



FACTORS RELATED TO THE EVALUATION OF THE TODDLERS' GROWTH EARLY DETECTION PROGRAM AT TAMAN POSYANDU IN PUSKESMAS LAMONGAN

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Abstract: *The toddlers' growth early detection program in Taman Posyandu (Integrated Health Service Post) is monitoring the growth of children under five years using KMS (Road to Health Cards) and monitoring the development of children under five years using the developmental stage of children under five and preschool children. Provided there is no stimulation given stimulation, the brain system will be less-developed leading to the decrease of brain function. This health problem may impair the quality of human resources in the future. The purpose of the research is to analyze the factors associated with the evaluation of the early detection program of toddlers' growth at Taman Posyandu in Puskesmas (Public Health Center) Lamongan. The populations in this study are 98 Posyandu cadres in the Puskesmas Lamongan working area. This study used univariate and bivariate data analyses, and employed Chi Square test (significance level = 0.05) as the data analysis technique.*

The results showed that the early detection program ran well (58.2%). Most of the respondents were 48-65 years old (55.1%), highly educated people (67.3%), unemployment (5.2%), people receiving training (77.6%). Chi Square test showed that age ($p = 0.026$), training ($p = 0.000$), cadre incentive fund ($p = 0,000$), Posyandu infrastructure facilities ($p = 0,000$), manuals of Posyandu activities ($p = 0.000$) were the variables related to the program implementation. Moreover, the implementation is the variable related to the output range of the early detection program (0,015). Suggestion for this research is the necessity to conduct the training for the cadres to improve the ability to conduct this toddlers' growth early detection program.

INTRODUCTION

The quality of toddler growth in Indonesia needs a certain attention such as good nutrition, adequate stimulation and affordable and good health services including the early detection and intervention of physical growth deviation.¹ The early growth detection is necessary to find out the normality of growth and to detect the growth deviation earlier.² Stimulated children brain system will grow until 80% on the age of 3. If they were not stimulated, their brain system will be less-developed, and it will decrease the brain function which eventually can reduce badly affect the quality of human resources in the future.³

The East Java Provincial Government has made a program called *Taman Posyandu* (Posyandu Parks) which consists of BKB (Young Mother's Program), PAUD (Early Childhood Education) and *Posyandu* (Integrated Health Service Post) that have already been autonomous organizations. In Posyandu, there is an early detection program for toddlers' growth created by East Java Provincial Government⁴ This program consists of toddler growth monitoring with KMS and toddlers' and pre-school children's growth cards.⁵

In 2014, Lamongan Public Health Office established the companion of Taman Posyandu that will be in charge

of evaluating BKB, PAUD and Posyandu. The evaluation is conducted using The Assessment Sheet of Taman Posyandu. The evaluation grade is based on the equipments provided by Posyandu, the number of cadres present on each service, the number of Posyandu services in a year, and cross-sector coaching.

The evaluation result showed that the early detection program for toddler's growth in Taman Posyandu Puskesmas Lamongan was 80% running. It ran optimally in 16 out of 20, and it did not run effectively in the 4 remaining Taman Posyandu.

The health promotion department of Puskesmas (Public Health Center) Lamongan conducts the evaluation of the early detection program based on the monthly report from the cadres. However, not all cadres regularly submit the report every month.

Cadres play the important rule in this early detection program. Therefore, the effort made by Puskesmas Lamongan to optimize the program was holding training event of the toddlers' growth early detection program in 2012. The overall numbers of Taman Posyandu cadres were 103 cadres, but there was only one cadres from each village (20 villages) who got the training. Puskesmas Lamongan did direct coaching cadres during the program,

and in addition, Puskesmas Lamongan also conducts cadre refreshing programs each year to improve their knowledge and skills related to the early detection of toddlers' growth. Unfortunately, because of insufficient fund, this program is only attended by some representatives from each village.

RESEARCH METHODS

This research employed the quantitative method with the cross sectional approach. Data collection was done by interviews and questionnaires. The samples in this research were 98 cadres. The univariate and bivariate data analyses applied *Chi Square* (significance degree = 0.05). The research used Azrul Azwar's Theory of System that consists of inputs, processes and outputs.

RESULTS AND DISCUSSIONS

The research results, which are based on the factors related to the evaluation of the early detection program for toddlers' growth at Taman Posyandu in Puskesmas Lamongan, can be seen in the following table below:

1. **Outputs (The Scope of the Toddlers' Growth Early Detection Program)**

Table 1. The Frequency Distribution of the Output Variable

Program	Number	
	F	%
Not so good	41	41.8
Good	57	58.2

The univariate result (Table 1) showed that the early detection program

for the toddlers' growth in Taman Posyandu had run well (58.2%). In "Not so good" category, 41.8% cadres did not know how to fill out the KMS (Road to Health Cards), 41.8% could not read KMS, 13.3% could not describe KMS to mothers and 11.2% could not record the toddlers' growth in KMS.

This research used Azrul Azwar's Theory of System to analyze factors which are related to this early detection program. According to Azrul Azwar, a system is formed by parts or elements that interact and are interconnected each other. Some of those parts or elements, in connection with, this program are inputs, processes and outputs. Inputs consist of ages, education levels, jobs, training received by cadres, incentive funds for cadres, facilities and infrastructures and the manuals of Posyandu activities. The process consists of toddlers' growth monitoring by KMS and toddlers' and pre-school children's growth cards.

2. **Man (Human Resources)**

a. **Ages**

Table 2. The correlation between the cadres' age and the program implementation

Age	The implementation of the toddlers' growth early detection program				Total	
	Not too good		Good		f	%
	f	%	f	%		
Adults	13	29.5	31	70.5	44	100
Elderly	28	51.9	26	48.1	54	100
	α=0.05		p=0.026		Ho=rejected	

Table 2 showed that cadres who were not so good in implementing

the program were the ones in the elderly group (51.9%) rather than those in the adult group (29.5%). *Chi Square Test* results showed that *p-value* $0.026 < 0.05$ which means that H_0 is rejected. It can be concluded that there is a correlation between cadres' age and the implementation of the toddlers' growth early detection program.

This result is in line with Aticeh who stated that there is a significant relationship between cadres' age and their motivation in SDIDTK (The Stimulation of Early Growth Detection and Intervention) with *p-value* 0.001 on α 0.05.⁶

According to Hurlock, the more mature someone is, the better he/she is in thinking and working.⁷

b. Education Levels

Table 3. The correlation between Education Level and the Program Implementation

Education Level	The implementation of the toddlers' growth early detection program				Total	
	Not too good		Good		f	%
	f	%	f	%		
Less Educated	16	50	16	50	32	100
Highly Educated	25	37.9	41	62.1	66	100

$\alpha=0.05$ $p=0.254$ $H_0=accepted$

Table 3 showed that cadres who did not perform well in implementing the early detection program were the ones who are less educated (50%). *Chi Square Test* showed that the *p-value* is $0.254 > 0.05$ which means that H_0 is accepted. It can be concluded that there

is no correlation between cadres' education and the implementation of the program.

It is in accordance with Patemah et al. who stated that there is no relationship between education and the implementation of The Stimulation of Early Growth Detection and Intervention (SDIDTK) with *p-value* 0.146.⁸

According to Notoatmojo, education is generally one of efforts planned to create conducive behavior in solving problems.⁹

c. Jobs

Table 4. The Correlation between Jobs and the Program Implementation.

Jobs	The implementation of the toddlers' growth early detection program				Total	
	Not so good		Good		F	%
	f	%	F	%		
Not Working	24	41.4	34	58.6	58	100
Working	17	42.5	23	57.5	40	100

$\alpha=0.05$ $p=0.912$ $H_0=accepted$

Table 4 showed that cadres who were unable to perform well the program implementation were those who had a job (42.5%). The *Chi Square Test* between the "jobs" variable and the "program implementation" variable showed that the *p-value* is $0.912 > 0.05$. This test result means that H_0 is accepted, so it can be concluded that there is no correlation between the cadres' job and the program implementation.

This result is similar to Patemah et al. who stated that there is no

relationship between the jobs and the implementation of The Stimulation of Early Growth Detection and Intervention (SDIDTK) done by cadres ($p\text{-value} = 0,647$).⁸

The less time these cadres have time to socialize, due to their jobs, the less responsibility and awareness they have to do social activities, like being an active cadre.¹⁰

d. Training

Table 5. The Correlation between Training Received by Cadres and the Program Implementation

Training	The implementation of the toddlers' growth early detection program				Total	
	Not so good		Good		F	%
	F	%	f	%		
Never	18	81.8	4	18.2	22	100
Ever	23	30.3	53	69.7	76	100
	$\alpha=0.05$		$p=0.000$		Ho=rejected	

Table 5 showed that cadres who never have any training (81.8%) were the ones who performed ineffectively in implementing the program in comparison with those who ever joined trainings (30.3%). Chi Square Test showed that the $p\text{-value}$ is $0.000 < 0.05$ which means that H_0 is rejected. It can be concluded that there is correlation between training and the early detection program implementation.

This calculation is in line with Putriningtyas who stated that the training of early detection for toddlers' growth influences the cadres' motivation

and skills in Dusun (Village) Soragan Ngestiharjo, Kasihan Bantul, with $p\text{-value}$ 0.001 on α 0.05.¹¹

According to Hayati, the cadre training activities at Posyandu in detecting toddlers' growth can provide some alternative solutions for the occurring problems.¹²

3. Money (Incentive Funds for Cadres)

Table 6. The Correlation Analysis between Incentive Fund for Cadres and the Program Implementation

Incentive Funds for Cadres	The implementation of the toddlers' growth early detection program				Total	
	Not so good		Good		F	%
	F	%	f	%		
Less Available	12	100	0	0	12	100
Available	29	33.7	57	66.3	86	100
	$\alpha=0.05$		$p=0.000$		Ho=rejected	

Table 6 showed that cadres who were less effective in implementing the early detection program for toddlers' growth are those who got less incentive funds (100%). Hypothesis test using *Chi Square Test* between the incentive fund variable and the implementation of early detection program showed that the $p\text{-value}$ is $0.000 < 0.05$ which means that the H_0 is rejected. Therefore, it can be concluded that there is correlation between the incentive fund and the implementation of the early detection program.

This research result is in accordance with Yanti et al. who stated that there is a relationship between

incentive funds and cadres' participation with *p-value* 0.001 on α 0.005. Therefore, the higher the incentive fund, the more frequent the cadres in participating in Posyandu activities.¹³

According to Wisnuwardani, incentive (in the form of money) can increase the performance of

The Manual of Posyandu Activities	The implementation of the toddlers' growth early detection program				Total	
	Not so good		Good		F	%
	F	%	F	%		
Clear	9	100	0	0	9	100
Unclear	32	36	57	64	89	100

Posyandu.¹⁴

4. **Materials (Facilities and Infrastructures)**

Table 7. Analysis of the Correlation between Facilities and Infrastructures and the Implementation Program

Facilities and Infrastructure	The implementation of the toddlers' growth early detection program				Total	
	Not so good		Good		f	%
	f	%	f	%		
Less Available	36	83.7	7	16.3	43	100
Available	5	9.1	50	90.9	55	100

$\alpha=0.05$ $p=0.000$ $H_0=$ rejected

Table 7 described cadres with limited facilities and infrastructures were ineffective in implementing this early detection program (83.7%) in comparison with the cadres with available facilities and infrastructures (9.1%). The hypothesis test using Chi Square Test between Posyandu facilities and infrastructures variable and the program implementation showed that *p-value* is $0.000 < 0.05$ which means that H_0 is rejected hence correlation

between the facilities and infrastructures and the program implementation.

This result is in line with Eka et al. research stating that the available facilities influence the cadres behavior in detecting toddlers' growth (*p-value* 0.014 on α 0.05).¹⁵

According to Azrul Azwar, if the infrastructures do not comply with the regulated standard, the service quality will be difficult to achieve.¹⁶

5. **Methods (The Manual of Posyandu Activities)**

Table 8. The Correlation between the Manual of Posyandu Activities and the Program Implementation.

Table 8 shows that cadres with unclear manual of posyandu activities were less effective in implementing the early detection program (100%), higher than those who were provided with the clear manual (36%). The hypothesis test using *Chi Square Test* showed that the *p-value* is $0.000 < 0.05$ which means that the H_0 is rejected. Therefore, it can be concluded that there is correlation between the manual and the implementation of the program.

This result is in accordance with the qualitative research of Susanti showing that the good result of The Stimulation of Early Growth Detection and Intervention (SDIDTK) is supported by clear manuals.¹⁷

However, it is not in line with Ninda who stated that there is no relationship between the manual and counseling

practice on the Table 4 of Posyandu in Ngaliyan Village, Semarang City with *p-value* 0.871 on α 0.05.¹⁸

6. Implementation

Table 9. The Correlation between the Implementation of Toddler's Growth Early Detection Program and the Output Range of the Program

The implementation of the toddlers' growth early detection program	the Output Range of the Program				Total	
	Less Optimal		Optimal		f	%
	f	%	f	%		
Not so good	23	56.1	18	43.9	41	100
Good	18	31.6	39	68.4	57	100

$\alpha=0.05$ $p=0.000$ $H_0=\text{rejected}$

From Table 9, we can figure out that cadres who were less optimal in output range of the early detection program are those who were also not so good in implementing the early detection program (56.1%). The Chi Square Test showed that the *p-value* is $0.015 < 0.05$ which means that the H_0 is rejected. Thus, it can be concluded that there is correlation between the implementation of toddlers' growth early detection program and the output of the program.

This research result is similar to Sugiarto who stated that the well recorded KMS at the Posyandu can provide the early detection of toddlers' nutrition status and growth.¹⁹

Based on the Regulation of Ministry of Health, the benefits of KMS for cadres are recording toddler weight, distributing vitamin A capsules, assessing the weighing result, complimenting the mothers when the their children's weight increases, and

reminding mothers to weigh their children in Posyandu in the next months.²⁰

CONCLUSIONS AND SUGGESTIONS

Conclusions

1. The *Output* range of the early detection program of toddlers' growth at Taman Posyandu in Puskesmas Lamongan were well implemented (58.2%) where the cadres monitor the children growth using growth stage card (96.9%); there were reliable children's height measuring instrument (100%); there at were at least 4 cadres present in each Posyandu activities (100%); and Posyandu gave health service at least 10 times a year (100%). However, there were cadres who did not weigh their toddler in Posyandu (12.2%), toddler with inhibited growth (53.1%), toddler having problem with their development (28.6%), and cadres who did not frequently report the monthly data of Posyandu activities to Puskesmas Lamongan (10.2%).
2. The implementation process of the early detection was good (58.2%), but 41.8% cadres had not implemented the maximally. Some cadres did not know either how to fill out the KMS (41.8%) or how to read the KMS (41.8%).
3. Variables related to the implementation of the early detection program of toddlers' growth are ages

(*p value* = 0.026), training (*p value* = 0.000), incentive funds (*p value* = 0.000), facilities and infrastructures (*p value* = 0.000), the manual of Posyandu activities (*p value* = 0.000). Meanwhile, the variable related to the output range of the toddlers' growth early detection program is the implementation of the toddlers' growth early detection program (*p value* = 0.015).

Suggestion

- a. Cadres who have not joined any training program should join training in order to improve their skill.
- b. It is necessary to train cadres to educate mothers/baby sitters about the importance of being involved in Posyandu activities.
- c. Puskesmas needs to organize training program in how to use KMS.
- d. Puskesmas needs to hold regular training program their cadres.
- e. The Public Health Office needs to provide flipcharts which contains information about the early detection of toddlers' growth.
- f. There should be close collaboration Collaborate with Puskesmas Lamongan in training the cadres.

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