

## PERCEPTION OF MOTHERS AND CHILDREN'S PARTICIPATION IN THE NUTRITIONAL PROGRAMS

(Persepsi Ibu dan Partisipasi Anak dalam Program Gizi)

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### ABSTRAK

*Penelitian ini bertujuan untuk mengetahui persepsi masyarakat terhadap pelayanan program gizi serta menganalisis partisipasinya dalam program posyandu. Disain penelitian ini menggunakan cross-sectional dengan sampel rumah tangga yang memiliki anak balita. Sampel yang diambil sebanyak 300. Pemilihan sampel dilakukan secara acak berlapis (stratified random sampling). Penelitian ini dilakukan di dua kecamatan di Kabupaten Cianjur yang dilakukan pada tahun 2006-2007. Data yang dikumpulkan meliputi jenis pelayanan gizi, persepsi terhadap program gizi dan partisipasi dalam program gizi. Data diperoleh melalui wawancara. Data hasil wawancara diolah menggunakan software excel. Data dianalisis dengan SAS (Statistical Analysis System). Hasil penelitian ini menunjukkan bahwa para ibu berpendapat bahwa program PMT dan penyuluhan gizi harus lebih diperbaiki. Jumlah dan keterampilan kader cukup memadai, namun kehadiran bidan di posyandu kurang mencukupi. Program imunisasi bagi balita diikuti dengan baik oleh para ibu balita. Terkait pelayanan di puskesmas, sebagian besar ibu mengeluhkan waktu antri yang lama dan frekuensi kehadiran dokter yang kurang. Partisipasi balita dalam mengunjungi posyandu relatif baik (92.4%). Lebih dari 90% balita, baik yang sering maupun jarang mengunjungi posyandu telah menerima kapsul vitamin A. Pelayanan posyandu yang sangat dirasakan oleh masyarakat adalah penimbangan balita dan imunisasi.*

**Keywords :** *persepsi, partisipasi, program gizi*

### INTRODUCTION

#### Background

National efforts in improving nutrition in Indonesia have been running for thirty years and are still focused on the major problems of nutrition, namely, protein energy malnutrition (PEM), vitamin A deficiency (VAD), iron anemia and iodine deficiency disorders (IDD). Nutritional improvement has succeeded in reducing the four major nutritional problems, but is considered as inefficient because it is closely related to the efficiency of cross-sector efforts such as poverty elevation. Hartoyo, Astuti, Briawan, and Setiawan (2000) state that nutrition programs need supports by making efforts in improving motivation, knowledge and skills of cadres, participation of families and public figures so that facilities and infrastructure of nutrition programs provided by the government can bring out optimal results.

One goal of the nutrition program is to improve the status of community nutrition geared to the improvement of intelligence and

work performance to support the improvement of human resource quality. Another objective is to reduce the rate of nutritional diseases (PEM, VAD, iron anemia, and IDD), which are in general experienced by a low income society (poor household) in rural and urban areas especially children under five and pregnant women. The objective supports attempts in reducing the infant mortality rate, children under five, and mothers. The program also supports the improvement of the status of community nutrition in general by improving the patterns of food consumptions to become more diverse, balanced and nutritionally qualified. Such improvement of consumption pattern is also required for a group of people with the high risk of some degenerative diseases, who tend to increase in number (Atmarita & Fallah, 2004).

The nutrition program at district level is a part of national nutrition program. The national policy of nutrition program consists of 4 sub programs: program on protein-calorie malnutrition, program on iron-anemia, program on vitamin A deficiency, and program on iodine deficiency.

There are some variations in achieving the program objectives at district level. Our

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discussion with staff of Health Office in Cianjur District (February 10, 2006) showed that even all programs have been implemented; the community still has problems related to nutrition. Implementation of nutrition program at community level is through *Posyandu*.

*Posyandu* has functioned as the spearhead for all the nutrition and primary health care services provided by health centres and sub-centres now present in every sub-district and village (Jus'at, 1992). Thus, *Posyandu* functions as an informal-referral system of community participation to rural health centres and sub-centres. *Posyandu* makes the "un-reachable" children and mothers "reachable".

The occurrence of malnutrition is often overlooked from our common observation, but a closer look will indicate high death rates of mothers, babies, children under five, and a low life expectancy. Although nutrition programs have long been in operation, the problems of malnutrition still happen everywhere.

### Goals and Objectives

The objectives of this research were :

1. To find out the mothers's perception of nutrition program services.
2. To analyze children's participation in *Posyandu* program (Health and Nutrition Integrated Service Center).

## METHODS

### Design

This research used a cross-sectional design. The research was carried out in two sub-district of Cianjur, the Province of West Java. The research was conducted in 2006.

### Sampling

The populations studied in this research are having children under five years old and 300 of them were taken. The populations were selected in two subdistricts of Cianjur District, West Java. Those subdistricts are the areas with a high portion of poor population and many of them utilized the nutrition programs offered by the government.

Samples were taken through stratified random sampling with proportional allocation where high and low frequency visit stand as stratum. Sample size was also proportional with respect to *posyandu* size.

Cianjur District was selected since there were variations in nutrition program implemented and variations in achieving the program objectives (Personal Communication with Staff of Health Services, Cianjur, February 10, 2006). The two subdistricts were chosen to increase heterogeneity of samples, so that the performance of nutrition program was truly represented by the selected samples.

### Data collection

Data collection consisted of utilization of nutritional program, nutrition service and access to services of nutrition programs. The secondary data involved coverage of nutrition programs. The primary data were collected through questionnaires, while the secondary data by means of a completion form. To be more operational, questionnaires and completion form tried out before use. Then the revised questionnaires and completion form were use to collect data.

### Data Analysis and Management

Data processing involves editing questionnaires, coding, arrangement of file structure, data entry, editing files, generating variables, merger creating and splitting files. The software used in data processing is Excel and Statistical Analysis System.

The estimations of means, standard deviation, minimum and maximum values made for all quantitative variables. The estimation of proportion has been conducted for all categorized qualitative and quantitative variables. All parameter predictions have been made for the respondents who utilize nutrition programs greatly (high frequency visits) and the respondents with a low utilization (low frequency visits) in each district. The estimate results have been presented in the forms of tables and diagrams.

## RESULTS

### Perception of Mothers towards Nutritional Program

The distribution of mothers' perception that the nutritional program must be improved can be seen in Table 1. As many as 33.6% mothers of children under five in the low participation group and 37.6% in the high participation group state that the weighing services for children must be improved. This indicates some dissatisfaction among mothers with the weighing program. Weighing is a routine major

activity of *posyandu*. Therefore, an improved service is much needed, which can be done by increasing the number of weighing scales so that *posyandu*'s participants do not have to queue for a long time for weighing their children. Commonly, at *posyandu* there is only one weighing scale to serve around 50 children.

Table 1. Distribution of Mothers based on Perception about Activity that should be Improved at *Posyandu*

Kinds of Activity	Participation at <i>Posyandu</i>	n	%
Supplemental Feeding Program	Low	166	91.7
	High	111	93.2
Nutritional extension	Low	152	83.9
	High	107	89.9
Iron tablet distribution	Low	90	49.7
	High	63	52.9
Immunization	Low	66	36.5
	High	51	42.7
Growth chart availability	Low	71	39.2
	High	43	36.1
Weighing of children	Low	68	37.6
	High	40	33.6
Vitamin A distribution	Low	51	28.2
	High	30	25.2

As many as 39.2% of mothers in the low participation group and 36.1% in the high participation group say that the availability of growth chart cards should be increased. Besides a growth chart resulted from the weighing records of children, the card contains immunization records. Such card has an important function; from the card, a mother can look at her child's growth. The fact that some mothers want an increased availability of the cards indicates that number of cards available may be not enough for the number of children participating at *posyandu*.

Improvement in immunization service is expected by 36.5% mothers of children under five years in the low participation group and 42.7% in the high participation group. It indicates a dissatisfaction of some mothers with the immunization activities so far carried out at *posyandu*. Immunization is given according to the different ages of children and free or at a very low cost. This indicates the seriousness of the Indonesian Government to increase the health level of under-five-year children.

There are still many mothers who feel unsatisfied with the supply of iron tablets. Approximately half of respondents admit that it should be improved. With the distribution of vitamin-A capsules, about a quarter of respondents say that they are not satisfied, and therefore the service must be improved. The supply of vitamin A in high might be consid-

ered to be better by respondents because the government has introduced certain months, namely February and August as the months of vitamin A. In both months, children are taken to get vitamin A.

Supplementary feeding program and nutritional extension at *posyandu* might be seen as the weakest point. Over 90% mothers in the low and high participation group expect an improvement in the service of food supplements and more than 80% hope for an improvement in extension. They view that the supply of food supplement is not good enough.

The distribution of mothers' perception that some aspects of extension must be improved can be seen in Table 2. The material of extension is the most important to improve. More than half of mothers in the low participation group (61.8%) and in the high participation group (53.9%) say that the material of extension should be improved. The extension materials related to food, nutrition, health are essential for the mother of children under five year because with such materials they can prepare a healthy and nutritious menu for their children. As long as there is no economic constraint, the application of nutritional knowledge can be easily done in each household.

Another aspect of extension needing improvement is the use of visual aids. This is expressed by 70.6% mothers in the low participation group and 65.4% in the high participation group. A visual aid has an important role in allowing mothers to understand the extension material easily. However, because of a lack of fund, such visual aids are rarely available at *posyandu* to support the extension activities.

Table 2. Distribution of Mothers based on Perception about Nutritional Education Variable that should be Improved

Nutritional Education Variable at <i>Posyandu</i>	Participation at <i>Posyandu</i>	n	%
Materials	Low	42	61.8
	High	28	53.9
Cadres	Low	30	44.1
	High	19	36.5
Visual aids	Low	48	70.6
	High	34	65.4

The quality of cadres in giving extension also requires improvement. As can be seen at Table 2, more than 40% mothers in the low participation group and over 35% in the high participation group expect an improved quality of the cadres. The *posyandu*'s cadres in rural

areas are volunteers working without a salary. There are no specific requirements to be a cadre; anyone having the time and willing to work voluntarily can become a *posyandu's* cadre. Because women of rural areas have commonly a low education, those who become cadres are also of the low educational level. Thus it is not an easy task to upgrade the quality of cadres. However, it is still possible to improve the cadres, for example, by giving some training on nutrition and health so that they can do their jobs at *posyandu*. In this context, it is important that the Health Services launch a regular program of training or capacity building for cadres to upgrade their knowledge.

The respondents' perception of cadres and midwife at *posyandu* can be seen in Table 3. More than 80% mothers of children under five years in the low and high participation groups view that the number of cadres is already adequate. A *posyandu* in the village is commonly served by 2 - 4 cadres, which is relatively sufficient and proportional to the number of children visiting *posyandu*.

As for the skill of cadres, more than 70% mothers in the low participation group state that the cadre's skill is adequately good, while around 65% in the high participation group think that it is already good. Mothers' perception of cadres is certainly pleasing, but their hope for an improved quality of cadres (in extension) is really an indication that a more skillful cadre is very much expected. As the front line in giving nutritional service to the public, *posyandu* with its cadres have an important role in maintaining the nutritional status of children under five years.

Table 3. Distribution of Mothers based on Perception about Cadres and Midwives at *Posyandu*

Variable	Participation at <i>Posyandu</i>	n	%
Sufficiency of cadres number	Low	151	83.4
	High	97	81.5
Adequately skills of cadres	Low	129	71.3
	High	77	64.7
Presence of midwives at <i>posyandu</i>	Low	104	57.5
	High	76	63.9

Table 3 indicates that around 57.5% - 63.9% of mothers in both low and high participation groups expect the presence of a midwife for each activity at *posyandu*. This, however, has not been met. In every village, there are generally 8 - 10 *posyandus*, meaning that a

midwife must allocate her time of 8 to 10 days in a month to be active at *posyandu*.

The perception of mothers towards immunization at *posyandu* can be seen in Table 4. In general (80% - 90%) mothers of children under five years old admit that all types of immunization are available at *posyandu*. Immunization has become an important part of nutritional programs Indonesia. Through immunization (BCG, DPT, measles, TT, Polio, and Hepatitis), the Indonesian government would be able to reduce the death rate of children.

The immunization programs become a motivating factor for mothers to come to *posyandu* every month. The government subsidy has enabled mothers of children under five to get an optimum service of immunization at a very low cost or free of charge. The success of immunization programs by the government has so far cut down the children mortality rate to less than 50/1000 births.

Table 4. Distribution of Mothers based on Perception towards Immunization Availability at *Posyandu*

Kinds of Immunization	Participation at <i>Posyandu</i>	n	%
BCG	Low	161	90.5
	High	107	90.9
DPT	Low	166	92.7
	High	108	91.5
Measles	Low	158	88.3
	High	104	88.1
TT	Low	155	86.6
	High	105	89.0
Polio	Low	159	88.8
	High	109	92.4
Hepatitis	Low	31	83.8
	High	13	72.2

Immunization is an initial step to improve the nutritional status of children. The resulted protection of children from infectious diseases means that one cause of malnutrition problems can be solved. Infection and malnutrition are synergic or strengthen each other. An infection will worsen the nutritional status, and vice versa - malnutrition will make it easier for a child to get infected by a certain disease.

The perception of mothers having children under five years on the health services at *puskesmas* is presented in Table 5. There are 35.0% mothers in the low participation group and 40.0% in the high participation group who think that the medical workers at *puskesmas*

are not friendly. This indicates that improved services are required so that the complaints about the unfriendly medical workers can be reduced.

The daily working hours of *puskesmas* are 8.00 - 14.00. This is sufficient because most mothers with children under five years old state that the service hours have already met their expectations. Only a small number (13.7%) of them in the low participation group and (21.3%) in the high participation group admit that there should be longer working hours.

Given the large number of patients at *puskesmas*, one must queue for quite a long time to get a health service. This is the complaint of many respondents in this research. There are 57.3% mothers (of children under five year) of the low participation group and 64.6% of the high participation group view that the queuing is quite long.

Table 5. Distribution of Mothers based on Perception towards Services at *Puskesmas* (Community Health Centre)

Services at <i>Puskesmas</i>	Participation at <i>Posyandu</i>	n	%
Long time queue	Low	67	57.3
	High	48	64.0
Rarely present of doctor	Low	54	46.2
	High	32	42.7
Unfriendly services	Low	41	35.0
	High	30	40.0
Expensive ticket	Low	19	16.2
	High	12	16.0
Short working hours	Low	10	13.7
	High	16	21.3

The doctor *puskesmas*, besides a medical worker, is also responsible for the daily administrative work at *puskesmas* and attends meetings at the Health Services in the Regency. This condition has caused the presence of a doctor at *puskesmas* to give public health service is considered to be less. This perception is expressed by 46.2% of mother in the low participation group and 42.7% in the high participation group. Although the doctor is seldom present at *puskesmas*, the health services continue to operate because there are other medical staffs. For the people, the presence of a doctor is important because they will feel more satisfied with a doctor' service than a nurse'.

**Children's Participation in and Access to Nutritional Programs**

***Vitamin A Capsule Program for Children***

The first five years is an individual developing phase for children. Based on its characteristic after the infant hood (0 - 1 year), it is necessary to distinguish it from other developing phases because the children have to begin to learn to live in an external and new environment (Hurlock, 1999).

Table 6 indicates that mothers are in general aware of the vitamin A program for their children. Every August and February *Posyandus* distribute high-dosage capsules of vitamin A to children for free. Usually many mothers with their children visit *posyandus* for such capsules. *Posyandu* has been operational in Indonesia for decades, so generally mothers already know the programs of *posyandu*. And thus, despite being the low participation group, most mothers (97.2%) know the vitamin A program. The percentage is not much different from that of the high participation group (98.3%).

Table 6. Distribution of Mothers based on Having Knowledge about Vitamin A Capsule Program for Children

Knowledge of Mother	Level of Participation			
	Low		High	
	n	%	n	%
Having knowledge about Vitamin A Capsule Program for Children	176	97.2	117	98.3
Information Sources of Vitamin A Capsule Program for Children :				
1. Health Workers	70	59.3	154	87.0
2. Television	43	24.3	30	25.4
3. Friends/Neighbors	7	5.9	87	49.1
4. Radio	5	2.8	2	1.7

Mothers' access to information can become an indicator of their ability to take a better care of their children. Information can be obtained from newspapers, radios, or televisions for understanding (Engle, Manon, & Hadad, 1997). The information about the presence of vitamin A program can be taken from other sources: health workers, friends or neighbors.

Table 6 shows that the high participation group gets more information about vitamin program from health workers than the low

participation group (87.0% compared to 59.3%). Approximately a quarter of respondents receive such information from television and only around 2-3% know it from radios. This indicates that television is more influential and can become a better media of information than radios for nutritional programs.

More than 90% of the samples (children under five years) admit obtaining vitamin A capsules, both in low and high participation groups (see Table 7). It shows that the vitamin A distribution program has been successful.

Children under five years old are very susceptible to infectious diseases (Satoto, 1990). According to the Ministry of Health of the Republic of Indonesia (1995), vitamin A is important not only for the eye health and the prevention of blindness, but also for an improved immunity of the body. The condition of children with adequate vitamin A, when developing diarrhea, smallpox, or other infectious diseases, would not get worse or endanger their lives.

Table 7 shows that many mothers know that vitamin A are good only for eye health. In the low and high participation groups, almost

60% mothers realize the benefit of vitamin A for eyes; whereas only 5 - 10 % of them know its benefit for the body's immunity, and 8 - 11 % understand its benefit for children growth.

**Children's Participation at Posyandu**

Regular visits of children to *posyandu* are highly recommended. At *posyandu* every child is monitored for its body weight by weighing. In this way, the body weight changes can be obtained from one month to another. In case of a decreased trend of body weight or below the red line, *posyandus* are expected to give nutritional advice or food supplements so that a declining body weight can be prevented.

Table 8 indicates the suitability of the criteria determined by the researchers, i.e. those entering the low participation group in the last six months are indeed irregular to visit *posyandus*. As many as 71.7% children of the low participation group are not regularly taken to *posyandus*, while in the high group there are only 7.6% children who do not regularly visit *posyandus*.

Table 7. Distribution of Children based on Vitamin A Capsule Supply

Supply, Kind, and Benefit of Vitamin A Capsule for Children	Level of Participation			
	Low		High	
	n	%	n	%
Distribution of Vitamin A Capsule for Children	167	92.3	113	95.0
Kind of Vitamin A Capsule for Children :				
1. Red	140	77.3	85	71.4
2. Blue	15	8.3	15	12.6
3. Forget	26	14.4	19	16.0
Benefit of Vitamin A :				
1. Eye health	99	58.2	68	59.1
2. Children growth	14	8.2	13	11.3
3. Body's immunity	9	5.3	12	10.4

Table 8. Distribution of Children according to Mother's Regular Visit to *Posyandu*

Visiting	Level of Participation			
	Low		High	
	n	%	n	%
Mother Who's not Regularly Visiting <i>Posyandu</i>	101	71.7	9	7.6
Various Reasons of Infrequent Visiting :				
1. Mothers are busy	51	60.7	3	37.5
2. Children are still asleep	33	39.3	5	62.5
3. Completeness of children immunization	17	12.9	1	12.5

Such irregular visits to *posyandus* have various reasons (see Table 8). The reason mostly given by the mothers in the high participation is that their children are still asleep (62.5%). On the other hand, those of low participation say that they are busy (60.7%), therefore, unable to take their children to *posyandu*. Only a small number of mothers (around 12 - 13 %) have the reason that their children have already had a complete immunization, thus they do not need to come to *posyandu* regularly.

In one village there are usually 6 - 18 units of *posyandus*. The many *posyandus* are to facilitate mothers to get access to nutritional and health services. Therefore, there is no reason for mothers not to come to *posyandus* because of a long distance to *posyandu*. A *Posyandu* as the front line of nutritional service in villages is commonly open once a month, therefore mothers having children under five years old should be able to take their children to the *posyandu* on the day scheduled to open.

KMS (Growth Chart Card) is a simple and inexpensive technique to monitor the health and growth of children. According to Sukarni (1994), KMS allows an appropriate and practical monitoring of children health in all aspects. Therefore, such a card could be very useful for mothers and families to observe their children growth so that no mistakes or imbalance would occur in feeding their children.

Every child should have the card distributed free at *posyandus*. The percentage of those holding the cards varied from 65.3% - 97.8% from 2001 - 2005. The biggest percentage of card ownership was in 2001 (97.8%) and the lowest was in 2005 (65.3%). The decreased card ownership in 2005 was indeed a problem because children without such cards mean that they do not visit *posyandus*; or if they do come, the services provided are less optimal. With the regular weighing of children once a month, the ownership of the cards would be very useful for understanding the growth of a child.

The percentage of children having the cards to reach 100% is rather difficult to attain. The children of better-off families seldom go to *posyandus* for health examination, but to private doctors for children. Therefore, if the percentage of card ownership can reach 90%, this would seem to be a good achievement and must become the target.

Weighing participation refers to the number of children visiting *posyandus* in a certain month (August) compared to the total population of children. Between 2001 and 2005 the weighing participation was between 57.1% and 76.8%. In 2005, it was the lowest (57.1%). This indicates that it is necessary for *posyandus* to make greater efforts to remind mothers to take their children to *posyandus* for weighing.

Those who do not weigh their children might have stopped visiting *posyandus* or are too busy to come to *posyandu* on the day of weighing. It is much better if *posyandus* can set a target of participation expected. With such target, the degree of success in attaining the target can be evaluated. From the figures presented in the table, the participation targets ranging from 80% - 85% may be regarded to be realistic to reach. The poor performance in 2005 with the weighing participation of only 57.1% must be analyzed for possible causes so that solutions can be made immediately. In the coming years it is expected that the degree of participation will improve.

#### *Children's Access to Nutritional Programs*

The distance from home to the locations of health/nutritional services can be seen in Table 10. A *Posyandu* located in every neighborhood (RW) is the closest location of nutritional/health services (84 m) from the homes of mothers having children under five years old. The government's policy to shorten the distance to the nutritional/health services is considered to be very appropriate and will allow people to access such services easily. Other places for such services which are relatively close in distance are health clinics (122 m) and *Pustu/Polindes* (459 m), which are commonly privately managed with relatively more expensive tariff compared to the public health centers. As can be seen from Table 9, the distance to the location of nutritional/health service, which is relatively far away, is to the doctors who provide private services (1510 m), *puskesmas* (1938 m), and hospitals (5293 m).

Table 11 shows the means of transportation taken by mothers to get to the locations of nutritional/health services. To arrive at *posyandus*, most respondents (99.3%) walk because of the relatively short distance. Only About 0.7% of respondents ride motorcycles to go to *posyandus*. Meanwhile, to go to a village/private midwife, 44.6% of the respondents walk. A village midwife is one who is

assigned by the government to open practices in every village so that the rural people can get health services more easily. Some respon-

dents visit a village midwife by a public transport (29.5%) and motorcycles (25.5%).

Table 9. Growth Chart Card Ownership of Children in Cianjur Regency in 2001-2005

Variable of Growth Chart Card Ownership	Year				
	2001	2002	2003	2004	2005
Total of children under five	157 782	171 472	171 696	171 919	198 446
Children under five who owned growth chart card	154 312	129 623	157 960	129 621	129 511
Children under five who had been weighed	121 220	104 065	120 874	107 634	113 292
Coverage of growth chart card ownership (%)	97.8	75.6	92.0	75.4	65.3
Participation of weighing (%)	76.8	60.7	70.4	62.6	57.1

Tabel 10. Distance of Nutritional/Health Service Location from Children Homes

Location of Nutritional/Health Service	n	Distance (m)	Category of Distance
<i>Posyandu</i> (Integrated Health Service Centre)	300	84	Close
Health Clinics	300	122	Close
Pustu/Polindes (Auxiliary Public Health Centre)	300	459	Close
Local/Private Midwife	300	802	Medium
Doctor	300	1510	Far away
<i>Puskesmas</i> (Public Health Centre)	300	1938	Far away
Hospital	300	5293	Far away

Note : Close = < 500 m  
 Medium = 500 - 1500 m  
 Far away = > 1500 m

Table 11. Distribution of Children based on The Transportation taken by Mothers to Nutritional/Health Service Location

Location of Nutritional/Health Service	Kind of Vehicle	n	%
<i>Posyandu</i> (Integrated Health Service Centre)	Walking	297	99.3
	Riding motorcycles	2	0.7
Local/Private Midwife	Walking	112	44.6
	Riding motorcycles	64	25.5
	Public transport	74	29.5
Pustu/Polindes (Auxiliary Public Health Centre)	Walking	40	31.5
	Riding motorcycles	37	29.1
	Public transport	34	39.4
<i>Puskesmas</i> (Public Health Centre)	Walking	24	10.5
	Riding motorcycles	45	30.7
	Public transport	132	57.9
Health Clinics	Walking	1	7.7
	Riding motorcycles	2	15.4
	Public transport	8	61.5
	Private car	2	15.4
Hospital	Walking	6	2.8
	Riding motorcycles	52	23.9
	Public transport	159	72.9



To go to *puskesmas*, most respondents take public vehicles (57.9%). A *puskesmas* is located in the capital of District, which rather far away from the respondent's home. Only a small number (10.5%) of respondents take a walk to get to *puskesmas*.

There is a relatively small number of respondents who go to health clinics. The privately owned health clinics charges higher medical costs than *puskesmas*. Those going to health clinics commonly take public vehicles (61.5%). Similarly those going to the hospital located in the town use public vehicles (72.9%).

## CONCLUSION AND RECOMENDATION

### Conclusion

Mothers having children under five years old think that the supplemental food program and nutrition extension at *posyandus* should be improved. The number and skills of the cadres are already considered quite good, the presence of midwives at *posyandus* is inadequate. The immunization program for children is viewed as very good by mothers having children under five years old. As for the services at *puskesmas*, the majority of mothers with children under five years old complaint about the long queuing time and the infrequent presence of doctors when they visit for medical treatment.

The participation of children (under five years old) in visiting *posyandus* is relatively good, namely, 92.4% (for the high participation group). However, for the low participation group, the number of participating children is relatively low (28.3%). The absences from *posyandus* are due to their mothers being busy or children being still asleep. More than 90% of children, both of those who often and seldom visit *posyandus*, have received vitamin A capsules. This means that there is an adequate distribution of vitamin A capsules. A *posyandu's* services mostly felt by the public are the weighing of children and immunization. The access from the homes of mothers having children under five years old to the nearest places of nutritional services (i.e. *posyandu*) is < 500 m and the distance is covered by walking.

### Recommendation

1. Because the nutritional extension is a weak aspect of the activities at *posyandus*, it is necessary to make efforts in improving

the nutrition knowledge of cadres and midwives who are in charge at *posyandus* through trainings. Further, the extension activity has to be an inseparable part of the nutritional program services at *posyandus*.

2. The supplemental food program at *posyandus* has not been optimally managed because of a limited budget of *posyandus*. Therefore, the better-off community or corporations around *posyandu* must be encouraged to give voluntary donation or financial aid so that the operation of supplemental food program can be more effective. In addition, the Health Services should also be able to allocate a bigger budget of *posyandus* to carry out the supplemental food program.

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