Empowering Health Cadres as a Toddler Posyandu Team to Improve the Knowledge and Skills of Cadres Through Counseling by Screening Toddlers so That Cadres and Families can Detect early and Refer to Stunting Cases That Have Increased During the COVID-19 Pandemic

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Abstract: The COVID-19 pandemic has exacerbated nutritional problems for children under five and many Posyandu for toddlers are not operating, thus increasing delays in preventing stunting and stunting growth for toddlers. This health cadre empowerment activity is carried out because health cadres are a team in the toddler posyandu. This is done by increasing the knowledge and skills of cadres so that they can perform early detection of stunting and make referrals. This activity goes through 7 steps of serial activities, namely Preparing, Participatory Program, Asset Reinventing, Designing, Communicating, Implementing, Evaluating. Activity results: knowledge of cadres about stunting increased from a score of 70 to 90, understanding the interpretation of measurement results for toddlers so that cadres' skills in early detection of stunting increased Implication: the application of digital applications that make it easier for cadres to detect stunting early to prevent and refer.

Introduction

Indonesia has experienced nutritional problems since before the COVID-19 pandemic. Based on current data, more than 2 million children suffer from malnutrition and more than 7 million children under five years of age suffer from stunting. The COVID-19 pandemic has caused an increase in the burden on health facilities, disruption of the food supply chain, and loss of income. According to UNICEF estimates, the number of acutely malnourished children under five could increase by 15% due to the COVID-19 pandemic. These children tend to be stunted, i.e., their height is lower for their age, so that more children will suffer from stunting in this country and are
vulnerable to long-term developmental disorders.¹

Coronavirus Disease 2019 (COVID-19) has been designated as a non-natural disaster in the form of an outbreak/pandemic, followed by efforts to prevent the spread of coronavirus through social restrictions, namely crowd restrictions, travel restrictions, isolation, delays, and cancellations of events, as well as the closure of public facilities and service arrangements.² President Joko Widodo on Tuesday 2 March 2020 announced the first Covid-19 case in Indonesia, namely three people in one family in Depok.³ The Depok City Government has designated 238 RWs as the Covid-19 alert village social restriction areas (PSKS), according to the Depok Mayor Decree Number 443/399/Kpts/Dinkes/Huk/2020, concerning the Determination of the Covid-19 PSKS Area. A number of PSKS RWs are spread across 11 sub-districts. With the details of Sukmajaya District as many as 43 RW, Beji 26 RW, Pancoran Mas 27 RW, Sawangan 24 RW, Cinere seven RW, Limo 17 RW, Cipayung 12 RW, Cilodong 17 RW, Tapos 18 RW, and Bojongsari 26 RW.⁴ The City Government (Pemkot) of Depok has finally issued a Circular (SE) containing the temporary suspension of activities that can cause crowds of people, namely SE Number: 443/132-HUK/Dinkes Concerning Follow-Ups on Prevention of the Spread of Corona Virus Disease (Covid-19) Depok City.⁵ The condition affects the schedule and procedures of health services, one of which is posyandu.⁶ Posyandu and Puskesmas are primary health care facilities that become the main force in improving maternal and child health degrees experiencing temporary closures and/or delays in immunization services in Posyandu and Puskesmas in some areas.⁷ One of them occurred at the Orchid Posyandu, Jatimulya sub-district, Cilodong District, Depok City so that during the COVID-19 pandemic it did not operate. This causes toddlers to receive less monitoring of their growth and development.

⁷ Kemenkes, Petunjuk Teknis Pelayanan Imunisasi Pada Masa Pandemi COVID-19.
activity is 10 people. The main targets in this activity are posyandu cadres and people who have toddlers. After attending the training, they are expected to have the ability to provide information to the community, especially to people who have toddlers. The permit for this activity was given by the Head of RT 05/03 Jatimulya Village, Cilodong District, Depok, for further implementation of activities carried out at the Orchid Posyandu. Another potential is that there are active participants in this activity, namely local midwives, cadres, RT, and PKK.

Indonesia is a country with the third-highest prevalence of stunting in ASEAN and is currently facing a COVID-19 pandemic. Based on the results of Riskesdas 2018, the prevalence of stunting in Indonesia is 30.8%\(^9\) and there are no activities to increase the knowledge and skills of cadres about stunting prevention during the COVID-19 pandemic. During the COVID-19 pandemic, many integrated service post activities (posyandu) for toddlers were canceled/not operating, especially in Depok, according to the policy of the local health center. Since the COVID 19 pandemic occurred in Depok, the Orchid II Posyandu has not operated. However, the Orchid II Posyandu once received services by implementing strict health protocols, but only a few toddlers came for fear of experiencing COVID 19. This caused the cadres to lose toddler growth data, and the growth of toddlers was not monitored by the Community Health Center (Puskesmas) Cilodong District. Health cadres at the Orchid II Posyandu in Jatimulya village said that they did not know the meaning of the data from the data collection results for toddlers (age of toddlers, measurements of height, and weight of children under five). In addition, the people of Jatimulya village do not know the growth status of their children under five at risk of experiencing stunting or not. Therefore, this community service activity aims to increase awareness and knowledge of posyandu cadres about clean and healthy living behavior in preventing the spread of COVID-19, the importance of stunting prevention by checking the growth and development of infants and toddlers, increasing the skills of cadres in providing counseling about the importance of life behavior: clean and healthy in preventing the spread of COVID-19 and skills to check the growth and development of infants and toddlers to the community so that they can carry out early detection of stunting and make referrals.

Method

This community empowerment activity was carried out in Jatimulya Village, Cilodong District, Depok City, West Java. The method used is Asset Based Community Development (ABCD),\(^{10}\) which is an approach method in community empowerment by

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emphasizing the inventory of assets owned by the community and is considered to support community empowerment activities. This activity uses 7 steps of serial activities,\textsuperscript{11} namely Preparing, Participatory Program, Asset Reinventing, Designing, Communicating, Implementing, Evaluating.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{Community Empowerment Implementation Methods}
\end{figure}

The target of this community empowerment activity is the community of Rw 01 Rw 03 which has 100 children under five, with the main target being the 10 people of Posyandu Orchid II Jatimulya, Cilodong District, Depok City, West Java Province.

\textbf{Result}

This community service activity is carried out offline by implementing health protocols in preventing the spread of COVID-19 transmission.

\textbf{Preparing}

The implementation of activities begins with a site survey and takes care of permits and initial assessments. The results of interviews with partners revealed that partners already had assets in the form of Posyandu for toddlers with a cadre of 10 people who were eager to learn more about Posyandu activities for toddlers. However, knowledge of cadres about stunting and how to interpret weighing results as early detection of stunting is not well understood. This is because routine weighing is only a routine procedure and reporting. At this stage, it has been agreed on the time and place for the implementation of counseling to posyandu cadres.

\textbf{Participatory Programs}

The target of this community empowerment activity is the community of Rw 01 Rw 03 which has 100 children under five with the main target being 10 people of Posyandu Orchid II Jatimulya cadres, Cilodong District, Depok City, West Java Province. At the offline meeting, it was agreed that the implementation of the empowerment of

posyandu cadres began with a pre-test to assess the knowledge of cadres with a questionnaire about stunting and prevention of the spread of the COVID-19 virus with clean and healthy living behaviors. The results of the pre-test knowledge average score of 70. Furthermore, counseling was carried out using ppt media and the distribution of flyers that had been recorded on stunting and clean and healthy living behavior from the Ministry of Health. In addition, there were also questions and answers and discussions on the materials and experiences of cadres while running the Posyandu for toddlers.

Figure 2. Counseling Activities to Cadres

Asset Reinventing

The next process is to develop an activity plan based on the identification of assets owned by the community, namely posyandu, 10 posyandu cadres, portable height, and portable weight measuring devices, office stationery, and a collection of flyers that have been recorded.

Design

Based on an agreement with posyandu cadres, the next stage of screening for toddlers is by way of home visits by cadres to toddlers who do not come to the posyandu other than because the posyandu is not operating during the COVID-19 pandemic. Another plan is counseling cadres to residents who have toddlers and counseling to residents at every community meeting activity.

Communicating

This step was taken to determine the time of home visits for toddlers and counseling to residents would be carried out when there were social gathering activities and religious studies. The results of the communication also agreed on a time and place for the evaluation of activities.

Implementing
This stage is an independent cadre activity carried out by cadres by way of home visits to residents who have toddlers by implementing health protocols. This is done to screen children under five who do not come to the posyandu or because the posyandu does not operate during the COVID-19 pandemic, and to educate parents to increase public knowledge about clean and healthy living behavior and how to detect stunting using the MCH handbook. This was done by 6 cadres of the Orchid II integrated service post who managed to measure the height and weight of 100 toddlers who did not attend the integrated service post. While the number of parents who received counseling by the cadres was 80 parents.

Posyandu cadres feel excited and challenged after learning about their role in public health because they are the first to be directly involved with the community. It was happened during home visits by conveying clean and healthy living behaviors, implementing health protocols in preventing COVID-19, and the importance of monitoring the growth of toddlers (age, height, and weight). Previously, cadres were afraid to hold Posyandu activities for toddlers due to the COVID-19 pandemic. The cadres now feel more confident in monitoring the growth of toddlers (age, height, and weight) by implementing health protocols.

Parents who received home visits by cadres were afraid of being visited by cadres. After explaining the data collection for toddlers for stunting prevention by implementing health protocols, they gladly accept cadre visits. In addition, parents become more aware of clean and healthy living behavior, maintain correct health protocols, and monitor their own child’s growth using the MCH handbook. It is becoming a new behavior, a new habit that is applied daily by the community. Furthermore, make it easier to collect data on toddlers without home visits because cadres can ask for data from parents of toddlers, especially data on height and age.
In addition, the cadres also conduct counseling at every community meeting such as social gatherings and religious studies. This is done to strengthen the home visits that have been carried out to motivate the community to monitor children’s growth independently at home using the Healthy Towards Card (KMS), as well as to strengthen the behavior to prevent transmission of COVID-19. This activity was carried out by 10 cadres of the Orchid II integrated service post at every citizen event such as social gathering and religious studies. The number of people who attended the counseling by the cadres was 90 people. Community gatherings are usually only the main event, and lack of heeding to health protocols, health counseling by cadres, public knowledge increases, and people’s attitudes become more positive. At the next meeting, the community was more orderly in implementing health protocols such as the correct use of masks and frequent hand washing.

**Evaluating**

The cadre empowerment activities were evaluated using a post-test questionnaires distributed to assess the knowledge of cadres before and after counseling, as well as discussions about the implementation of cadre activities in screening children under five and outreach to the community. The results of the pre-test and post-test were analyzed univariately and bivariate using a non-parametric test, namely the Wilcoxon test.

*Table 1. Differences in Cadre knowledge in Pre-Post Test Measurement (n=10 cadres)*

<table>
<thead>
<tr>
<th>Knowledge Variable</th>
<th>Median</th>
<th>Mean</th>
<th>min-max</th>
<th>Standard Deviation</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>11</td>
<td>11.2</td>
<td>10-12</td>
<td>0.78</td>
<td>0.002</td>
</tr>
<tr>
<td>Post-test</td>
<td>14</td>
<td>14.3</td>
<td>13-16</td>
<td>0.95</td>
<td></td>
</tr>
</tbody>
</table>
Based on the Willcoxon test, there is a difference in the median score of cadres’ knowledge about early stunting detection from 11 to 14 with a \( p \)-value = 0.002 (\( p \)-value <0.05). This shows the effect of health education on increasing the knowledge of Posyandu Cadres.

The results of monitoring and evaluation of community service activities as a whole are an increase in community knowledge, especially cadres about stunting prevention and clean and healthy living behavior in the context of preventing the spread of COVID-19. The attitude of cadres, parents who have toddlers, and people who pay less attention to the growth of toddlers' height and clean and healthy living behavior have changed. They become more concerned about their toddler's height. Parents become routine every month to report the results of their toddler measurements. Data on toddlers, especially their growth data, are recorded and monitored by cadres.

Cadres asked for a quick way to assess stunting, at risk of stunting or normal. Then they can prevent or refer to the nearest health facility quickly. Finally, an application for Android-based toddler growth assessment has been created and socialized. This Cadre Application is named “Child Growth Monitoring” (PPA). The advantage of this application is that there is a downloadable certificate of under-five growth assessment against stunting risk. When this application is socialized to cadres, they can quickly understand and use this application so that they are very satisfied and happy. With this application the skills of cadres improve in detecting, preventing, or referring stunting toddlers. Cadres have used this application as one of the tools in the Posyandu services for toddlers every month. Parents and the community are very happy because of the direct results of their toddler’s growth assessment, especially the certificate that can be taken home.

**Discussion**

This activity is carried out in 7 steps of serial activities, namely Preparing, Participatory Program, Asset Reinventing, Designing, Communicating, Implementing, Evaluating. The assessment of community service activities by partners received a very satisfactory category due to the increased knowledge and skills of cadres in clean and healthy living behavior and skills in detecting cases of stunting under five. According to previous researchers reported that the success of community empowerment programs is influenced by planning and socialization factors, mentoring and target motivation, training in the utilization of yard results, monitoring and evaluation of programs, promotion, and marketing.
At the participatory programs and preparing stage, Partners welcome the intent and purpose of conducting community empowerment activities, this is indicated by the willingness of 10 cadres to participate in counseling activities as debriefing before conducting outreach to the community. Based on the previous community empowerment, it was reported that posyandu acts as the spearhead of monitoring nutritional status in the community, which is expected to be more optimal. At the agreed offline meeting conducted a cadre knowledge assessment with questionnaires as a pre-test of knowledge about stunting and prevention of the spread of the COVID-19 virus with clean and healthy living behaviors. While cadre knowledge is measured using print questionnaires because cadres cannot access questionnaires on the Google Form platform. Cadres are open with counseling given and seem enthusiastic and active in asking questions. There is a schedule of plans for further activities for the networking of toddlers who do not come to integrated service pos and the date of counseling to the community by cadres at citizen meetings such as arisan dates and study dates. Education on stunting is declared successful if there is an agreement with cadres to attend the program. This also happened to community service activities in the Mondokan District, Sragen for PKK cadres which had been successfully implemented. When the resource persons delivered the material on preventing stunting in toddlers, the PKK cadres were very enthusiastic by actively participating in asking questions to the resource persons.

In the Asset Reinventing stage, the results of the identification of assets owned by the community are posyandu, 10 posyandu cadres, portable height, and weight measuring devices, office stationery, and a collection of flyers that have been recorded. Health development program applies the principle of community empowerment such as integrated service post (posyandu). Posyandu is a form of health efforts with community resources that serve as a forum for community empowerment to bring basic health services closer to reduce the Death Rate of Mother (AKI), Infant Mortality Rate (AKB), and Infant Mortality Rate (AKABA). In services for infants and toddlers include

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Weight weighing, Determination of growth status, Counseling and counseling, and Health examination (performed when there are health workers). Cadres as the organizer of activities in Posyandu. This shows the important role of posyandu cadres who are leading in service to the community. In addition, the data show that there are 266,827 Posyandu in Indonesia spread throughout Indonesia with 3 to 4 cadres per Posyandu. This means that there are more than 1 million Posyandu cadres. As many as 78% of toddlers do the weighing, this shows that cadres are the front line in service to the community so that their role is very important in Posyandu. However, the understanding and skills of cadres are inadequate in carrying out their duties, and there are still many cadres who do not have adequate understanding and skills in carrying out their duties.

All cadres do not know if the toddler is stunting or not, so measurement and data collection is only a task to measure the height, weight, and age. Children's Anthropometry Standard is based on weight and length/height parameters consisting of 4 (four) indexes, including a. Weight by Age (BB/U); b. Length/Height by Age (PB/U or TB/U); c. Weight by Length/Height (BB/PB or BB/TB); and d. Body Mass Index by Age (BMI/U). Children's Anthropometry Standards must be used as a reference for health workers, program managers, and related stakeholders for assessment: a. nutritional status of children; and b. child growth trends. While the mothers of posyandu cadres of Ngarap-arap Village who were the participants were mostly (> 60%) has been able to practice the way the measurement of body length (PB) and height (TB) of toddlers is measured by observation. However, determining nutritional status using a nutrition status table can not be done by most participants. In empowering the community, the role of Posyandu cadres for toddlers is formed from internal and external motivations, obstacles, resources, potential, and experience in developing abilities. This community empowerment is played by the Posyandu Cadre because the Cadre can involve the community with a social spirit which is very important in community empowerment. This is supported by previous research that strengthening the empowerment system of a community by involving existing resources.

In the Designing stage, It was agreed that there would be independent cadre activities in the form of screening toddlers with home visits and counseling activities during home visits and to residents at every community meeting activity. In community

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19 Ibid.
20 Ibid.
22 Purwanti, “Peningkatan Kapasitas Kader Posyandu: Cegah Stunting Dengan Perbaikan Gizi 1000 HPK.”
empowerment, the most influential factor is the resource factor, namely Posyandu cadres because they act as intrapreneurs based on creative entrepreneurs.\textsuperscript{24} This is following the theory that a person experiences understanding through knowledge of sensing objects and is the result of knowing.\textsuperscript{25} The cadre’s perception of its role and function is influenced by the cadre’s routine in carrying out its duties. There is little chance of cadres getting training and refresh their knowledge.\textsuperscript{26} While the commitment of posyandu cadres is positive to the sustainability of the program because the credibility, character, and attractiveness of cadres influence community participation in health programs.\textsuperscript{27}

At the Communicating stage, All cadres agree on the time for carrying out home visits for toddlers and counseling to residents as well as time and place for activity evaluation. Empowerment in a community is influenced by communication with a participatory approach to encourage discussion and debate to increase knowledge and awareness, and higher levels of critical thinking. This allows partners to understand the interaction of forces in their lives so that people can make their own decisions.\textsuperscript{28}

At the Implementing stage of the 10 cadres, 6 cadres of the Orchid II integrated service post managed to measure the height and weight of 100 toddlers who did not attend the integrated service post. While the number of parents who received counseling by the cadres was 80 parents. In addition, 10 cadres also conduct counseling at every community meeting such as social gatherings and religious studies. Based on the previous community empowerment, it was reported that the trainers who facilitated community empowerment activities through BIMA-X product innovation based on creative entrepreneurs were Posyandu cadres. In addition, his duties are also as a facilitator who conducts counseling, assistance/technical mastery, skills, service quality as well as monitoring and evaluating these community empowerment activities.

Cadre empowerment activities are evaluated by means of a post-test. The average pre-test score of 70 increased to 90 at the time of the post-test of cadre. This is following the theory that a person experiences understanding through knowledge of sensing objects and is the result of knowing.\textsuperscript{30} The training aims to improve knowledge

\textsuperscript{24} Ibid.
\textsuperscript{27} Purwanti, “Peningkatan Kapasitas Kader Posyandu: Cegah Stunting Dengan Perbaikan Gizi 1000 HPK.”
\textsuperscript{28} Norcahyanti, Pratama, and Pratoko, “Upaya Pencegahan Stunting Dengan Optimalisasi Peran Posyandu Melalui Program Kemitraan Masyarakat.”
\textsuperscript{29} Ibid.
\textsuperscript{30} Siswanto, Widyawati, and Pranowowati, “Pemberdayaan Kader Posyandu Sebagai Upaya...
and skills and be able to carry out their duties and responsibilities according to standards. 31 This is in line with community service activities at the Peruri Pisangan Posyandu, East Ciputat, South Tangerang. There were 11 posyandu cadres present. The socialization activities were carried out and went well and smoothly as seen in the very enthusiasm and interest of the cadres with the posyandu information system that was presented. Cadres also hope that there will be a follow-up program, namely training on posyandu information systems so that the Peruri posyandu can be used as a pilot posyandu for the East Ciputat sub-district.32

Conclusion

Knowledge of cadres and the public about stunting and preventing the spread of COVID-19 in the community has increased. Their attitude changed to paying more attention to their toddler's height and taking care of the health protocol. Parents of toddlers become routinely measuring their toddlers, taking notes in the KIA book, and reporting it to the cadres. Cadres improve their skills in assessing the growth status of toddlers' height and use the PPA application every month.

Acknowledgements

Thank you to Health Polytechnic of Jakarta III, village equipment, cadres posyandu Anggrek II and community village Jatimulya Cilodong Depok West Java.

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