Pocket Book To Improve Cadres' Knowledge And Attitude Regarding Early Detection of Stunting

Yuni Ginarsih, Ira Rahayu Tyar Sari, and Fitria Nurwulansari

Poltekkes Kemenkes Surabaya, Indonesia
yuni.g@poltekkesdepkes-sby.ac.id

Abstract. Posyandu is a type of community resource management and organization that is done for, by, with, and for the community in the implementation of health development. Posyandu Empowerment needs to be supported by cadres who are qualified to detect stunting early. Various media can be used to improve the skills of cadres. This study aimed to determine the effect of pocket book on the knowledge and attitudes of cadres in early detection of stunting. The research used Quasy-Experimental with a pre and posttest control group design. The population was all cadres in Kedung Doro Health Center Surabaya, with a sample of 30 control groups and 30 treatment groups taken using non-probability sampling. The research instrument used questionnaires and a pocket book. The analysis used was the Wilcoxon and Mann Whitney tests. The results showed that pocket book had an effect on the knowledge (p value 0.013<0.05) and attitude (p value 0.011<0.05) of cadres in their early sensitivity to stunting. There was a difference in knowledge (p value 0.002<0.05) but there was no difference in attitude (p value 0.301>0.05) of the cadres after the stunting pocketbook treatment. It has been demonstrated that the pocket book improves knowledge and behavior in the early detection of stunting. It is hoped that the needs of cadres in running Posyandu will remain a concern of policy makers in order to improve the behavior and skills of cadres through various trainings.

Keywords: Early detection, Stunting, Pocket book.

1 Introduction

Improving public health and nutrition services is a program prioritized by Indonesia, with several targets that must be achieved. Indonesia is currently still facing nutritional problems that have a serious impact on human resources. One of these problems is stunting. Stunting is a condition of a child's height shorter than the height of children his age caused by lack of nutritional intake for a long time [1]. Basic Health Research (Riskesdas) in 2018 conducted by the Health Research and Development Agency (Litbangkes) showed that the incidence of stunting was 30,8 percent. The stunting rate in East Java is lower than the national rate of 26,2 percent. However, this figure exceeds the limit set by WHO, because developed countries stunting rates below 20% [2].

T. Triwiyanto et al. (eds.), *Proceedings of the 6th International Conference of Health Polytechnic Surabaya (ICoHPS 2023)*, Advances in Health Sciences Research 72,
https://doi.org/10.2991/978-94-6463-324-5_65

Stunting is caused by a lack of nutrition for a long time, especially in the first 1,000 days of life, causing growth and development disorders. Stunting causes a child's brain not to develop optimally, thereby reducing cognitive abilities. When intelligence decreases, children's achievement and productivity are affected, thus affecting the quality of life of toddlers in the future. The period of fulfillment of nutrition in toddlers begins from pregnancy to the age of 2 years so that it only appears after the child is 2 years old. Stunting is caused by multidimensional factors, including poor parenting or nutritional intake practices, including the lack of knowledge of parents, especially mothers about health and nutrition for their toddlers both before and after pregnancy and when mothers give birth and breastfeed. Limited health services including antenatal care, postnatal care and quality early learning services, lack of household/family access to nutritious food and lack of access to clean water and sanitation [3].

The Ministry of Health makes efforts in controlling stunting, namely by carrying out activities based on community empowerment. These activities are in the form of local food delivery carried out at the Integrated Service Post (Posyandu). Posyandu is one form of community-sourced health efforts managed and organized from, by, for and with the community in the implementation of health development, in order to empower the community and provide convenience to the community in obtaining basic health services to accelerate the reduction of maternal and infant mortality or morbidity rates. The Posyandu program that has been carried out to prevent stunting is focused on pregnant women, this is very good considering that pregnant women who already know more or less about stunting can prevent stunting. However, it would be better if even after pregnancy, both mothers and cadres can know the growth and development of children. However, the cadres still only record the weight and age of infants or toddlers. The empowerment of cadres related to stunting is carried out so that when cadres are recording the child's weight, cadres can immediately find out whether the child is included in a stunting condition or not. This is because the current phenomenon, in carrying out posyandu activities, cadres only measure weight and height, then record them in the visit book without interpreting the measurement results [4]

The knowledge and skills of posyandu cadres are needed in taking anthropometric measurements, so a competent cadre is needed to be able to interpret the nutritional status of toddlers who have been weighed. Thus the ability of cadres must be developed, with the provision of knowledge and skills adapted to the tasks carried out, in managing Posyandu so that they can play an active role in improving public health [5]. One of the debriefing efforts to increase the knowledge and skills of health cadres is by using a pocket book on stunting. Therefore, this study aimed to find out how the pocket book media influences the knowledge and attitudes of health cadres in the early detection of stunting in the one of the working areas of Indonesia's health service units in Surabaya.

2 Methods

The research design used Quasy-Experimental with a pre and posttest control group design. The study population was all cadres in Kedung Doro health center Surabaya, with a sample of 30 control groups and 30 treatment groups taken using non-probability

sampling technique. The inclusion criteria included cadres who were active in Posyandu, could read and write and were in good health, while the exclusion criteria were cadres who were not willing to be respondents. The independent variable is the pocket book media and the dependent variable is the knowledge and attitudes of health cadres in early detection of stunting. The research instrument used a questionnaire and a pocket book. The questionnaire asks about personal information, knowledge, social norms, perceived behavior control, and cadre attention to early stunting detection. It also uses a pocket book and covers topics like what stunting is, how to measure weight and height, how it affects people, and how to deal with it, also the z score table. The analysis used the Wilcoxon test to determine the significance of the influence of pocket book media on the knowledge and attitudes of cadres, while the Mann Whitney test was to determine differences between the intervention and control groups. This research has passed the Ethical clearance from the Research Ethics Committee of the Surabaya Ministry of Health Poltekkes on August 25 2021 with No.EA/649/KEPK-Poltekkes_Sby/V/2021.

3 Results

The characteristics of the respondents from the Table 1. shows that the majority of respondents in the control group were aged 46-60 years namely 28 people (93,3%), as well as in the treatment group namely 15 people (50%). In the control group, most of the respondents had high school/equivalent education around 20 people (66,7%), while the treatment group also had high school/equivalent education namely 23 people (76,7%). The duration of being a cadre for the control group was mostly > 1-10 years namely 22 people (73,3%), while for the treatment group, most of them were between > 1 to 10 years namely 15 people (50%).

Table 1. The characteristics of the respondents

Characteristics	Control		Intervention	
	N	%	N	%
Age				
21-35 years	0	0	1	3,3
36-45 years	1	3,3	7	23,3
46-60 years	28	93,3	15	50
61-74 years	1	3,3	7	23,3
Education				
No School	2	6,7	1	3,3
Elementary School	1	3,3	0	0
Middle School	5	16,7	5	16,7
High School	20	66,7	23	76,7
Diploma	1	3,3	0	0
Bachelor	1	3,3	1	3,3
Long time as a Cadre				

≤ 1 years	2	6,7	2	6,7
>1-10 years	22	73,3	15	50
> 10-20 years	6	20	9	30
> 20 years	0	0	4	13,3

Table 2. Effect Of Pocket Book Media On Knowledge Of Cadres In Early Detection Of Stunting In The Treatment Group

Knowledge	Pocket Book			
	Befor		After	
	N	%	N	%
Less	4	13,3	2	6,7
Enough	13	43,3	8	26,7
Good	13	43,3	20	66,7
Total	30	100	30	100
Wilcoxon Statistic Test Sign Rank Test				
Asymp Sig (2-tailed) = 0,013				
Negative rank = 2				
Positive rank = 11				
Ties = 17				

Table 2 shows that almost half of the respondents before being given the pocket book media treatment had sufficient and good knowledge (43,3%), after being given the treatment, it showed that almost all of the respondents had good knowledge (66,7%). The results of this study describe 2 respondents who experienced a decrease in knowledge after being given the pocket book media (the negative rank = 2) and it was found that 17 respondents had no increase or decrease in knowledge after being given the pocket book media (the ties = 17), and 11 respondents who experienced an increase in knowledge after being given the pocket book media (the positive rank = 11). The results of the Wilcoxon sign rank test obtained a value of p = 0,013 (0,013 <0,05) so H1 was accepted, which means that there is an effect of pocket book media on cadres' knowledge in early detection of stunting in the one of the working area of Indonesia's health service units in Surabaya.

Table 3. The Effect of Pocket Book on the Attitude of Cadres in the Early Detection of Stunting in the Treatment Group

Attitudes	Pocket Book Media			
	Before		After	
	N	%	N	%
Negative	19	63,3	11	36,7
Positive	11	36,7	19	63,3
Total	30	100	30	100

Statistical Test	Wilcoxon Sign Rank Test
Asymp Sig (2-tailed)	= 0,011 Negative
rank	= 1
Positive rank	= 9
Ties	= 20

Table 3 shows that most of the respondents before being given the pocket book media treatment had a negative attitude (63,3%), and after being given the treatment the majority of the respondents had a positive attitude (63.3%). The results describe 1 respondent who experienced a change in attitude to be negative after being given a pocket book media (it's mean similar with the negative rank = 1) and it was found that 9 respondents experienced a change in attitude to be positive after being given a pocket book media (similar with the positive rank = 9), and 20 respondents who did not experience a change in attitude after being given a pocket book media (it's mean the ties is 20). The results of the Wilcoxon sign rank test obtained a value of p = 0,011 (0,011 <0,05), so H1 was accepted, which means that there is an effect of pocket book media on the attitude of cadres in early detection of stunting in the one of the working area of Indonesia's health service units in Surabaya.

Table 4. Differences in knowledge and attitudes of cadres in early detection of stunting in the work area of the Kedung Doro Health Center in Surabaya in the control and treatment groups

Characteristics	Control		Intervention		P Value
	N	%	N	%	
Knowledge					0,002
Less	3	10	2	6,7	
Enough	20	66,7	8	26,7	
Good	7	23,3	20	66,7	
Attitudes					0,301
Negative	15	50	11	36,7	
Positive	15	50	19	63,3	

Table 4 shows that most of the respondents in the treatment group after being given the pocket book had good knowledge (66,7%), while in the control group, most of the respondents had sufficient knowledge. This illustrates that the group given the treatment experienced an increase in knowledge when compared to the control group. To find out the difference in the knowledge of cadres in the control group and the treatment group, a Mann Whitney Test Analysis was carried out to obtain a value of p = 0,002 (0,002 <0,05) then H1 was accepted which meant that there was a difference in knowledge after the stunting pocket book media treatment, while for attitudes it was shown that respondents almost all of the treatment group (63,3%) had a positive attitude after being given the pocket book, while half

of the control group had a positive attitude (50%). The Mann Whitney test results obtained $p = 0{,}301$ (0,301> 0,05) then H1 was rejected which means there was no difference in attitude after the stunting pocket book intervention.

4 Discussion

4.1 The Effect of Pocket Book Media on Knowledge of Health Cadres in Early Detection of Stunting

The results of this study on the respondents before being given the pocket book intervention were almost half knowledgeable enough and good. After being given intervention, it showed that almost all respondents had good knowledge. The results of this study showed that a small proportion of respondents experienced a decrease in knowledge after being given pocket book and it was found that the majority of respondents had neither an increase nor a decrease in knowledge after being given pocket book. And most of the respondents experienced an increase in knowledge after being given pocket book. This is because the knowledge of the previous cadres was sufficiently supportive and some were even good, where this was more influenced by the many life experiences in carrying out their duties as cadres in the community under the direction of health workers at one of the working areas of Indonesia's health service units in Surabaya where their experience as cadres was more than 1 year old. Because experience can provide professional knowledge and skills and can assist in making decisions [6]. The results of the Wilcoxon sign rank test found that there was an effect of pocket book media on cadres' knowledge in early detection of stunting in the Kedung Doro health service unit in Surabaya. Pocket books are a very common medium of information with all shapes and sizes and are easy to carry anywhere [7]. Another study, namely from Laras & Sumarmi states that the use of pocket books affects students' knowledge and practice [8].

A pocket book is a tool or media used to provide education in order to change a person's knowledge, attitudes and behavior. A pocket book with various kinds of information in it which is equipped with various interesting pictures will be able to support the ease of absorbing existing information. So that it will facilitate the process of transferring knowledge from health workers to cadres in their work area.

4.2 The Effect of Pocket Book on the Attitudes of Health Cadres in Early Detection of Stunting

Based on research on respondents before being given pocket book media treatment, most of them had a negative attitude. After giving treatment to the cadres, it showed that most of the respondents had a positive attitude. Then this study showed that most of the respondents did not experience a change in attitude after being given the pocket book media. In accordance with the statement Budiman and Riyanto which states that age affects one's comprehension and mindset. Experience is a source of knowledge in obtaining the truth and solving problems. Where the results of this study can be

influenced by the age and experience of the cadres. The more mature the age the more experience they have [6].

Study by Urifah showed that the benefit of information sources from print media is higher in patients attitude against HIV/AIDS [9]This was in line with study by Setiyawati and Meilani which stated that the use of pocket book influence the attitudes towards stigma people with HIV/AIDS [10]

A person's experience in receiving information through a pocket book will increase so that it can influence a person's attitude. Personality, intelligence and interests are factors that can influence the attitude process. Although knowledge will determine attitudes, it is not always someone who has good knowledge, they will have good attitudes too, vice versa [11]. Meanwhile a person with good knowledge will influence long last behavior. They will be more alert to the risk from poor health condition. However, for an adult who already has the knowledge and attitude that they believe before, he will likely find it difficult to accept what they think cannot be trusted [12, 13] .

The results of the Wilcoxon sign rank test show that there is an influence of pocket book media on the attitude of cadres in early detection of stunting in the one of the working areas of Indonesia's health service units in Surabaya. This is because in giving pocket book media treatment, besides cognitive knowledge, understanding is also given in a practical way to determine the state of stunting in toddlers by using the Z score table. This is a new experience for cadres because so far cadres have only used the charts in the MCH Handbook which are actually an elaboration of the Z Score table. Apart from that, there is also additional provision or refresh in the correct of weight or height measurements. Then it is possible to increase attitudes to be more positive. In line with research Satrianingsih & Dewi N which states that the PBL model assisted by science pocket books has an effect on improving cognitive abilities and attitudes towards science [14].

4.3 Differences in knowledge and attitudes of cadres in early detection of stunting

The results of the study showed that the cadre group after being given treatment, namely with the pocket book media, showed that their knowledge had differences. This is because the research media is a pocket book that has adjusted the contents of the material according to the needs of the cadres. Where it contains information, pictures, and explanations so that it becomes more interesting and easier to understand. This is what causes it to affect one's mindset in utilizing the information received. This is very different from what happened to the control group who did not get additional knowledge through any media. This is in line with research Eliana D. and Solikhah which states that there is a difference in the level of knowledge of nutrition between before and after being given a nutrition pocket book, which means that there is an effect of a nutrition pocket book on the level of knowledge of nutrition in grade 5 elementary school children [15]. Another study by Djannah and Wanufika showed that Pocket book is effective to increase adolescent’s knowledge and attitude regarding healthy sexual behavior [16].

In the group of cadres who were treated with pocket book media, the results after being tested with the Mann Whitney test showed that there was no difference between the attitudes of cadres in the control group and after being given treatment. This is because the cadres are still in the process of receiving or receiving, meaning that the cadres still want and pay attention to the stimulus provided but have not yet reached a more advanced stage, namely experiencing internalization in their lives. In line with the theory of Notoatmodjo about the level of attitude, namely accepting, responding, appreciating, being responsible and acting [17].

Pocketbook as a learning media like booklet, that contains pictures to increase the audience's interest. It's smaller size like a pocket. Many studies have compared the effectiveness of videos and booklets. In Study by Mona and Azalea showed that both pocketbook and video have significant impact to improvement of children's knowledge about dental health [18]. Another study by Manueke and Donsu stated that the pocket books and videos are an effective method to improve knowledge regarding Labor Planning and Prevention of Complications (P4K) [19]. Meanwhile, study by Suci et al concluded that video is more effective to improve knowledge of mothers about complementary feeding than the use of pocket books [20]

Pocket books also can improve a person's output. Study by Dyah et al stated that family planning pocket book for cadres has an effect on cadres' knowledge and skills on family planning services [21]. Another study by Dhiniaty *et al* stated that the pocket book based on local genius is feasible and effective to increase the student achievement [22]. Study by Munawaroh et al also stated that pocket books improve the knowledge and attitudes of pregnant women which ultimately increases the level of fulfillment of blood tablet consumption during pregnancy [23].

Along with technological developments, another study tested the effectiveness of digital pocket books. A study by Wuryandari et al stated that the use of digital pocket book effectively improved the student's knowledge regarding puberty reproductive health. The advantage of digital pocketbooks is that they are easier to access [24]. This is in line with study by Heryani and Lestari which recommend that digital pocket book can be an innovation in health promotion [25].

5 Conclusion

The results showed that pocket book influenced the knowledge and attitudes of cadres in the early detection of stunting in Kedung Doro Health Center Surabaya. There was a difference in knowledge but no difference in attitude of the cadres after the stunting pocketbook treatment. It is hoped that the needs of cadres in running Posyandu will remain a concern of policy makers in order to improve the behavior and skills of cadres through various trainings. In addition, midwives can continue to develop various educational media to improve stunting early detection by cadres and the community to reduce the incidence of stunting. Further research is needed to embed the effects of pocket book using other research designs and their effects on behavior.

References

1. Ministry of Health: Performance Report 2015-2018. , Jakarta (2019).
2. Ministry of Health: Basic Health Research 2018. , Jakarta (2018).
3. Sutarto, Mayasari, D., Indriyani, R.: Stunting, Faktor Risiko dan Pencegahannya. J Agromedicine . 5, (2018).
4. Adistie, F., Belinda, V., Lumbantobing, M., Nur, N., Maryam, A., Keperawatan, F.: Empowerment of Health Cadres in Early Detection of Stunting and Stimulation of Growth and Development in Toddlers. Media Karya Kesehatan. 1, (2018).
5. Handarsari, E., Syamsianah, A., Astuti, R.: Improving Knowledge And Skills Of Posyandu Cadres In Purwosari Village, Mijen District, Semarang City. Prosiding Seminar Nasional dan Internasional. (2015).
6. Budiman, Riyanto, A.: Capita Selekta Knowledge and Attitude Questionnaire in Health Research. Salemba Medika, Jakarta (2013).
7. Ministry of National Education Language Center: Big Indonesian Dictionary (KBBI) Offline. Ministry of National Education, Jakarta (2016).
8. Laras Azadirachta, F., Sumarmi, S.: Nutritional Education Using Pocketbook Media Improves Knowledge And Practices Of Vegetable And Fruit Consumption In Primary School Students. Media Gizi Indonesia. 12, 107–115 (2017).
9. Urifah, S.: Knowledge and Stigma Against HIV/AIDS Patients in The Health Environment, Indonesia . J. Heal. Sci. 8, 199–207 (2017).
10. Setiyawati, N., Meilani, N.: The Effectiveness of Videos and Pocket Books on The Level of Knowledge and Attitudes towards Stigma People with HIV/AIDS. Journal of Education and Learning (EduLearn). 14, 489–494 (2020). https://doi.org/10.11591/edulearn.v14i4.15751.
11. Dianna, Fitriani, H., Purba, L.: Differences In Knowledge And Attitudes In The Pocketbook Of Toddler Development Growth. Jurnal Kebidanan Malahayati). 9, 341–346 (2023). https://doi.org/10.33024.
12. Siwiendrayanti, A., Pawenang, E.T., Indarjo, S.: Changes in Knowledge, Behavior, and Environmental Control for Filariasis Prevention with "Mandiri" Pocket Book in Pekalongan City Society: A Longitudinal Study. Jurnal Pendidikan IPA Indonesia. 8, 177–184 (2019). https://doi.org/10.15294/jpii.v8i2.17766.
13. Craig, L., Davies, M., Macdowall, W.: Health Promotion Theory. Mc- Graw-Hill Education, England (2013).
14. Juni Puput Satrianingsih, C., Haryani, S., Ratna Dewi, N.: Problem Based Learning Model Assisted by Science Pocket Book to Improve Cognitive Abilities and Attitudes towards Science. JISE. 6, (2017).
15. Eliana, D., Solikhah: The Influence Of Nutritional Pocket Books On The Level Of Nutritional Knowledge In Class 5 Children In Muhammadiyah Dadapan, Wonokerto Village, Turi District, Sleman Regency, Yogyakarta. Kes Mas: Jurnal Fakultas Kesehatan Masyarakat Universitas Ahmad Daulan. 6, (2012).
16. Nur Djannah, S., Wanufika, I.: The Effectiveness of Pocket Book of Healthy Sexual Behavior in Improving Knowledge and Attitude on Premarital Sexual

among Adolescents in Yogyakarta. In: Reaching the Unreached: Improving Population Health in the Rural and Remote Areas. pp. 168–168. Masters Program in Public Health Universitas Sebelas Maret (2018). https://doi.org/10.26911/theicph.2018.02.49.
17. Notoatmodjo: Metodologi Penelitian Kesehatan. Rineka Cipta, Jakarta (2010).
18. Mona, D., Azalea, F.W.: Leaflet and Pocketbook as An Education Tool to Change Level of Dental Health Knowledge. Bali Medical Journal. 7, 760–763 (2018). https://doi.org/10.15562/bmj.v7i3.1172.
19. Manueke, I., Donsu, A.: Pocket and Video Books on Kader Knowledge About the Implementation of Labor Planning and Prevention of Complications (P4K). In: Proceeding 2nd Manado Health Polytechnic International Conference. pp. 193–196 (2020).
20. Suci, M., Kalsum, U., Siregar, N.: The Effectiveness of Education Using Video and Pocket Book on Knowledge of Mothers to Stunting About PMT. KESANS: International Journal of Health and Science. 2, 2023 (2023). https://doi.org/10.54543/kesans.v2i6.143.
21. Paramita, D.P., Mulyaningsih, S., Alfiana, R.D., Fitri, G.C., Nurunniyah, S.: The Influence of Family Planning Pocketbook on Cadres' Knowledge and Skills in Changing the Couples Perceptions in Special Region of Yogyakarta. Open Access Maced J Med Sci. 10, 68–72 (2022). https://doi.org/10.3889/oamjms.2022.9484.
22. Gularso, D., Purwoko, R.Y., Sujatmiko, Purwaningsih, W.I., Ingtias, F.A.N.: Developing a Local Genius-Based Pocket Book for Elementary School Students. Pegem Journal of Education and Instruction. 13, 304–313 (2023). https://doi.org/10.47750/pegegog.13.03.31.
23. Munawaroh, A., Nugraheni, A., Zen Rahfiludin, M.: The Effect ff Pocket Book Education On Intake Behavior Iron in Pregnant Women Related to Prevention Iron Deficiency Anemia. Jurnal Kesehatan Masyarakat. 7, 2356–3346 (2019).
24. Wuryandari, A., Murtiyarini, I., Ichwan, E., Julaecha, J.: Utilization of Puberty Reproductive Health Digital Pocket Book for Deaf Students during the Covid-19 Pandemic. (2022).
25. Heryani, H., Lestari, L.: Digital Pocketbook Increase Mother's Knowledge about Covid-19 Transmission Prevention. Indian Journal of Forensic Medicine and Toxicology. 16, 242–247 (2022).