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Optimizing the Role of Posyandu and Posbindo Cadres through Nutrition Education and Health Screening for Stunting and NCD Prevention in Pacar Kembang Village, Surabaya

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ABSTRACT Stunting, a significant health problem in Indonesia, must be addressed. Stunting is defined as a condition caused by inadequate nutritional intake that does not meet nutritional needs. Integrated Service Posts (Posyandu) are a way to provide health services to the community and have the ability to develop resources, especially in health matters. The methods used in this community service activity are lecture/presentation and discussion and question and answer methods. The lecture activities included presenting material on the importance of balanced nutrition during the first 1000 days of life (HPK), explaining the role of cadres in providing simple counseling to the community, facilitating discussions and question-and-answer sessions, and concluding the session. The results of this community service demonstrated that the educational intervention effectively enhanced Posyandu cadres' knowledge and counseling competence, strengthened their capacity to deliver balanced nutrition education, and supported community-based efforts to prevent stunting through sustainable health promotion. These findings indicate that strengthening the capacity of Posyandu cadres through structured health education is a feasible and effective approach to supporting community-based stunting prevention. Continuous mentoring, periodic evaluation, and sustained collaboration with local health services are recommended to maintain program sustainability and maximize its long-term impact

INDEX TERMS Role of Cadres, Posyandu and Posbindo, Stunting Alleviation, and Non-Communicable Disease Prevention

I. INTRODUCTION

Stunting, a significant health problem in Indonesia, must be addressed. Stunting is defined as a condition caused by inadequate nutritional intake that does not meet nutritional needs. This is in line with the theory [1] in [2], which states that stunting, also known as short children, is described as a child whose height is shorter than expected and can impact child development [3].Therefore, efforts are needed to prevent stunting at integrated health service posts (Posyandu) as one way to prevent the continued increase in stunting rates. Integrated Service Posts (Posyandu) are a way to provide health services to the community and have the ability to develop resources, especially in health [2]. Therefore, Posyandu plays this role here, being an appropriate target for stunting prevention programs. Posyandu officers are cadres trained to assist the community, especially in terms of counseling. Therefore, cadres play a crucial role in implementing Posyandu (Integrated Service Post) activities, particularly in maintaining the nutritional status of toddlers. To prevent stunting, nutritional knowledge is crucial for cadres [1] Based on the information previously explained, stunting prevention efforts must be implemented to prevent more severe impacts that toddlers will experience later in life. Through nutrition education, toddlers are weighed and their heights measured. Afterward, the toddler's nutritional status is determined, and cadres can provide dietary instructions according to the toddler's nutritional status. To improve Posyandu services, cadres are expected to be able to undergo training and practice directly [4]. Both Posyandu and Posbindu play a crucial role in managing stunting. Posyandu focuses on prevention and early detection in pregnant women and toddlers, while Posbindu plays a role in monitoring general public health and detecting risk factors such as hypertension. These two services support each other through growth

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monitoring, nutrition counseling, supplementation, and case referrals and assistance, thereby sustainably improving the quality of community health and nutrition. This program aims to support Indonesia's National Strategy for Stunting Reduction by empowering local Posyandu and Posbindo cadres through training and participatory education. The expected outcome is an increase in cadres' competence and community awareness.

II. METHOD

The methods used in this community service activity include lectures, presentations, discussions, and question-and-answer sessions on TABLE 1. The lecture activities involve presenting material on the importance of balanced nutrition during the first 1000 days of life (HPK), explaining the role of cadres in providing simple counseling to the community, facilitating discussions and question-and-answer sessions, and concluding the session.

TABLE 1.
Data Series of Activities

No	Activity	Speaker/Facilitator	Results
1.	08.00-08.30 Participant registration and opening	Committee	Participants arrived on time, the atmosphere was conducive
2.	08.30-10.00 Material: The importance of balanced nutrition in the first 1000 days of life (HPK)	Mayhana Titian Maghfiro	Participants understand the concept of balanced nutrition, the urgency of 1000 HPK, and stunting prevention.
3.	10.00-11.30 Material: The role of cadres in providing simple counseling to the community	Pestariati Anik Handayati Suhariyadi	Participants acquire basic nutrition counseling skills based on simple communication and local healthy menus.
4.	11.30-12.00 Discussion and Q&A	Facilitator	Active cadres discuss and share field experiences
5.	12.00-12.15 Closing	Committee	The activity closed with a prayer, participants expressed their commitment to supporting balanced nutrition in the community.

III. IMPLEMENTATION

The implementation of community service activities was carried out in the working area of the Kelurahan Pacar kembang Surabaya.

A. PARTNER ROLES

1) Providing technical support in the form of medical personnel (doctors and nurses) who conduct health checks (blood pressure, blood sugar, and anthropometry).
2) Providing some health checkup equipment, such as digital blood pressure monitors, blood sugar meters (glucometers), and LILA strips.
3) Providing educational materials related to the prevention of non-communicable diseases (NCDs) and stunting.

B. PACARKEMBANG VILLAGE HEALTH CADRES

1) Act as community mobilizers, informing residents about activities through invitations and direct communication.
2) Assist with participant registration, recording test results, and providing support during the activities.
3) Facilitate the practice of preparing healthy menus for toddlers and pregnant women, ensuring the material is more easily understood by the community.

C. VILLAGE OFFICIALS (HEAD OF THE VILLAGE AND HEAD OF COMMUNITY WELFARE)

1) Provide official permission and support for the implementation of community service activities in RW 6.
2) Provide the activity venue/location (RW hall) and assist in coordinating participants.
3) Provide moral and administrative support through official attendance and welcoming remarks, strengthening the legitimacy of the activities.

IV. RESULT

Nutrition counseling has been conducted for health cadres, focusing on: The importance of balanced nutrition in the first 1,000 days of life (HPK). Practical preparation of healthy menus for toddlers and pregnant women (HKI Practical Module for preparing healthy menus for toddlers and pregnant women).
https://drive.google.com/file/d/1B1_ZwLcK7hDGhMBbDhNX6vXOkS_Dcchn/view?usp=sharing

a) The role of cadres in providing simple counseling to the community.
b) Number of cadres who participated in the counseling: 30 people.

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c) Level of understanding increased (based on pre- and post-tests): the average rose from 62% to 85%. (Question link: https://drive.google.com/file/d/1Res09ggdfuSnB0JWAvL3Hr9i-pSOHm0D/view?usp=sharing)
d) Cadres are more confident in providing nutrition education at integrated health posts (Posyandu).

FIGURE 1. Coordinating with the Village Health Cadre Coordinator and The importance of balanced nutrition in the first 1000 days of life (HPK)

PTM (Non-Communicable Disease) examinations are carried out on the community with indicators of blood pressure, blood sugar, and uric acid. Most participants were in normal condition, but 19–20% had risk factors for non-communicable diseases (NCDs). This highlights the importance of early detection and healthy lifestyle education.

In addition, it was also found that health cadres understand the importance of balanced nutrition in the 1000 HPK, cadres have basic skills in simple nutritional counseling for the community, and the commitment of cadres to be the spearhead of stunting prevention in their respective work areas is growing.

The skills of cadres in providing health education are the result of repeated training, so it can be said that cadres have made changes for the better to provide maximum service to the community. The results of research by [5] showed that training will improve skills in providing services to the community. According training is a key activity during the implementation phase of a health program. During implementation, training aims to maintain and build behaviors that are very important for the program's continuity.

FIGURE 2. Material: The role of cadres in providing simple counseling to the community

TABLE 2
Results Data

No	Kode	LILA	LP	BB	TB	TD	Hasil	
							GDA	AU
1.	IDN	26	82	60	150	119/90	119	3,6
2.	AMH	30	202	70	157	-	-	-
3.	SHT	25	83	55	146	127/93	112	7,5
4.	TPY	30	91	67	148	113/78	302	3,3
5.	SMP	28	72	48	137,4	154/78	-	-
6.	KRM	27,5	90	60	154	157/83	110	
7.	RTM	26	95	57	151	128/76	111	7,1
8.	DJT	25	91	62	152	124/85	142	6,7
9.	MDJ	28	89	57	153	150/77	-	-
10.	AND	25	84,5	51	141	119/67	109	7,4
11.	ANK	28	54	-	154	146/80	138	-
12.	STP	26	84	48	142	127/83	93	10
13.	MTM	26	79	57	158	113/70	99	10
14.	PTK	26	86	55	145	132/78	272	3,0
15.	SJH	28	76	58	150,2	134/75	319	4,9
16.	BNS	27	84	70	160	120/77	101	-
17.	NKH	29	88	62,5	178	135/73	109	-
18.	MNH	32	107	51	154	132/85	120	-
19.	MSK	28	110	59	104,5	158/80	144	-
20.	AMNR	29	89	72	72	158/86	-	-
21.	STSH	31	98	76,5	145	155/90	-	-
22.	STRM	29	89	52	140,5	104/87	122	-
23.	MKS	31	116	79,5	155	155/93	164	-
24.	STN	27	95	55	130,5	148/84	-	-
25.	IK	28	91	62	150	138/84	106	-
26.	FBT	29	86	53	155	131/74	106	-
27.	SLH	31	98	75	160	147/91	119	-
28.	FTH	28	92	59	165	143/72	111	-
29.	PTSH	32	88	59	150	137/79	108	-
30.	NNK	35	99	74	152	114/60	119	-

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V. CONCLUSION

First, nutrition counseling was conducted for health cadres to improve their knowledge and skills in educating pregnant women, mothers of toddlers, and the community about the importance of balanced nutrition for stunting prevention.Second, health checks for Non-Communicable Diseases (NCDs) were done, which included checking blood pressure, blood sugar, and uric acid levels. The results of these checks were documented as baseline data for monitoring community health status and early detection of NCD risk.Third, the community service team also provided supporting equipment, including adult and infant scales, to family Posyandu (Integrated Service Post) cadres.

This equipment is expected to improve the quality of family health services in monitoring the growth and development of toddlers and the health of adults. Furthermore, as a specific nutritional intervention, the community service team provided supplements in the form of milk, eggs, and other nutritious food supplements to stunted toddlers. This activity was carried out in collaboration with village health cadres to ensure that the recipient toddlers met the criteria. This intervention is expected to help improve nutritional status, increase animal protein intake, and support toddler growth. Overall, the implemented activities demonstrate the active participation of cadres and the community. These results form the basis for implementing further activities in the form of monitoring, evaluation, and more targeted health interventions.

This program enhanced cadres' capacity in stunting and NCD prevention and increased community participation in health promotion. Sustainable monitoring is recommended to ensure long-term behavioral change.

Next Stage Plan:

Data Validation & Targets

a) Streamline the measurement results database (weight/height, limb/shoulder circumference, blood pressure, and blood glucose).
b) Prioritize stunted toddlers, at-risk pregnant women, and residents with NCDs.

Nutrition & Health Interventions

a) Distribution of supplements/food supplementation for stunted toddlers.
b) Nutrition counseling for pregnant women and toddler caregivers.
c) Joint physical activity (exercise/healthy walks) and education on healthy lifestyles.
d) Strengthening Integrated Health Post (Posyandu/Posbindu) Services
e) Training cadres on standard measurements and simple record-keeping.
f) Optimizing the use of distributed weighing equipment.

Monitoring & Evaluation

a) Regular (monthly) weighing and re-measuring.
b) Analysis of results trends, quarterly evaluation meetings with cadres, community health centers, and sub-districts.

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