

Knowledge, Perception, and Utilization of Posyandu of Mother in Samarinda, Indonesia: A Cross-sectional Study

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Abstract: *Posyandu* is a community-based activity for health care in Indonesia. We evaluate the association between mother knowledge and perception about cadres performance with utilization of *posyandu* in 67 participants (22-43 years) from the cross-sectional study of 2013. Participants were interviewed face-to-face using a questionnaire. Chi-square analysis examined the associations between knowledge and perception about cadres performance with the utilization of *posyandu*. Utilization of *posyandu* showed that majority mothers were inactive participants (90%). The study revealed that the majority of mothers (80.6%) were knowledgeable about *posyandu* and its function. However, only 26.9% mothers knew the others function of *posyandu*, except growth monitoring. Half of mothers (55.2%) had positive perception about cadres performance. Most of them (92.5%) stated that cadres always on time, but 70.1% cadres could not give enough information about their health children. Mother knowledge and perception about cadres performance was associated with the utilization of *posyandu*. However, there was no significant association with mothers of toddlers' health care needs. Mothers who were inactive participation in *posyandu* were more good knowledge of *posyandu* (90.7%), more negative perception about cadres performance (96.7%) and more needed *posyandu* (79.2%). Cadres performances are needed to explore in future studies to activate *posyandu*.


1 INTRODUCTION

Stunting is a health problem in Indonesia, as 30.8% children under 5 years are stunting and severely stunting (Indonesia Ministry of Health, 2018). Overweight and obesity are health issues also with the prevalence among children under-five are 8% (Indonesia Ministry of Health, 2018). Low coverage of growth monitoring program is one of potential causes of stunting and overweight in Indonesia (Sahanggamu et al., 2017). The Indonesia government has focused on enhancing Maternal Child Health by extending access to health care through the organization of volunteer-staffed of *Posyandu* (Health and Nutrition Integrated Service Center) (Andriani et al., 2016). It was the merged activities of nutrition improvement (growth monitoring, supplemental feeding, vitamin and mineral supplementation and nutrition education), diarrhea prevention, immunization and family planning, mother and child health, as stated in the

Alma Ata Declaration in 1978 (Nazri et al., 2016). However,

Posyandu is community based programme, that needs community participation and conducted every month in every neighbourhood or village. Cadres are volunteers who have to be recruited and trained from the community to organize the activities of *posyandu*. Therefore, the utilization of *posyandu* depends on the cadres performances, location of *posyandu* and mother's participation (Restu et al., 2020, Nazri et al., 2016).

Participation of mother to *posyandu* was approximately 45% (Indonesia Ministry of Health, 2007, Indonesia Ministry of Health, 2010, Indonesia Ministry of Health, 2013), which is similar in East Kalimantan (40%). The health centre of Bengkuring, Samarinda has the same problem with low participation of mother to *Posyandu*. Therefore, the aim of this study was to evaluate the association of mother knowledge and perception of cadres with utilization of *posyandu* in the health centre of Bengkuring.

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2 MATERIALS AND METHODS

2.1 Design and Participation

This study was cross-sectional study investigating the role of posyandu among 67 mothers who had children under 5 years from Bengkuring’s health centre. The data were collected from April to June 2013. Participants were selected by purposive sampling. Data were collected by face-to-face interview using a questionnaire.

2.2 Socio-demographic

Mother’s occupations were reported as four categories (housewife, private employee, government employee, and entrepreneur). Age of children was reported as one of three categories (below 6 months, 7-24 months and up to 25 months).

2.3 Knowledge, Perception and Utilization of Posyandu

Knowledge of mothers was identified as knowledge of mothers about posyandu (definition, aims, frequency of activities, programs, and benefit). Mother’s perception about cadres performance was defined as the satisfaction of mothers with cadres performances including punctuality, friendliness, weighing skills, recording skills, and the skills to communicate health information. The need of mothers in posyandu services was described as the things that were felt by mothers, so mothers wanted the posyandu services.

The utilization of posyandu was the participation of mothers to posyandu which were divide into two categories (active and non-active). Active participation was defined as 4 times participated during 6 months in posyandu.

2.4 Statistical Analysis

Baseline characteristics were presented as percentages for categorical variables. To evaluate the association in mother knowledge, perception of cadres and the need of posyandu services between the utilization of *posyandu* (active and non-active), the Chi-square test was used. *p* values <0.05 (two-tailed) were considered statistically significant, and all analyses were performance using Statistical Package for Social Science (SPSS, version 25).

3 RESULTS

3.1 Characteristics of Study Participants

Participants were mothers who had children under 5 years and participated in Posyandu of Kemuning, Bengkuring’s Health centre. The participants were younger (22-29 years old) and more housewife (Table 1). The most participated children in posyandu were in the age of 2-5 years old.

Table 1: Baseline characteristics of participants.

Characteristics	Percentages (%)
Age of mothers	
22-29	47.8
30-36	26.8
37-43	25.4
Age of children under 5 years	
< 6 months	1.5
7-24 months	31.3
>25 months	67.2
Occupation of mothers	
Housewife	77.6
Private employee	9
Government employee	3
Entrepreneur	10.4

3.2 Knowledge, Perception and Utilization of Posyandu

Although the majority of participants had good knowledge of posyandu (80.6%), but only 9.3% participants were active participants in posyandu. More than half participants had positive perception about cadres performance (55.2%), with the highest perception of punctuality. Cadres had low ability to inform health information (70.1%). Most of participants needed posyandu services, with immunization was the highest needed service.

However, knowledge of mothers about posyandu was associated with utilization of posyandu/participation mothers in posyandu (*p*=0.026). The perception about cadres performances was significantly associated with higher participation in posyandu (*p*=0.019) (Table 6). In addition, the need of mothers in posyandu services had no association with the participation (*p*=0.052) (Table 2).

Table 2: Knowledge of mother about posyandu.

	Participation Mothers (%)		P value
	Active	Non-Active	
Knowledge			0.026
Good (upper average)	50	86	
Not good (Below average)	50	14	
Perception			0.019
Positive	90	49	
Negative	10	51	
The needs of posyandu			0.052
Need	100	67	
Less need	0	33	

4 DISCUSSION

To our knowledge, this is the first study to evaluate the relation between knowledge, perception and the needs of posyandu with the utilization of posyandu/participation mothers in Samarinda. The cross-sectional analyses consistently showed knowledge and perception about cadres performance were related to the utilization of posyandu. In contrary, no association of the needs of posyandu with the utilization of posyandu.

A good knowledge of posyandu was associated with higher non active participation in posyandu in our study. In contrary, low knowledge was associated with low participation mothers in posyandu (Arsyad et al., 2020). Mothers understood the definition, aims, frequency of activities, and benefit of posyandu, that more than 90% correct answers about these questions. In contrary, mothers didn't know about the growth monitoring programme in posyandu, that only 27% mothers had correct answers. Therefore, the nutrition educational programme is needed for mothers.

Interestingly, half of mothers had low knowledge but they were active participants. In fact, the location of posyandu closed to their home and cadres invited them to posyandu. This is in agreement with the results from Indonesia that accessibility issues were related with participation to posyandu and risk of obesity (Andriani et al., 2016).

In our study, a higher perception about cadres performance was associated with a higher participation mothers. Indeed, cadres are one of the supporting system to operate posyandu. The lowest cadres performances was communication skills to inform health information. A previous study showed that the more frequent mothers visit to posyandu, the

greater change mothers would have to obtain nutritional information through nutrition (Anwar et al., 2010). Therefore, the capacity building of cadres is needed (Nazri et al., 2016). Training, operational assistance, certificates, transportation fees were associated with cadres performances (Wisnuwardani, 2013). In addition, recognition from the community, status within the system, training opportunities, competition among communities, and small payments provide incentives to sustain cadres participation (Ekowati et al., 2016). Appropriate incentives for cadres will improve cadres performances.

Immunization is the highest reason participation mothers. Cadres ability to integrate with the community is the success of immunisation programme through posyandu (Widayanti et al., 2020). However, posyandu activities are not only for immunization, but also for growth monitoring for nutrition status children, vitamin A capsule program, family planning, supplemental feeding, mother and child health, disease control (diarrhea prevention). Education of mothers about growth charts can promote mothers' interest in their children and they can utilize posyandu as growth monitoring (Nazri et al., 2016).

5 CONCLUSIONS

In conclusion, the capacity building for mothers and cadres may contribute to the utilization posyandu as knowledge, perception of cadres performance and location are related to the participation posyandu. Cadres have important rule in posyandu. However, drop out cadres might influence the activity of posyandu. Studies of incentive cadres and the capacity building of cadres and mothers are needed to explore the posyandu's participation in more detail.

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