indicates that 87.3% of the participants are classified as housewives.

Table 3. According to the last education, the frequency distribution of the responders

last education	Frequency (n)	Percentage (%)
Basic education:		
Elementary School	8	11,3
Junior High School	10	14,1
Middle education:		
Senior High School	50	70,4
College		

Diploma	0	0
Bachelor	3	4,2
Masters	0	0
Amount	71	100

Source: Primary data, June - July 2023

Most respondents (70.4 %) completed high school, according to Table 3.

Table 4. Based on their experience obtaining instruction or orientation on stimulation, early detection, and child development intervention, the respondents' frequency distribution

Category	Frequency (n)	Percentage (%)
Once	7	9,9
Never	64	90,1
Amount	71	100

Source: Secondary data, June - July 2023. As shown in Table 4, the most of the participants (90.1%) have not taken part in any kind of orientation or training related to early detection, stimulation, and parenting. Cadre representatives usually participate in this kind of training or orientation, which is led by the Puskesmas.

Table 5. Distribution of how often infrastructure and amenities are available in Posyandu for the purposes of early childhood development detection, stimulation, and intervention

Tool	Frequency	
	There is	There isn't any
Tools for monitoring child growth:		
KIA Book	47 (100%)	0 (0%)
Digital children's scales / dacin	47 (100%)	0 (0%)
Digital baby scales	47 (100%)	0 (0%)
Measuring instruments for length or height (infantometer, stadiometer, microtoise)	47 (100%)	0 (0%)
Head circumference measuring tape	47 (100%)	0 (0%)
LiLA tape measure	47 (100%)	0 (0%)
Tools for monitoring child development:		
SDIDTK chart book	47 (100%)	0 (0%)
Funduscopy or direct ophthalmoscopy	47 (100%)	0 (0%)
Flashlight	47 (100%)	0 (0%)
Tumbling "E" card	47 (100%)	0 (0%)
SDIDTK screening kit	47 (100%)	0 (0%)
Reporting DDTK results	47 (100%)	0 (0%)

Source: Secondary data, June - July 2023. The facilities and infrastructure required for 47 Posyandu to carry out early intervention, detection, and stimulation programs for child growth and development are shown in Table 5. These utilities and infrastructure are funded by village APBDes, regional APBDs, APBNs, APBDs of the regent or city, and other permissible and optional sources.

Table 6. Respondent frequency distribution according to roles in program implementation, detection,

and stimulation Early child development intervention

No	The role of cadres	Frequency	
		Done	Are not done
1	Complete the Early Detection of Child Growth and Development form by providing the child's identification	0 (0%)	71 (100%)
2	Create a note of your height, weight, upper arm circumference, and head circumference on the children's growth and development early detection form	71 (100%)	0 (0%)
3	Plot the results of the measurement	71 (100%)	0 (0%)
4	Analyze the anthropometric measures' results	42 (59,2%)	29 (40,8%)
5	Applying the mother and child health book's child development checklist to the kid's observations of their developing skills, note everything that seems suitable (√) or inappropriate (-)	0 (0%)	71 (100%)
6	Give moms and families advice on the value of stimulating children for their best possible development and growth	29 (40,8 %)	42 (59,2 %)
7	For health treatments, direct the kid to table 5. If the youngster is ill, has dietary issues, has developmental skills that are not age-appropriate, or if the child's parents have expressed concerns or signals of concern	39 (54.9 %)	32 (45,1 %)

Source: Primary data, June - July 2023

Table 6 demonstrates that while filling out the Early Detection of Child Growth and Development questionnaire, 100% of respondents mentioned the child's identity. The child's weight, height or body length, upper arm circumference, and head circumference were also measured by every responder (100%) and were recorded on the questionnaire. Plotting the measuring findings was done by all responders (100%) as well. In addition, 59.2% of the respondents understood how the anthropometric measurement findings were to be interpreted. When determining whether a child's developing skills were suitable (√) or not, none of the respondents (0%) used the mother and child health book's child development checklist. Mothers and families received advice from over half of the respondents (59.2%) on the significance of stimulation for the best possible growth and development of children. In addition, unwell children, who had dietary problems, showed developmental delays, or whose parent's expressed concerns were referred to Table 5 for health care by more than half of the respondents (54.9%). The following are the responsibilities of cadres at Posyandu in accordance with the standards for early intervention, detection, and stimulation in child development: (1) completing the Early Detection of Child Growth and Development form with the child's identification information; (2) determining the child's head circumference, upper arm circumference, weight, and height or body length, then noting these measures on the form; (3) Plotting the results of the assessment; (4) analyzing the findings of the anthropometric measurements; (5) using the maternal and child health book's child development checklist, evaluate the kid's developmental ability and indicate what is suitable (√) or inappropriate (-); (6) educating moms and families on the value of stimulation for the best possible development and growth of their children; and (7) If a child is unwell, exhibits nutritional problems, has developmental delays, or if the parent(s) of the child have concerns or grievances, they should be sent to Table V for health services (Ministry of Health, Republic of Indonesia, 2022). Registration is

done on Table I, weighing is done on Table II, the KMS is completed on Table III, nutritional advice is done on Table IV, and health services such vaccination, minor treatments, and family planning consultations. The services provided by Posyandu are grouped into five tables of varying sizes. Tables I through IV are monitored by Posyandu cadres, whereas Table V is overseen by both cadres and Puskesmas health professionals (Kementerian Kesehatan RI, 2017). The following is a breakdown of the cadres' responsibilities in this study:

Complete the Early Detection of Child Growth and Development form by entering the child's details.

Parents or guardians sign the Posyandu schedule at Table I to confirm their child's attendance when they arrive at the Posyandu for toddlers. On the Early Detection of Child Growth and Development questionnaire, none of the responders filled in the child's identification. These days, the maternity and child health book's (MCH) pages 70–71 include this type. Given that the children identify is already recorded on the first page of the MCH book at the moment of birth, cadres do not need to fill out this form. For cadres to compare the findings of growth and development evaluations with typical developmental milestones for the child's age, the child's identity specifically, the date of birth is crucial for ascertaining the child's age (Avulakunta, 2012).

Enter the kid's height, weight, upper arm circumference, and head circumference on the early detection form for child growth and development.

The child's weight, height or body length, upper arm circumference, and head circumference were all measured by the responders in Table II, which is the authorized weighing area. Mother and Child Health pages 70–71 provide the integrated stimulation, detection, and early intervention form for growth and development, is where the metrics' results were documented. At toddler Posyandu, measuring the development of children is an essential responsibility that must be completed by all cadres (Kementerian Kesehatan RI, 2017). The necessary measurement tools are provided at the Posyandu as part of government support (Table 5).

Plot the measurement results

Calculating the measurement findings on the health card is done by all cadres (100%) (KMS), which is integrated into pages 45–46 and 57–58 of the maternal and child health book. The plotted results on the growth curve in the KMS serve as the basis for interpreting anthropometric measurements (de Onis and Branca, 2016). Consequently, it is crucial for cadres to accurately plot these measurement results.

Analyze the anthropometric measures' findings

Anthropometric measurement findings were understood by over half of the respondents (59.2%). Cadres plot the measuring findings and then carry out this interpretation. In the course of these readings, some cadres notified parents of their child's weight change and if the decrease was below the card's red line, which signifies possible health concerns. Proper interpretation of anthropometric measurements is crucial for informing parents if the development of their kid is suitable at their age (Casade and Kiel, 2021; Gibson, 2023). It is essential for cadres to understand how to interpret these results accurately to fulfill their roles effectively (Baguune et al., 2023).

Utilizing the child development checklist included in the MCH manual, evaluate the kid's developmental capabilities. If the abilities are appropriate, mark them with a (√); if they are not appropriate, mark them with a (-).

The kid's developmental skills were evaluated by none of the respondents (0%) using the mother and child health book's child development checklist, which indicated whether the abilities were suitable (√) or not (-). Cadres did not perform this role as it is assigned to midwives present at the Posyandu. The

standards for cadres' responsibilities in early intervention, detection, and stimulation programs for child development do not correspond with this practice. For posyandu cadres to effectively observe child development abilities, they need assistance from someone with the necessary expertise (Saleh, 2011; Suyatno and Kartasurya, 2019; Indarwati and Firmansyah, 2021; Mardiyanti and Case, 2021; Muhammad et al., 2023). Only 9.9% of cadres, nonetheless, have had any kind of orientation or training on this duty. Posyandu cadres might get orientation or training at the Puskesmas, district, or village levels. The purpose of these workshops is to train a limited group of cadres who are ready to use the Maternal and Child Health books to help families identify and encourage infant growth and development (Kementerian Kesehatan RI, 2022). The fact that this work is seen as an extracurricular activity may be a contributing factor in the absence of monitoring of kids' developmental progress at Posyandu. Such extra activities are introduced only after the five core activities have been effectively implemented, with more than 50% coverage and sufficient auxiliary resources at hand. Support from the community is necessary when new activities are introduced, as reproduced in the Self-Introduction Survey (SMD) results and must be approved through the Village Community Deliberation Forum (MMD) (Kementerian Kesehatan RI, 2017).

Give moms and families advice on the value of stimulating children for their best possible development and growth.

The majority of the participants, which accounted for 59.2% of the total, provided advice to mothers and families about the significance of providing children with stimulation to ensure their healthy expansion and progress (Branitskiy et al., 2019). In the options is this counseling provided at Table IV in toddler Posyandu. In some Posyandus, these counseling services are combined with those at Table V, typically conducted by healthcare professionals. However, if a healthcare professional is unavailable, the services at Table V will not be offered. For Posyandu volunteers to perform their duties at each Posyandu service station effectively, they must get training or orientation. Educating mothers and families about the significance of stimulating children is essential, so parents can implement these practices at home (Gadsden, Ford, and Breiner, 2016). Children's developmental delays may be avoided or at least less likely when they get consistent stimulation (Luo et al., 2015; Choo et al., 2019; Attanasio et al., 2022; Rakotomanana et al., 2023).

If the child is sick, refer them to Table V for medical treatment, has nutritional issues, shows developmental delays not appropriate for their age, or if there are concerns or complaintsfrom the child's parents.

Children who were sick were referred to Table V for health care by more than half of the respondents (54.9%), had nutritional issues, showed developmental delays, or if there were concerns from the parents. However, some volunteers did not make these referrals when healthcare professionals were absent during the Posyandu sessions. Additionally, progress monitoring was not conducted in the absence of healthcare workers, leading to delays in addressing developmental issues in children (World Health Organization, 2012; Khan, Israr, and Leventhal, 2018).

4. Conclusion and future scope

The cadres perform two primary roles: (1) weighing, measuring, and documenting children's head, upper arm, and length or height on a form to identify growth and development problems early on; (2) plotting the measurement results. Additionally, some cadres take on three further responsibilities: (1) interpreting the anthropometric measurement results; (2) advising families and moms on the value of stimulating children for their best development and growth; and (3) referring children to Table V for

health services if they are ill, have nutritional issues, show developmental delays, or if there are concerns raised by the parents. Two roles are not consistently performed by all cadres: (1) the child's information is entered into the Early Detection of Child Growth and Development form, and (2) utilizing the mother and child health book's child development checklist to evaluate the children's developmental capabilities. They indicate whether the child's development is appropriate by marking with a check (√), and if not appropriate, they mark with a dash (-).

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Conflict of interests

The authors of the published work in this journal have indicated that there were no conflicting financial interests or personal ties that had any influence on their work.

Ethical clearance

This work has been ethically authorized by the health research ethics council of Nahdlatul Ulama University in Surabaya; the committee's ethical number is 081/EC/KEPK/UNUSA/2022.

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