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RESEARCH ARTICLE

Strengthening Communication: A Strategy to Increase Community Satisfaction in Stunting Services in Indonesia

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Abstract:

Introduction:

The Indonesian government has prioritized stunting management programs, but until 2022 the prevalence of stunting is still high.

Objectives:

The purpose of this research is to develop a strategy to increase community satisfaction with stunting services oriented toward strengthening communication.

Methods:

This is a cross-sectional design research with data collected from a sample population of 298 mothers who have stunted children through a survey and analyzed using path analysis with SEM-PLS.

Results:

The result showed that communication affects stunting service facilities and sanitation management with a P-value of 0.000, respectively. Communication does not directly affect stunting service satisfaction, it is moderated by the variables of facilities and sanitation, which play a role in strengthening or weakening the effect of stunting service satisfaction. An essential factor that can be used to produce optimal stunting service satisfaction is strengthening communication.

Conclusion:

Strengthening communication between regional institutions at the Regency level synergistically supports the provision of the required facilities, thereby increasing community satisfaction. Furthermore, strengthening cross-sectoral communication synergistically in managing environmental sanitation supports stunting service programs. This research contributes to the government's emphasis on stunting service policies to strengthen communication between service providers and cross-sectoral communication.

Keywords: Stunting, Stunting services, Cross-sectoral communication, Interpersonal communication, Sanitation, Facilities.

Article History

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1. INTRODUCTION

In Indonesia, stunting or nutritional disorders in children are considered problems nationwide, with a 20% and 24.4% prevalence in 2018 and 2021 [1]. The occurrence of this deficiency in growth in children aged five years is due to chronic micro and macronutrient deficiencies. According to a

2018 report by the Ministry of Health, malnutrition is experienced by babies from the womb till they are born [2, 3]. The category of stunted children is determined based on their length or height on age in accordance with WHO (World Health Organization) standards, where the z-score is less than 2 SD median growth chart [4]. Stunted children risk metabolic disorders, failure to grow and develop, impaired intelligence, and low productivity in adulthood.

In 2019, a total of 144 million stunted children were

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recorded in several other developing countries besides Indonesia, with the highest prevalence of those less than five years found in Madagascar. The results showed that children living in villages are more likely to experience stunting than those in cities [5].

The research on stunting intervention conducted by Soofi *et al.* [6] using a social and behavior change communication strategy with a 12 months duration found the differences between the intervention and control groups who were given communication treatment to change behavior. The limitation of this research is that it does not describe the form of behavior change and communication strategy intervention given. However, it focuses on actions such as regulating nutritious food, monitoring the first 100 days of pregnancy, and using communication as a tool to convey the program. The advantage of this research is that the intervention program successfully reduced stunting through modification of the health program, where socialization is conducted using a social communication science approach. Communication is a transfer of knowledge through reciprocal interaction between the government and the community, which allows both parties to participate in policy creation and implementation. The government must increase access to health services with the best technology [7].

According to Phuong [8], health service satisfaction is determined by four factors, including 1) transparency of procedures and information, 2) facilities and equipment, 3) attitude and capacity of health workers, as well as 4) service results. The highest satisfaction is found in doctors' communication attitudes toward patients and the capacity of health workers [8]. Transparency of procedures and information needs to be properly socialized hence health programs can be accepted by the community [9, 10]. Socialization involves the role of public communication in the health sector, which can provide change and improve health quality. Service quality has an influence on community satisfaction. The skill and reliability of officers providing services have a higher level of satisfaction [11].

The maternal and child nutrition health program is carried out to address cases of malnutrition and growth failure in children. The program aims to 1) provide supplementary food, 2) strengthen promotion and health services, as well as 3) perform behavior change communication [12]. This research emphasizes the three constituents of the above program to overcome stunting positively and significantly. However, it does not explain the form of strengthening health service promotion using a communication strategy.

Based on the empirical data, the novelty of this research is to increase community satisfaction with stunting services through a combination of social communication and public health theories. The combination of these two disciplines can build an effective strategy to support the stunting reduction acceleration program promoted by the Indonesian government over the past four years. However, the prevalence of stunting is still high to date hence it is necessary to determine the various aspects that play an essential role in increasing community satisfaction with stunting services in Indonesia.

For 4 years, the Indonesian government has prioritized

stunting management programs, but until 2022 the prevalence of stunting is still high, so it is necessary to study aspects that play an important role in increasing community satisfaction with stunting services in Indonesia. The research limitation is how to increase community satisfaction with stunting services in Indonesia. The research objective is to find the right strategy to increase satisfaction with stunting services in Indonesia.

The novelty of this research is to formulate a strategy to increase community satisfaction with stunting services by strengthening interpersonal and cross-sectoral communication, which has not been carried out by other studies. The strategy was developed using the service satisfaction model which was modified from research results by Phuong [10], Leroy [12], and Sisdiyantoro [11]. The combination of the 3 concepts above was formed into a model of stunting service satisfaction which was identified as being influenced by 5 factors: characteristics, communication, distance, facilities, and sanitation.

The theory underlying these variables is put together into a model referring to the service satisfaction model [10] information transparency and service procedures support public acceptance of health programs. The skills and reliability of service providers influence satisfaction [11]. Stunting cases in Ethiopia are related to environmental factors such as water and sanitation [13].

Communication does not directly affect service satisfaction but is moderated by the variables of facilities and sanitation, which play a role in strengthening the influence on service satisfaction. One way to improve service quality is to conduct a satisfaction survey. Satisfaction surveys are not only a tool for assessing the accreditation of health institutions but can be used to improve governance [14, 15]. It is important to assess satisfaction with health services to determine the follow-up steps needed to increase satisfaction with health services [16].

2. METHODS

2.1. Research Type and Design

This is quantitative research because data were collected from a sample representing a large population in the community from March to July 2022. The survey research method was used due to its ability to describe the characteristics of the population in the community, such as age, education, and gender [17]. The cross-sectional design and data collection processes were carried out systematically to obtain appropriate information for the survey research.

2.2. Population, Sample, and Data Collection Techniques

The population consists of mothers with stunted children ($N = 1.740$). The target population was 976 mothers with stunted children, spread over 25 villages that were reached by researchers. A total of 470 samples did not meet the inclusion criteria that is: not at the location at the time of the study, not willing to be research respondents, and children aged over 6 years. A total of 506 respondents met the inclusion criteria. The sample size was 298 respondents based on calculations using the Slovin formula. The sample criteria were determined: 1) willing to be a research sample until it was completed. 2) mothers with stunted children aged 5 years. 3) live and stay for

2 years or more in the research area. 4) Mother and child were not sick at the time of the study. 5) have received stunting services in the last 6 months. Sample selection using a random sampling technique. Sample size determination flow chart (Fig. 1).

2.3. Variables and Data Analysis

A total of six variables were studied in this research, including respondent characteristics, communication, distance to the integrated service post, facilities, environmental sanitation, and satisfaction with stunting services. The characteristic variable consists of 3 indicators, namely age (X1.1), education (X1.2), and occupation (X1.3). The communication variable was measured using 2 indicators, namely: verbal communication (X2.1) and non-verbal communication (X2.2). Previous researchers analyzed satisfaction with the communication of health service providers in Kuala Lumpur. The results showed that higher satisfaction was influenced by communication style [18]. Communication in the form of empathy for health workers (doctors) is shown in verbal and nonverbal forms [19].

The communication in question is communication between health service providers at the integrated service post and the community (parents who have stunted children). In Indonesia, officers who serve the community at integrated service posts are health workers, such as nurses, village heads, village, sub-district, and district governments. Communication is measured using a questionnaire. Mothers who have stunted children who receive services at the integrated service post are given a questionnaire to assess verbal and nonverbal communication made by health service providers during the implementation of the integrated service post. What kind of activity was attended by the district administration? Did the respondent see the involvement of village officials? What is the intonation of the voice? how clear is the information? Nonverbal communication in the form of attitudes such as friendliness, and courtesy refers to previous research [20].

Facilities are measured by 2 indicators, namely: first-rate health facilities (Y1.1) and clean water facilities (Y1.2). The variable facilities referred to by the author are health service

facilities and clean water facilities available in the respondent's residence. This indicator refers to the national intervention of the Ministry of Health of the Republic of Indonesia, the handling of stunting in Indonesia emphasizes fulfilling nutritional intake, improving parenting, increasing access to health service facilities, and increasing access to clean water [1].

The environmental sanitation referred to by the author is the existence of latrines, sanitation of latrines, and community trash where the respondent lives. Environmental sanitation is measured by indicators: the presence of latrines (Y2.1), latrine sanitation (Y2.2), and household waste (Y2.3). The water and sanitation variables in this study are in accordance with the results of research [13] and the Ministry of Health [1]. Stunting service community satisfaction is measured by 3 indicators, namely: ease of service (Y2.1), schedule accuracy (Y2.2), and responsibility of stunting service officers (Y2.3). Variable categories based on 3 categories: 1). Minimum score – (less than mean – SD). 2). mean – SD < X < mean + SD. 3). Mean - SD < X < mean +SD.

The characteristics were analyzed using frequency distribution. Furthermore, path analysis tests the research hypothesis using an SEM-PLS with a p-value less than 0.05 and a T-statistic greater than 1.96. The hypotheses proposed in this research are as follows:

- H1: Characteristics influence community satisfaction with stunting services
- H2: Communication affects health facilities
- H3: Communication affects environmental sanitation
- H4: Distance has an impact on community satisfaction with stunting services
- H5: Facilities have an impact on community satisfaction with stunting services
- H6: Environmental sanitation affects community satisfaction in stunting services

The hypothesis was developed from some of the literature that has been carried out by previous researchers Phuong [10], Sisdiyantoro [11], Kwami [13], and Qin [16].

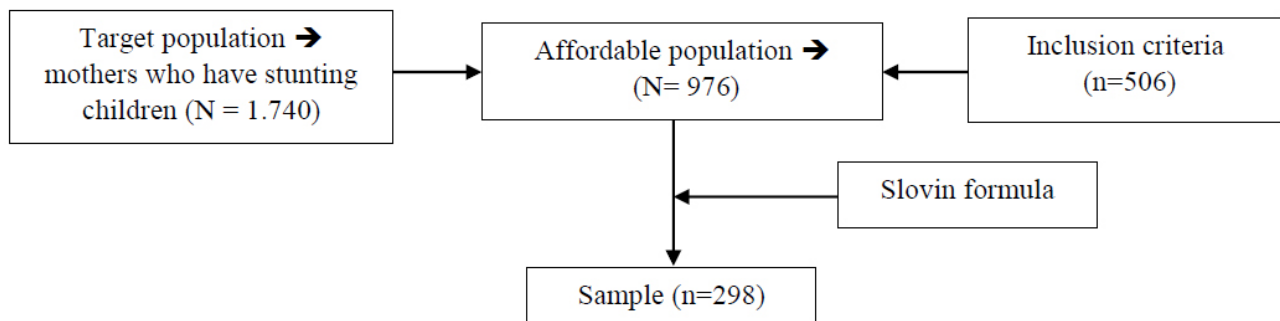


Fig. (1). Flowchart of the research sample.

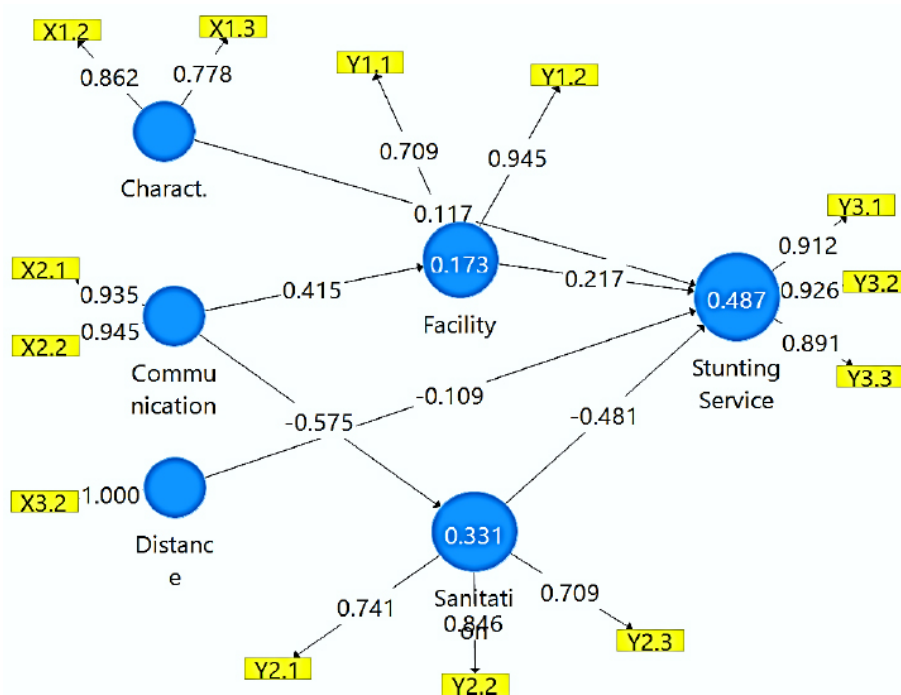


Fig. (2). Analysis of variable indicators.

3. RESULTS

The data collected were then analyzed according to the research objectives and displayed in tables and figures. The characteristics of the respondents are shown in Table 1.

Based on Table 1, a total of 189 or 63.4% of respondents are aged 30 – 42, 94 or 31.5% have an elementary school education and 256, or 85.9% do not work.

Fig. (2) shows the measured indicators with construct variables, and those with a loading factor above 0.7 were declared valid. The analysis results illustrated that the indicators used to measure the characteristics variable consist

of age (X1.1), education (X1.2), and occupation (X1.3), with loading factors of 0.544, 0.862, and 0.778. However, age (X1.1) has the lowest loading factor, which makes it unable to measure the characteristics variable hence it is eliminated accurately.

The communication variable is measured using two indicators, namely verbal (X2.1) and non-verbal (X2.2) communication, with loading factors of 0.935 and 0.945, respectively. The distance to the integrated service post variable is measured with a loading factor of approximately 1.000, therefore both indicators are declared valid.

Table 1. Characteristics of respondents (n=298).

Characteristics	Frequency (f)	Percentage (%)
Age (years)		
17 – 29	90	30.2
30 – 42	189	63.4
43 - 55	19	6.4
Education		
No school	6	2.0
Elementary school	94	31.5
Junior High school	66	22.1
Senior High School	113	37.9
Diploma III/Undergraduate	19	6.4
Occupation		
Not working	256	85.9
Working	42	14.1

Source: primary data, July 2022

Table 2. Pathway analysis of hypothesis test.

Hypothesis	Path Analysis	Mean	STDEV	T-statistic	P-value
H1	Characteristics -> community satisfaction	0.113	0.048	2.442	0.015
H2	Communication -> health facilities	0.420	0.080	5.165	0.000
H3	Communication -> environmental sanitation	- 0.575	0.059	9.689	0.000
H4	Distance -> community satisfaction	- 0.100	0.047	2.349	0.019
H5	Facilities -> community satisfaction	0.227	0.067	3.251	0.001
H6	Sanitation -> community satisfaction	- 0.481	0.066	7.329	0.000

Source: primary data, July 2022

The facilities variable is measured by first-rate health (Y1.1) and clean water (Y1.2) facilities with loading factors of 0.709 and 0.945, respectively. Therefore, both indicators are declared valid to measure the construct of the facilities variable.

The environmental sanitation variable is measured by latrines (Y2.1), latrine sanitation (Y2.2), and household waste (Y2.3) with loading factors of 0.741, 0.846, and 0.709, respectively. It is concluded that these three indicators accurately measure the environmental sanitation variable.

The community satisfaction with stunting services variable is measured by ease of service (Y2.1), schedule accuracy (Y2.2), and the responsibility of stunting service officers (Y2.3) with loading factors of 0.912, 0.926, and 0.891, respectively. It is concluded that the three indicators are declared valid to measure the construct of the community satisfaction with stunting services variable (Table 2).

The research hypothesis test is declared significant and accepted if the *P* and T-statistic values are less than 0.05 and more than 1.96. The hypotheses test results are shown as follows:

H1: Characteristics influence community satisfaction with stunting services. The *p*-value is 0.015, smaller than 0.05, and the T-statistic is 2.442, greater than 1.96, hence the hypothesis is accepted.

H2: Communication affects health facilities because the *p*-value is 0.000, smaller than 0.05, and the T-statistic is 5.165, greater than 1.96, thereby the hypothesis is accepted.

H3: Communication affects environmental sanitation because the *p*-value is 0.000, smaller than 0.05, and the T-statistic is 9.689, greater than 1.96, therefore, the hypothesis is accepted.

H4: Distance affects community satisfaction with stunting services because the *p*-value is 0.019, smaller than 0.05, and the T-statistic value is 2.349, greater than 1.96, leading to the acceptance of the hypothesis.

H5: Facilities affect community satisfaction with stunting services because the *p*-value is 0.001, smaller than 0.05, and the T-statistic is 3.251, greater than 1.96, resulting in the acceptance of the hypothesis.

H6: Environmental sanitation affects the quality of stunting services because the *p*-value is 0.015, smaller than 0.05, and the T-statistic is 2.442, greater than 1.96, hence the hypothesis is accepted.

The communication variable has a direct effect on facilities but does not directly affect satisfaction. The satisfaction of research respondents with stunting services was not directly influenced by communication variables but was moderated by facilities and sanitation variables. Facilities contributed 17.3% and sanitation contributed 33.10% based on the coefficient of termination. The overall satisfaction of respondents with stunting services from the model is 48.7% influenced by the variable characteristics, facilities, distance, and environmental sanitation. A total of 51.3% were influenced by other factors outside the variables studied.

The strategy that is built from the model has a strength of 48.7%, which means that community satisfaction is influenced by 48.7% of the variable characteristics, communication, the distance of health services, facilities, and sanitation management. As much as 51.3% is influenced by other variables such as education, schedule accuracy, nutritional intervention, and others.

4. DISCUSSION

The path coefficient explains the direct effect of the independent variable on the dependent variable. Hypothesis 1 results of the path coefficient test value of 0.117 indicating the positive direction of the respondent's characteristics has a direct effect on stunting service satisfaction. As shown in the method section the characteristic variable is measured by 3 indicators, but only 2 indicators are declared valid, namely education indicators (X1.2) and employment (X1.3). This result means that the educational and occupational characteristics of the respondents have a direct effect on parental satisfaction with stunting services. Parents who are highly educated tend to be more satisfied with stunting services. Likewise, parental satisfaction with stunting services will increase if the parents' work is getting better.

Health services must prioritize community satisfaction at the integrated service post level to reduce stunting prevalence easily, if community satisfaction is met, it will be easier to achieve the target of reducing stunting prevalence. Communication positively affects health facilities and has an indirect effect on increasing community satisfaction with stunting services.

Previous research stated that patient satisfaction with health services is a major influential factor in low- and middle-income countries. This attribute increases due to a rise in the interaction between service providers and patients [21, 22]. Communication is an interaction between service providers and recipients, making it easier to achieve organizational goals. Its

basis is building interpersonal, intrapersonal, external, and internal relationships [23].

Estaswara [24] stated that communication can reduce conflict, and when it is effective, it continuously creates an environment capable of improving work quality. Communication also affects satisfaction with stunting services through facilities and sanitation variables. Sanitation is one of the community factors that causes stunting based on the WHO concept [3]. On average, 47.5% of children who are stunted are related to drinking water facilities, which have a significant *p*-value of 0.001 [13].

Satisfaction is influenced by the quality of health services, including aspects of physical evidence, reliability, responsiveness, assurance, and empathy. According to Sisdiyantoro & Minarni [11], the service quality expected from health workers includes abilities, skills, and knowledge. Other studies stated that services at government offices are less friendly to receive public visits, and a lack of responsiveness makes people unsatisfied [20].

Cross-sectoral communication is one of the effective strategies used to provide the necessary facilities for stunting services. Tarjo [21] stated that facilities are essential elements of service needed to achieve patient satisfaction. Dimensions of service quality Health is a framework of thinking that can be used in analyze service quality problems health that is being faced and then looking for a solution needed to get over it [25, 26].

Communication affects environmental sanitation, where regular socialization and education improve the quality of a healthy environment. The oral ability and attitude of health workers in conveying information and explanations facilitate the community's understanding hence their attitude and behavior support the role presented. Nur [27] and Gamboa *et al.* [28] stated that social interaction is manifested in an attitude of empathy. Strengthening empathy in communication is essential for health service providers and patients. Communication in the form of empathy for health workers is shown in verbal and nonverbal forms [19].

Sanitation affects community satisfaction because it is one of the causes of stunting, along with home environment factors and unavailability of access to clean water [2, 3, 29]. Fadiyah *et al.* [30] stated that personal hygiene, environment, and sanitation are some factors preventing children from infectious diseases capable of reducing nutrient absorption. In Bangladesh, stunting control prioritizes environmental management and child nutrition interventions [31]. Its services cover all aspects responsible for its existence, reducing its possible occurrence. Water sanitation is one of the community factors that causes stunting based on the WHO concept [3]. On average, 47.5% of children who are stunted have a relationship with drinking water facilities which has proven to be significant, with a *p*-value of 0.001 [13].

Another aspect of community satisfaction is the distance between the service and the community's house. The farther the distance that needs to be traveled by the community to obtain services, the more difficult it is to come to the integrated service post. Most integrated service post locations are not far

from the community's house. Information on its implementation is conveyed by village officials, health cadres, workers, and WhatsApp social media. Good service prioritizes community satisfaction, as stated by previous studies that customer satisfaction assessment improves service quality [32].

Communication can be carried out verbally and non-verbally. The use of communication media is also effective in promoting the community's awareness and attention hence they are involved in health programs. Anwar *et al.* [29] stated that the use of media in overcoming health problems can provide awareness for the community to be better. Therefore, this strategy is developed using a combination of social and health sciences. Communication *via* Targeted Client Communication (TCC), containing information, reminders, and motivation for pregnant women to check their pregnancy, has been proven effective in increasing their attendance [33, 34]. Prasetyo *et al.* [35] stated that innovation communication had been widely carried out by policymakers hence positive interactions are established where the leadership role promotes the cooperation of all parties.

This research shows that communication plays an essential role in the success of health programs. Policymakers need to know the needs and factors that can provide satisfaction to the community so that the health service system can be evaluated and of good quality [36]. The weakness of the government in implementing health programs so that health programs do not run effectively in the long term due to weak interactions between institutions [37].

Parents' satisfaction with the services provided motivation for other parents as well to regularly bring their children to visit integrated service posts to get services in the form of guidance, counseling, and monitoring of child growth. Previous studies evaluating user satisfaction with health services had an impact on increasing public trust in health services and increasing community welfare [16]. Continuous improvement of health service procedures has a positive impact on service quality [38]. Communication establishes interaction between individuals, verbal communication is a form of communication in the form of words. Nonverbal communication is the form of physical touch, or actions when angry, slamming a book, smiling when happy, and others [39].

The limitation of the research is that the strategy model that was compiled only measured community satisfaction with stunting services and had not measured the quality of stunting services, so the results of this study did not provide a conclusion on the quality of stunting services. Although satisfaction is one indicator of service quality. On the other hand, the strategy drawn up emphasizes the strengthening of inter-sectoral communication, which is expected to provide services that can provide the papacy to the community.

CONCLUSION

Based on the findings of this study, this research provides recommendations for actionable steps for health workers and health cadres at integrated service posts to provide the best service, meeting the criteria of quality service, ease of providing services, and timely and high responsibility.

The role of communication has a positive effect on health facilities and environmental sanitation. For instance, strengthening communication between regional institutions at the regency level synergistically supports the provision of the required facilities to increase community satisfaction. Furthermore, strengthening cross-sectoral communication synergistically in managing environmental sanitation supports the stunting service program. Communication has an indirect effect on increasing community satisfaction with stunting services. Good interaction between service providers and recipients makes it easier to achieve goals.

This research provides practical benefits for all government institutions, such as local governments, health offices, community health centers, and integrated service posts, to build interpersonal and intrapersonal communication. This leads to an increase in service quality which invariably raises community satisfaction. Effective communication continuously creates an environment that can improve work quality. Communication between government agencies plays an important role in dealing with health issues. This can be carried out by determining the same indicators in solving health problems, such as stunting, which is currently the focus of the government from the center to other regions.

The quality of stunting services at integrated service posts, which is oriented toward strengthening communication between health workers and cross-sectoral communication, positively impacts increasing satisfaction. It builds public trust and enables the community to play an active role in supporting programs to accelerate the reduction in stunting prevalence and stunting elimination in Indonesia.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The data collected using a questionnaire determined its validity and reliability. This research has received a permit from the Ethics Commission of the Faculty of Medicine, Islamic University of North Sumatera Number: 269/EC/KEPK.UISU/VI/2022 has been declared feasible based on seven WHO standards.

HUMAN AND ANIMAL RIGHTS

No animals were used in this research. All procedures performed in studies involving human participants were in accordance with the ethical standards of institutional and/or research committees and with the 1975 Declaration of Helsinki, as revised in 2013.

CONSENT FOR PUBLICATION

Informed consent was obtained from all participants.

STANDARDS OF REPORTING

STROBE guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The data supporting the findings of the article is available in the google drive at <https://tinyurl.com/39bsndy8>.

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None.

CONFLICT OF INTEREST

The authors declare no conflict of interest financial or otherwise.

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Declared none.

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