ABSTRACT

Background: The World Health Organization (WHO) said that South East Asia has a high stunting prevalence, where it is estimated that 22.2% of toddlers are stunted globally. The reality is that there are still many cases of inaccurate measurement methods, which question the validity of stunting prevalence. This study aims to know if small group training is effective in reducing stunting prevalence in toddlers.

Methods: This descriptive study was conducted at all Posyandu in Bugul Lor from August to September 2019. The inclusion criteria were the helper present on the day of the study, which was 50 helpers (5 helpers in each Posyandu), and the exclusive criteria were illiterate helpers. We used measurement guidelines from IDAI. The Group workshop started with a briefing about making sure that all tools were correctly set. Next, all helpers were asked to do height measurements, and if there was any error, we showed them how to do it correctly and let them do it again. We then compared the data before and after the intervention. Data from February 2019 were used as data before the intervention.

Results: No helper in 10 Posyandu measured correctly. But after the group workshop, a helper from 8 Posyandu could measure correctly. Stunting prevalence in Bugul Lor decreased by about 4%.

Conclusion: Group workshop seems to be effective in reducing stunting prevalence in toddlers.

Keywords: accuracy, measurement, stunting, toddlers, workshop.


INTRODUCTION

Stunting is still a global health issue, and it is estimated that 22.2% of toddlers are stunted globally.¹ According to the World Health Organization (WHO), Southeast Asia is one of the areas with high stunting prevalence.¹ According to the Survey Status Gizi Balita Terintegrasi (SSGBI) by Balitbangkes of the Indonesian Health Ministry in 2019, the proportion of stunting in Indonesia was 27.67%, and the position of East Java was 26.86%.²

The concern of stunting prevalence gives a reason for the importance of monitoring the height/length of toddlers at Posyandu, particularly done with the right procedures to get an accurate measurement.³ The reality is that there are still many inaccurate measurement methods cases that question the validity of stunting prevalence.³ Therefore, researchers wanted to know whether small group training could be useful in reducing the prevalence of stunting in toddlers in the working area of Puskesmas Kandang Sapi, Pasuruan City.

METHODS

This descriptive study was conducted in all of Posyandu in Bugul Lor sub-district, the working area of Puskesmas Kandang Sapi, Pasuruan City, from August to September 2019.

The population in this study were all helpers (Kader) in Posyandu, Bugul Lor sub-district. The sampling formula of the total population was used to include all helpers who met the inclusion criteria and did not meet the exclusion criteria. The inclusion criteria were the helper present on the day of the study, which was 50 helpers (5 helpers in each Posyandu). The exclusion criteria used was a helper who was illiterate.

The guideline of length measurement used in this study was from Ikatan Dokter Anak Indonesia (IDA)/Indonesian Pediatrics Society (IPS). Parents are asked to take off the socks, shoes, and all the accessories, especially if they’re on the head. For children <2 years old, length measurement was done with an infantometer.³⁻⁴ If, for some reason, the children can’t be measured by infantometer and has to be measured by stadiometer, the result has to be added by 0.7 cm.³⁻⁴ The measurement has to be done with 2 helpers.³ First, the helper lays the child on the infantometer with his head fixed at the upper end of the board facing upward.³ The second helper takes hold of the child’s feet (or left foot if the child is irritable) with his toes facing upward.³

P-ISSN: 2503-3638, E-ISSN: 2089-9084

Published by Intisari Sains Medis
RESULTS

Before the intervention, none of the helpers from 10 Posyandu did a correct height/length measurement. However, after the intervention, helpers in 8 out of 10 Posyandu were able to do measurements correctly.

In addition, a measurement tool that was not in accordance with the standard was found, such as a toy height-measuring device.

Prior to the intervention, according to data in February 2019, the prevalence of stunting in toddlers in the Bugul Lor sub-district was 23%. After the intervention, data from August 2019 showed that the prevalence of stunting in toddlers in the Bugul Lor sub-district decreased to 19%.

Here is the table showing the stunting prevalence of each Posyandu before and after the intervention.

<table>
<thead>
<tr>
<th>Posyandu</th>
<th>Before Intervention</th>
<th>After Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>26%</td>
<td>20%</td>
</tr>
<tr>
<td>A</td>
<td>28%</td>
<td>27%</td>
</tr>
<tr>
<td>L</td>
<td>25%</td>
<td>18%</td>
</tr>
<tr>
<td>D</td>
<td>18%</td>
<td>16%</td>
</tr>
<tr>
<td>N</td>
<td>22%</td>
<td>17%</td>
</tr>
<tr>
<td>F</td>
<td>27%</td>
<td>25%</td>
</tr>
<tr>
<td>K</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>B</td>
<td>19%</td>
<td>17%</td>
</tr>
<tr>
<td>M</td>
<td>24%</td>
<td>16%</td>
</tr>
<tr>
<td>G</td>
<td>20%</td>
<td>19%</td>
</tr>
<tr>
<td>Average</td>
<td>23%</td>
<td>19%</td>
</tr>
</tbody>
</table>

DISCUSSION

According to World Health Assembly (WHA), stunting is a condition in which a child is said to be short for his age (below -2 standard deviations on the WHO growth chart), which is caused by chronic malnutrition and repeated infections in the first 1000 days of life. Therefore, Tim Nasional Percepatan Penanggulangan Kemiskinan (TPNK) concluded that stunting is a condition in which toddlers have failed to develop due to chronic malnutrition resulting in children being too short for their age.

It is said that stunting often occurs in the fetal period because a large amount of nutrition is needed to support rapid growth and development during this period. Inadequate nutrition and frequent infection in the first 1000 days of life contribute greatly to stunting. Increased mortality and morbidity are closely related to stunting. The occurrence of cognitive decline, increased susceptibility to infections, as well as increased risk of suffering from diabetes mellitus, obesity, hypertension, and dyslipidemia can occur in someone who was stunted in their infancy period. In 2017, there were more than 150 million toddlers in the world who were stunted, and Indonesia was one of the biggest contributors to this condition.

Anthropometric measurements, including measurement of body height/length, require special knowledge and skills, which, if not carried out by trained people, the accuracy of the measurement results will be questioned. A study conducted by Fuada et al. in Indonesia showed that the accuracy of helper in Posyandu in measuring height/body length using an infantometer is 49.78% and a stadiometer 51.53%. After training, the accuracy of measurements using the infantometer increased to 68.72%, and the stadiometer increased to 89.17%. In this study, it was found that none of the helpers from 10 Posyandu in the Bugul Lor sub-district did height/length measurement correctly before the intervention. After direct training, a helper from 8 out of 10 Posyandu was able to do measurements correctly. Failure to reach the 100% figure was thought to be due to the nature of some people who were indifferent when they were taught.

In addition to the incorrect measurement method, there was a Posyandu that used a height measurement tool that was not up to standard, namely a toy height measuring device with an
accuracy of 1 cm. They claimed that it was easier to measure a child using cute instruments so that they would not cry. After an explanation about the importance of using a standard-compliant tool, the tool was immediately replaced using a stadiometer.

The intervention method chosen in this study was direct training in small groups. Researchers came to Posyandu and measured children’s body height/length before training started. This method is considered to be an effective learning method for adults because Karge et al., in their study, said that adults learn best through hands-on practice. Besides, adult learners need to understand why they are learning a new task or skill. Adults learn better through active experience than passive listening and through interacting with one another than working alone. In addition, teachers must show respect for those being taught. The role of a teacher may be effectively filled by a mentor, coach, peer, or expert. Self-motivation is important, and they seek out continuous learning based on personal interests, wants, and needs. It is said that those who are self–motivated will receive what is taught better.

The prevalence of stunting in toddlers in the Bugul Lor sub-district in February 2019 was 23%. This data was sourced before the intervention. After the intervention, the number fell to 19% in August 2019. This study has several limitations, including the lack of journals that discuss the same topic, the short research time, and the small number of variables studied. Besides, the decrease in stunting prevalence in Bugul Lor could be influenced by dietary factors because the data used for the pre-test was taken 6 months before. Regarding these limitations, researchers hope that further research will be carried out on the same topic but with more diverse research variables and different study designs.

CONCLUSION
Small group training seems to be useful in reducing the prevalence of stunting in toddlers in the working area of Puskesmas Kandang Sapi, Pasuruan City. The small group training method seems to be an effective way to improve the skills of the helper in measuring height/length.

ETHICAL CONSIDERATION
This study has been ethically approved by the Ethics Committee of the Faculty of Medicine Hang Tuah University with an ethical clearance number of NoI/32/UHT. KEPK.03/VII/2021.

CONFLICT OF INTEREST
There was no conflict of interest in the writing of this research.

FUNDING
The author is responsible for funding this research without involving other parties.

AUTHOR’S CONTRIBUTION
All authors contributed together in writing this research report, from the stage of proposal preparation, data collection and analysis to the preparation of reports in the form of publications.

REFERENCES

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