Education Pillar as a Community-Based Prevention Stunting During Covid-19 Pandemic

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ARTICLE INFO

Article history:
Received: 25th September 2021
Accepted: 6th June 2022
Published: 1st July 2022

Abstract

The high prevalence of stunting and poor environmental health conditions at Bengkulu and Kupang City, baseline the need for assistance to families to provide education on Community-Led Total Sanitation (CLTS). Through the implementation of the CLTS module science and technology, the purpose is to foster and empower CLTS cadre groups as family companions to educate about the 5 pillars of CLTS by increasing family knowledge, attitudes, and actions in preventing and overcoming stunting. The target audience is 40 families in Bengkulu and 40 families in Kupang City. Community Service activities were preceded by socialization with local governments and health workers, followed by training and coaching of cadres, and family assistance activities, by providing CLTS sanitation education for 4 months through home visits, assessed once a month. The results show that cadre training is effective in increasing the knowledge and attitudes of cadres. Family assistance activities are effective in increasing family knowledge, attitudes, and actions about CLTS in stunting prevention. Environmental health officers together with cadres need to improve programmed triggering activities, monitoring, and evaluation, as well as assistance for the community and local government advocacy to support the success of the CLTS implementation.

Keywords:


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INTRODUCTION

Community-Based Total Sanitation (CLTS) is a national program that seeks to improve public health and support the achievement of the targets Sustainable Development Goals (SDG’S) by 2030. There are five pillars of CLTS to improve public access to better environmental health, CLTS is also to improve the sustainability of a clean and healthy culture. CLTS is a community empowerment program with a triggering method to change clean and healthy living behavior. Triggering is done by facilitating the community to improve the health condition of the community's environment so that it can achieve an Open Defecation Free (ODF) condition with an indicator of 100% of the community having access to defecate in their latrine, in the environment, there is no human waste, and the community can maintain the cleanliness of the latrine (Kemenkes RI, 2014).

The purpose of implementing the CLTS Program is to reduce morbidity and mortality due to poor sanitation conditions and to encourage the realization of an independent and just healthy community (Kemenkes RI, 2014). Local governments such as the RT/Dusun/Kampung level have a role and important responsibilities in the implementation of CLTS to prepare the community for active participation. The village government is responsible for forming a team of village facilitators or cadres of CLTS triggers to facilitate community movements (Kemenkes RI, 2016). The results of monitoring and evaluation of CLTS program implementation in some areas are still not good, so efforts to implement CLTS are still needed (Davik, 2016; Foeh et al., 2019; Tuakong, 2020).

Analysis of the environmental health situation according to the results of the 2019 CLTS e-money, sanitation access for Indonesian people who have latrines is 77.07%, which means that around 25 million people still practice open defecation. National figures for 2014 show that only 44.17% achieved ODF from all regions that implemented CLTS. Bengkulu Province which has implemented the CLTS program since 2013 has only 52.41% achieved ODF while the City of Bengkulu with 9 sub-districts that have implemented CLTS only 43.27% achieved ODF (Marwanto et al., 2019). In the province of East Nusa Tenggara (NTT) There are still many NTT people who do not have access to proper basic sanitation, only 15% of the population has access to proper basic sanitation (Foeh et al., 2019). Data from the NTT Provincial Health Office shows that out of a total of 3,344 villages, only 66, 08% carry out CLTS, 27.24% of villages stop open defecation, 42.86% of the population has sustainable access to water that meets the requirements (East Nusa Tenggara Provincial Health Office, 2018).

Analysis of the situation of stunting prevalence in Indonesia during the period 2005-2017 an average of 36.4%. The 2010 Basic Health Research Reports, 2013, and 2018 show that the prevalence of stunting in Indonesia is a serious and serious problem, therefore the prevalence of stunting in several provinces is still higher than the WHO threshold (<30%). Indonesia with 34 provinces, as many as 13 prov-
inces including the prevalence of stunting in the severe category, and as many as 12 provinces including the serious category. The Basic Health Research Reports show that the prevalence of stunting in NTT Province is the highest (42.6% in 2018) and in the Sumatra Region, the prevalence of stunting in Bengkulu Province is the highest (Badan Penelitian dan Pengembangan Kesehatan, 2018).

Results of CS activities in Gapit Village, Empang District, showed that mentoring had a positive impact on changing people's behavior. There was a significant difference in increasing community knowledge, attitudes, and practices in defecation behavior before and after mentoring (Israjunna et al., 2020). Community Service (CS) activities in Sumbawa Regency found that the implementation of the CLTS program was influenced by various factors, the factors supporting the success of CLTS implementation were the availability of human resources, legal sanctions, and community participation. However, some factors hinder the success of CLTS implementation, namely financial resources and time resources (Purnama et al., 2019) Community assistance activities need to be carried out in the implementation of CLTS (Rumajar et al., 2019). In the community, there are supporting factors with the availability of human resources. environmental health at the Puskesmas and in the community, such as CLTS cadres and “jumantik” cadres who can be empowered. The empowerment of CLTS Cadres is expected to accelerate the success of the CLTS program.

The high prevalence of stunting and poor environmental health conditions in NTT and Bengkulu Provinces underlie the need for assistance to families to provide CLTS education. Through the Implementation of CLTS Module Science and Technology, the purpose of Community Service activities is to foster and empower CLTS cadre groups as family companions to educate about the 5 pillars of CLTS through increasing family knowledge, attitudes, and actions as an effort to prevent and control stunting. CS activities were carried out during the Covid-19 pandemic so that all stages of activities implemented health protocols with a combination of offline and online methods.

LITERATURE REVIEW

The incidence of stunting is caused by multiple factors, including lack of nutritional intake, maternal parenting regarding health and nutrition is not optimal, limited access to health services, limited access to nutritious food for families, and low family access to clean water and environmental sanitation. The government's efforts to reduce stunting prevalence are by implementing the CLTS Program. CLTS is an intervention that focuses on achieving total sanitation conditions in the community through changes in community hygiene behavior. The CLTS program aims to change the hygienic behavior of the community to achieve a state of total sanitation that runs by involving all components of the community. One of the efforts to overcome the problem of stunting is through community empowerment. CLTS program to change hygiene and sanitation behavior through community empowerment with the triggering method (Kemenkes, 2014).
Several research results prove the relationship between environmental sanitation and the incidence of stunting. The results of the literature study show that with various research design approaches there is a relationship between environmental sanitation and the incidence of stunting (Adzura et al., 2021). People who have access to the use of healthy latrines, access to clean water, and washing hands with soap in running water are protective factors against stunting in children in Indonesia. People who do not have access to clean water are a risk factor for stunting (Hasan & Kadarusman, 2019; Pertiwi et al., 2019; Ahmad & Nurdin, 2019; Lestari et al., 2014). The behavior of not washing hands with soap is a factor in the risk of stunting (Pertiwi et al., 2019; Ahmad & Nurdin, 2019; Nasrul, 2019; Soeracmad et al., 2019). Families who do not have healthy latrines are at risk of having stunted children (Hasan & Kadarusman, 2019; Pertiwi et al., 2019; Ahmad & Nurdin, 2019; Nasrul, 2019; Anggraini & Rusdy, 2019).

MATERIAL AND METHOD

Based on a situational analysis, this CS activity chose an alternative problem-solving method with the method of empowering CLTS cadres to assist families with problems in environmental health as an effort to prevent and control stunting. The target audience for the activity is environmental health problems, consisting of 80 families with 40 families in the Padang Serai Health Center work area, Padang Serai Village, Bengkulu City, and 40 families in the Pasir Panjang Public Health Center working area, Kupang City, who will be assisted in implementing the 5 CLTS pillars. The activity is carried out from August to December 2020.

The CS activity steps include

1. Preparation for
   a. Identification of environmental health problems in families in the CS activity area by conducting assessments and collecting data at the health center and community.
   b. Manage to license CS activities in the two target areas.
   c. Development of CLTS educational media in the prevention and control of stunting.
   d. Coordination with local government. Coordination with Environmental Health Officers and Community Health Center leaders to plan training and development activities for CLTS cadres and receive support for the implementation of activities.

2. Organizer. At the organizing stage, a CLTS cadre group was formed consisting of 10 people who were empowered to prevent stunting. The cadre group fosters and assists the target, namely families with environmental health problems during home visits. This team was accompanied by the Health Center Officer. Socialization and signing of commitments to support the implementation of CS activities between local governments, Community Health Center leaders, environmental health officers, and CLTS cadres.
3. CLTS Cadre Training and Development. Training and coaching of 10 CLTS cadres were carried out for 3 days to strengthen the role of CLTS cadres and increase the ability of cadres to provide family assistance. Measurement of the ability of CLTS cadres was carried out using a structured questionnaire. The training activities were carried out during the COVID-19 pandemic so that during the training activities, health protocols were applied. The discussion between the CS team and cadres was continued by discussing CLTS material in the What's App Group (WAG) and virtual (zoom meeting). The cadres fill out the questionnaire via the google form at the link https://forms.gle/9cYp8W6X1AWAZ5vA8.

4. Intervention. The next stage is 10 CLTS cadres to assist the target group of 80 families. Assistance media uses the CLTS module. Assistance is carried out through home visits for 4 months. Home visits are carried out at least once a month. Each CLTS cadre is responsible for assisting 8 families. A total of 80 families were assisted. During mentoring activities, cadres and the community are encouraged to apply health protocols by using masks and maintaining distance. The pretest and posttest questionnaires were filled out offline and online via the Google form at the link https://forms.gle/NEYfCCLee3ff4W1L9.

5. Intersectoral Coordination. At this stage, the community service team empowers the community by empowering the cadre group that has been formed. The team held an audience with the health center regarding the implementation of activities and coordinated related mentoring activities from the health center and the CS Team for the sustainability of the Stunting Free Village program. Coordination activities are carried out offline and online through WAG.

6. Monitoring and Evaluation. At this stage, monitoring and evaluation of activities in the target area are carried out by the monitoring and evaluation team. The activity continued with an offline meeting at the Puskesmas by implementing health protocols and limiting the number of participants, namely CLTS cadres and Health Officers to discuss follow-up plans.

7. Evaluation of Program Implementation and Success. Evaluation activities in the implementation of community service activities include:
   a. Evaluation of inputs, with indicators forming a group of CLTS cadres, identified 80 target families with environmental health problems, and available educational media for CS activities. Generated commitment to support the implementation of CS.
   b. Process Evaluation: active cadres participate in training and coaching activities in assisting in stunting prevention and control.
   c. Output Evaluation. An indicator of success is an increase in the knowledge, attitudes, and abilities of CLTS cadres and their families, and an agreed follow-up plan to go to a Stunting Free Village in Bengkulu City and Kupang City.
RESULT AND DISCUSSION

CLTS Cadre Training
cadres received training and coaching for 3 days to share perceptions and increase knowledge and attitudes about stunting prevention and control. The training also aims to strengthen the role of CLTS cadres and increase the ability of cadres to provide assistance to families with environmental health problems.

Table 1.
Changes in CLTS Cadre Behavior Before and After Training

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Before</th>
<th>After</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bengkulu</td>
<td>44.65±6.85</td>
<td>76.28±6.02</td>
<td>0.0001</td>
</tr>
<tr>
<td>Kupang</td>
<td>47.44±7.46</td>
<td>80.46±6.49</td>
<td>0.0001</td>
</tr>
<tr>
<td>p-value</td>
<td>0.556</td>
<td>0.321</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>46.04 ± 6.91</td>
<td>78.37 ± 6.13</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Before</th>
<th>After</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bengkulu</td>
<td>of 3.00±0.25</td>
<td>0.15 to 3.54</td>
<td>0.0004</td>
</tr>
<tr>
<td>Kupang</td>
<td>3.12±0.08</td>
<td>3.58±0.13</td>
<td>0.0001</td>
</tr>
<tr>
<td>p-value</td>
<td>0.347</td>
<td>0.667</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3.06±0.18</td>
<td>3.56±0.13</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action</th>
<th>Before</th>
<th>After</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bengkulu</td>
<td>58.0±4.47</td>
<td>76.0±15.0</td>
<td>0.034</td>
</tr>
<tr>
<td>Kupang</td>
<td>68.0±4.47</td>
<td>80.0±12.24</td>
<td>0.094</td>
</tr>
<tr>
<td>p-value</td>
<td>0.008</td>
<td>0.659</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>63.0±6.74</td>
<td>78.0±13.16</td>
<td>0.0001</td>
</tr>
</tbody>
</table>
Table 1 shows a significant increase in knowledge, attitudes, and actions of CLTS cadres before and after training. The description of the knowledge and attitudes of CLTS cadres before the training in the two target areas showed a homogeneous variation (p>0.05), while the action scores showed a difference in the scores of cadres in Bengkulu City and cadres in Kupang City (p<0.05). After the training activities, the knowledge scores, attitudes, and actions of CLTS cadres were homogeneous (p>0.05).

This CS activity shows that training can improve the knowledge and attitudes of cadres so that CLTS cadres can be empowered to assist families in the implementation of CLTS with health workers. A lot of scientific evidence and CS activities show that cadre training activities can increase knowledge, and improve positive attitudes and positive actions to implement health programs (Ayu et al., 2020; Patimah et al., 2020; Astuti, 2018). Health cadres and officers need to be continuously involved in coaching and training activities related to CLTS. Health workers play an important role in the implementation of CLTS, so it is necessary to increase knowledge about the concept and implementation of CLTS.

The results of the study in the Patamuan District found that the knowledge, attitudes, and roles of officers were still low in achieving the five CLTS pillars. The findings show that 45.1% of health workers with low knowledge of CLTS, 51% of health workers have a negative attitude towards CLTS, and more than half of respondents (52%) stated that health workers have little role in the implementation of CLTS (Gusmiati, 2017). Cadres CLTS together with workers' health will provide assistance to foster a desire to change, cadres and health workers motivate the community to achieve behavioral changes for better health, for example by providing alternative solutions to environmental health problems, helping to choose alternatives that will be implemented based on community decisions. The CLTS concept emphasizes sustainable behavior change efforts to achieve total sanitation conditions through community empowerment (Kemenkes RI, 2014).

Knowledge is a very important behavioral domain in the formation of action through attitude change. Attitude is not yet an action (open reaction) or activity but is still a closed action or reaction. Attitude is a square off to act or behave openly. To change an attitude into an open behavior there are several levels based on its intensity, namely receiving (receiving), responding (responding), appreciating and the highest level being responsible (responsible). At the level of attitude change, a person will try to realize his beliefs and dare to take risks from the decisions he will take. Attitude manifestations cannot be directly seen, but can only be interpreted beforehand from closed behavior. Attitude is showing readiness to react to objects in a certain environment as an appreciation of the object (Notoadmodjo, 2012).

Changes in Community Behavior

Table 2 shows an increase in family knowledge, attitudes, and actions regarding the 5 pillars of CLTS. The description of the family's knowledge, attitudes, and actions before CS was carried out in the two target areas showed a homogeneous variation (p>0.05). After the CS activity, family knowledge in
Bengkulu City was higher than family knowledge in Kupang City and was significantly different (p=0.004). After the CS activity, the increase in family attitudes and actions scores in Bengkulu City was higher than in Kupang City but the difference was not significant, meaning that family knowledge in the two regions was homogeneous.

The results of the CS activity show that community assistance activities by cadres in the community by providing CLTS education have succeeded in transferring knowledge and attitudes from cadres to the community with a good level of participation. There was a significant increase in knowledge before and after mentoring. This result is in line with the activities carried out in Pringgolayan Hamlet that counseling, training, and mentoring activities have a positive effect on increasing community knowledge (Musfirah et al., 2020). Efforts to provide knowledge to the community through STMB education by cadres are more acceptable and permanent, as evidenced by a significant change in knowledge improvement after 4 months of mentoring. The results of this CS activity are in line with the CS activity in Gapit Village, Empang District, which shows that there is a significant difference in the knowledge of the head of the family about defecation behavior before and after CLTS socialization (Israjunna et al., 2020).

### Table 2.

Changes in Community Behavior

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Before</th>
<th>After</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bengkulu</td>
<td>51.86±7.95</td>
<td>76.45±7.97</td>
<td>0.0001</td>
</tr>
<tr>
<td>Kupang</td>
<td>55.52±7.01</td>
<td>62.79±6.36</td>
<td>0.0003</td>
</tr>
<tr>
<td>p-value</td>
<td>0.988</td>
<td>0.004</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>53.69±7.67</td>
<td>69.62±9.93</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Before</th>
<th>After</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bengkulu</td>
<td>2.94±0.31</td>
<td>3.51±0.31</td>
<td>0.0001</td>
</tr>
<tr>
<td>Kupang</td>
<td>2.57±3.29</td>
<td>3.29±0.3</td>
<td>0.0001</td>
</tr>
<tr>
<td>p-value</td>
<td>0.286</td>
<td>0.931</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.76±0.36</td>
<td>3.40±0.28</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action</th>
<th>Before</th>
<th>After</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bengkulu</td>
<td>55.25±20.87</td>
<td>73.75±11.91</td>
<td>0.0001</td>
</tr>
<tr>
<td>Kupang</td>
<td>33.00±11.59</td>
<td>61.75±9.02</td>
<td>0.0001</td>
</tr>
<tr>
<td>p-value</td>
<td>0.504</td>
<td>0.715</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>44.12±20.16</td>
<td>67.75±12.11</td>
<td>0.0001</td>
</tr>
</tbody>
</table>
Human knowledge is obtained through education, the experience of others, the mass media, and the environment. Knowledge is a behavioral domain that is very important for the formation of one's actions. To change behavior through increasing knowledge, an effort to convey information is needed either directly or indirectly through communication media. Efforts to change behavior in addition to using power, discussion and participation also require efforts to provide information (Notoadmodjo, 2012). The distribution of educational materials in the form of modules and materials through WAG is effective in increasing public knowledge.

Community assistance for 4 months is also effective in increasing community attitudes toward CLTS implementation. In line with CS activities in Gapit Village, Empang District, it shows that there is a significant difference in the attitude of the head of the family towards defecation behavior before and after socialization and CLTS assistance. The triggering process can make change the attitude of response to open defecation behavior. Activities are carried out with the local community to seek assistance from several institutions in building healthy latrines in their environment (Israjunna et al., 2020). For attitudes to turn into real actions, several supporting factors are needed, including support and facilities. A person's attitude is a closed response to a certain stimulus or object that will involve the person's emotional factors (Notoadmodjo, 2012).

In this CS activity, there were also changes in community actions before and after 4 months of mentoring, both through offline and online assistance with WAG. The improvement in community action is influenced by increasing community knowledge and attitudes. The results of the study prove that there is a significant relationship between knowledge and attitudes toward CLTS actions (Marwanto et al., 2019). Good knowledge about health will be directly proportional to health behavior. The better a person's level of knowledge, the better the level of understanding and attitudes of people, so that an increase in one's knowledge, understanding, and attitude will be applied in the form of good behavior as well. This shows that it is important to increase one's health knowledge so that one's health behavior is also getting better (Qudsiyah, 2015). The results of this activity indicate the need for continuous CLTS education so that public knowledge, attitudes, and actions about CLTS become permanent behavior.

CLTS has the basic principle of being able to support the success and sustainability of community environmental health behavior. The focus of the CLTS process is more on triggering changes in community environmental health behavior than on building facilities. This triggering process is triggered by facilitators from within or outside the community and is concentrated on the whole community collectively. The benefits of this collective system will be able to stop the habit of open defecation because people will feel ashamed, feel disgusted, feel afraid of getting sick, and have low self-esteem. CLTS prioritizes social solidarity, does not prioritize subsidies, and does not provide a latrine model. An important element of CLTS is mutual assistance and cooperation between households in the community.
(Evans & Mara, 1967). CLTS is expected to be the basis for the importance of environmental health workers increasing programmed triggering activities, monitoring, and evaluation, as well as assistance for people who have not yet implemented CLTS and advocacy to local governments to support the success of the CLTS program (Widyanti, 2018).

Community assistance in the implementation of CLTS is carried out to strengthen public awareness about the commitment to collective behavior change. To realize a good CLTS implementation, and to prevent stunting, awareness efforts are needed public. Environmental Health Workers at the Puskesmas actively carry out monitoring and evaluation activities for the implementation of CLTS, providing assistance, monitoring, and evaluation on an ongoing basis, especially for people who have problems with environmental health. Support from local government and village officials is needed to make and establish regulations in the form of village regulations governing the implementation of CLTS in the community. Religious leaders are also involved in helping to make people aware of the importance of implementing CLTS according to religious teachings, especially for people who are still having problems implementing the 5 pillars of CLTS.

CONCLUSIONS AND RECOMMENDATION

Training and Development of CLTS Cadres can increase the knowledge and attitudes of 10 CLTS cadres about the 5 Pillars of CLTS for stunting prevention and control. stunting management. The model of family assistance activities by empowering CLTS cadres can be continued and implemented in other locations so that CLTS cadres can provide education and assistance in implementing the 5 CLTS pillars. Local governments together with other partners empower CLTS cadres to assist target groups of families with environmental health problems so that stunting-free villages can be realized by improving environmental health. Educational institutions need to increase stunting prevention and control movements through environmental health.

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