



The Impact of Education towards Mother's Knowledge About Stunting Prevention Using Moringa Oleifera in Kuan Noel Village, Fatumnasi District, South Central Timor Regency

Irlin Falde Riti¹, Emanuel Suban Bala Lewar

¹Nursing Profesion Study Program STIKes Maranatha Kupang
Baumata Barat, Taebenu, Kupang, Nusa Tenggara Timur
Email : irlinriti@yahoo.co.id

Abstrak

Salah satu permasalahan gizi yang dihadapi dunia adalah masalah anak pendek (*stunting*). *Stunting* merupakan kondisi gagal tumbuh dan masalah gizi kronis yang disebabkan oleh asupan gizi yang kurang akibat pemberian makan yang tidak sesuai dengan kebutuhan dalam jangka waktu yang lama. *Stunting* dapat dicegah dengan meningkatkan pengetahuan mengenai pencegahan *stunting* dengan mengonsumsi *moringa oleifera* (kelor). Penelitian ini bertujuan untuk mengetahui pengaruh edukasi terhadap pengetahuan ibu tentang pencegahan *stunting* dengan *moringa oleifera*. Desain penelitian ini adalah desain penelitian eksperimen semu (*quasi experiment*) dengan rancangan *non equivalent control group* dan terdiri dari dua kelompok; 30 ibu sebagai kelompok perlakuan dan 30 ibu sebagai kelompok kontrol. Teknik pengambilan sampel yang digunakan adalah teknik *consecutive sampling*. Hasil penelitian menunjukkan bahwa terdapat perbedaan rerata yang bermakna pada skor pengetahuan sebelum dan setelah intervensi pada kelompok perlakuan ($p=0,000$), dan tidak ada perbedaan yang signifikan pada kelompok kontrol ($p=0,184$). Analisis statistik menggunakan *independent sample t test* menunjukkan edukasi berpengaruh signifikan meningkatkan pengetahuan ($p=0,000$). Ada pengaruh edukasi terhadap pengetahuan ibu tentang pencegahan *stunting* dengan *moringa oleifera*.

Kata Kunci : edukasi; pengetahuan ibu; *moringa oleifera*

Abstract

One of nutritious problems susceptibly encountered in the world nowadays is kid's *stunting*. *Stunting* is a failure of growth condition and cronical nutritious problems caused by poor nutritious supply because of improper meal provisions in long term growth consumptions. *Stunting* could be primarily prevented by increasing knowledge about *stunting* prevention through consuming *moringa oleifera* regularly. This study is intended to know the impact of education towards mother's knowledge about *stunting* prevention through regular *moringa oleifera* consumption. This research applied a *quasi experimental design* by generating *non equivalent control group* which complied two groups; 30 subjects (mothers) were considered as treatment group; whereas, other 30 subjects (mothers) were taken as control group. Thus sampling technique applied was *consecutive sampling*. The study showed that there was a significant impact on education score after intervention towards the treatment group ($p=0,000$); whereas there was no significant difference on the control group ($p=0,184$). The statistical analysis applied was *independent sample t-test* which showed that education was significantly impacted the increase of mother's knowledge ($p=0,000$). It means that education had impact towards mother's knowledge about *stunting* prevention using *moringa oleifera*.

Keywords : education; mother's knowledge; *moringa oleifera*

Article info:

Article submitted on April 30, 2020

Articles revised on September 1, 2020

Articles received on October 27, 2020

DOI: [http://dx.doi.org/10.21927/jnki.2020.8\(3\).206-215](http://dx.doi.org/10.21927/jnki.2020.8(3).206-215)

INTRODUCTION

One of the nutritional problems facing the world is stunting. Stunting is a condition of failure to thrive and chronic malnutritional caused by insufficient nutritional intake due to feeding that is not in accordance with the needs for a long time (1). Stunting is a problem because it is associated with an increased risk of illness and death, suboptimal brain development so that motor development and mental growth are inhibited. The indicator used to identify stunting children is based on the height index according to age (height/age) according to the WHO (World Health Organization) Child Growth Standard with the stunting criteria if the H/A score is <-2 Standard Deviation (SD) (2).

People do not realize that stunting is a problem because in society, stunting children are seen as children with normal activities. Unlike a thin child who must be overcome immediately. The term stunting is not well known by the public. They consider stunting as a hereditary factor and not a health problem (3). The incidence of stunting in children is one of the global nutritional problems. The incidence of stunting in children is more common in developing countries. Indonesia is one of the developing countries with a high prevalence of stunting (2).

According to WHO data, an estimated 162 million children under five were stunted in 2012, 56% living in Asia and 36% in Africa (4). The 2014 Global Nutrition Report shows that Indonesia is among 17 countries out of 117 countries that have nutritional problems, namely stunting in children under five (4). Indonesia is the country with the fifth highest stunting prevalence in the world with a percentage of 37% after Nigeria and Pakistan (5).

Based on Basic Health Research (Riskesdas) in 2013, the percentage of nutritional status for short and very short toddlers in Indonesia is 37.2%. When compared to 2010 (35.6%) and 2007 (36.8%), it does not show a significant decrease or improvement. Riskesdas in 2018 showed the percentage of stunting in Indonesia had decreased to 30.8% but was still far from the WHO threshold of 20% (5). The highest percentage in 2013 was in the Province of East Nusa Tenggara (51.7%). In 2015, the Ministry of Health (Kemenkes) implemented Nutritional Status Monitoring (PSG) which showed that 29% of Indonesian children under five were in the short category with the highest percentage in East Nusa Tenggara Province. The results of the 2018 Riskesdas shows the percentage of stunting in the Province of East Nusa Tenggara was 42.6% or decreased by 9.1% when compared to the 2013 Riskesdas. Even though it had decreased by 9.1%, East Nusa Tenggara remains the province with the highest stunting prevalence in Indonesia.

Based on Riskesdas 2013 data and 2013 TNP2K data, the South Central Timor Regency is included in 15 districts/cities with the highest stunting prevalence, namely 70.4% (6). The 2018 Riskesdas data shows that the stunting rate in South Central Timor Regency in 2018 (53.4%) was smaller than in 2016 (57.3%), but remains a priority district for national stunting handling and in 2019 it was included in 160 districts/cities which become priority in national stunting handling.

Based on data from the Fatumnasi Health Center, the percentage of toddlers who experienced stunting in 2017-2018 for Kuan Noel

Village was 45.96%. Based on the results of initial interviews conducted on March 5, 2019 with 10 women in Kuan Noel Village, Fatumnasi District, South Central Timor Regency, respondents said that they lacked information about stunting and preventing stunting by moringa oleifera.

According to a study by UNICEF (United Nations Emergency Children's Fund) Indonesia, there are various obstacles that cause the high rate of stunting, one of the main obstacles is inadequate knowledge. Prevention and management of stunting is carried out by increasing maternal knowledge. Education is part of health education activities which are defined as a planned effort to train client skills or increase client knowledge (7). Education is one of UNICEF Indonesia's recommendations to alleviate the problem of stunting and it is effective in increasing knowledge (1). Stunting can also be prevented by increasing knowledge about stunting prevention by consuming moringa oleifera (Moringa).

Moringa plants have various benefits, but there are still many people who do not know about them and are only used as hedges or forage plants and are more associated with the mystical world (8). Moringa leaves have a high protein content of 6.7 g / 100 g and calcium 440 g / 100 g. Moringa leaves also contain various amino acids such as methionine which are rarely found in other vegetables. The results of Nabilla's research (2018) state that the highest nutritional content is in moringa which is a food ingredient that is high in nutrients such as protein and calcium needed by stunting children (9).

The results of modern scientific research prove that Moringa leaves are a source of vegetable food which is rich in nutritional content of carbohydrates, protein, vitamins and minerals, so one of the prevention and treatment of stunting is to add Moringa leaves to the food to be consumed. The high concentration of protein, minerals and various vitamins and amino acids in

Moringa leaves makes pregnant women, nursing mothers and children get ideal nutritional needs (10).

According to WHO standards, the amount of nutritional content in Moringa leaves meets the daily nutritional needs of children by 42% protein, 125% calcium, 61% magnesium, 41% potassium, 71% iron, 310% vitamin A, and 22% daily vitamin C needs, and the needs of pregnant women are 21% protein, 84% calcium, 54% magnesium, 22% potassium, 94% iron, 162% vitamin A, and 9% daily vitamin C needs (11).

The moringa oleifera plant has many benefits, seen from the leaves that it can be useful as a stimulant for breastfeeding and nutrition as complementary foods (19), nutrition for toddlers in their infancy (20). Another study concluded that the leaf powder of moringa oleifera or moringa has a positive effect on preventive and curative malnutrition in infants, pregnant and lactating women. Malnutrition has become a major problem in Senegal, 600 babies are malnourished every year. During the study, all health workers and mothers attended training on the use of Moringa leaf powder in their daily diet. With a lot of vitamin A, calcium, protein and zinc, of course these activities are proven to increase the weight and height of toddlers (18).

In general, the purpose of this study was to determine the effect of education towards mother's knowledge about stunting prevention using moringa oleifera in Kuan Noel Village, Fatumnasi District, South Central Timor Regency. This study identified the characteristics of age, education and employment of mothers, identified mother's knowledge about stunting prevention using moringa oleifera, identified the effect of education towards mother's knowledge about stunting prevention with moringa oleifera, analyzed the effect of education towards mother's knowledge about stunting prevention using moringa oleifera.

MATERIALS AND METHODS

In this research, the type of research used is quantitative research. The population in this study were 315 women in Kuan Noel Village, Fatumnasi District, South Central Timor Regency, using consecutive sampling technique. Based on the formula, a total sample of 30 respondents was obtained for each group. The research design was a quasi-experimental research design with a non equivalent control group design. The non equivalent control group design is a research design that is more likely to see the results of health education interventions with a control group. The non-equivalent control group design is very good for the evaluation of health education programs. In this design, the grouping of sample members in the experimental group and the control group is not done randomly or is called the non-randomized control group pretest posttest design. Measurements made in the experimental group before the knowledge intervention 01 are called pretest. In this study, the pretest aims to determine knowledge before giving intervention (X) in which the intervention provided is in the form of education (health education). After the treatment is carried out, the researcher re-observes knowledge 02 called posttest. Measurements carried out in the control group were given (01) pre test and 02 (post test) but were not given treatment or intervention (X).

RESULTS AND DISCUSSION

General Data

General data is data that is general in nature, in this case the characteristics of the respondent. Respondent characteristics are used to determine the diversity of respondents based on age, education and occupation. This is expected to provide a fairly clear picture of respondents condition and its relation to the problems and objectives of this study.

Respondents Characteristic based on Age

Based on the Table 1 , it can be concluded that the mean age of mothers was 29.85 years (95% CI: 28.12 - 31.58), with a standard deviation of 6.68 years. From the results of the interval estimation, it can be concluded that it is 95% believed that the mean age of the mothers is between 28.12 and 31.58 years.

Table 1. Distribution of Respondents Based on Age in Kuan Noel Village (n=60)

Age	Mean	SD	95% CI
19-43 (Years)	29,85	6,68	28,12-31,58

*SD=Standard Deviation; CI=confidence interval

Respondents Characteristic Based on Education Level

Based on the Table 2, the education level of the most respondents is that of elementary school graduates, namely 36 people (60%).

Table 2. Distribution of Respondents Based on Education Level in Kuan Noel Village

Education Level	Frequency	Percentage (%)
Elementary	36	60,0
Junior High School	11	18,3
Senior High School	10	16,7
College	3	5,0
Total	60	100

Respondents Characteristic Based on Occupation

Based on the Table 3, most of the respondents' occupations are housewives, as many as 58 people (96.7%).

Table 3. Distribution of Respondents Based on Occupation in Kuan Noel Village

Occupation	Frequency	Percentage (%)
Housewife	58	96,7
Teacher	2	3,3
Total	60	100

Specific Data

Respondents Characteristics in the Treatment Group (Experiment) Based on Knowledge Before Giving Education (Pretest) and After Giving Education (Posttest)

Based on the Table 4, the mean knowledge at the time of the pretest was 63.33 with a standard deviation of 10.71. At the time of posttest, an average knowledge of 87.67 was obtained with a standard deviation of 7.73. It can be seen that the mean difference between the pretest and posttest is 24.34. The statistical test results on the mean of knowledge in the treatment group before and after being given education showed a significant difference, which could be seen from the value of $p = 0.000$.

Table 4. Pretest and Posttest Result on Treatment Group (Experiment) in Kuan Noel Village

Knowledge	N	Mean	SD	SE	P value
Pretest	30	63,33	10,71	1,95	0,000
Posttest	30	87,67	7,73	1,41	

Source : Data Primer, Juni 2019

Based on the Table 5, most respondents have sufficient knowledge, as many as 18 respondents (60%).

Table 5. Distribution of Knowledge Frequency in the Time of Pretest for Treatment Group in Kuan Noel Village

Knowledge in Pretest	Frequency	Percentage (%)
Good	7	23,33
Sufficient	18	60
Less	5	16,67
Total	30	100

Based on the Table 6, most respondents have sufficient knowledge, as many as 23 respondents (76,67%).

Table 6. Distribution of Knowledge Frequency in the Time of Posttest for Treatment Group in Kuan Noel Village

Knowledge in Posttest	Frequency	Percentage (%)
Good	3	10
Sufficient	23	76,67
Less	4	13,33
Total	30	100

Based on the Table 7, the mean knowledge

at the time of the pretest was 65,33 with a standard deviation of 10,16. At the time of posttest, an average knowledge of 64,33 was obtained with a standard deviation of 9,35. The statistical tests results on the mean of knowledge for control group at the pretest and posttest obtained p value = 0.184 indicating that there was no significant difference in knowledge at the pretest and posttest.

Respondents Characteristics in the Treatment Group (Experiment) Based on Knowledge in the Time of Pretest and Posttest

Table 7. Pretest and Posttest Result on Control Group in Kuan Noel Village

Knowledge	N	Mean	SD	SE	P value
Pretest	30	63,33	10,16	1,85	0,184
Posttest	30	64,33	9,35	1,70	

Table 8. Distribution Knowledge Frequency in the Time of Pretest for Control Group in Kuan Noel Village

Knowledge in Pretest	Frequency	Percentage (%)
Good	6	20
Sufficient	15	50
Less	9	30
Total	30	100

Based on the Table 9, most respondents have sufficient knowledge, as many as 20 respondents (66,67%).

Table 9. Distribution Knowledge Frequency in the Time of Posttest for Control Group in Kuan Noel Village

Knowledge in Posttest	Frequency	Percentage (%)
Good	7	23,33
Sufficient	20	66,67
Less	3	10
Total	30	100

Based on the Table 9, the mean posttest knowledge for the treatment group was 87.67 with a standard deviation of 7.73. Meanwhile, the average knowledge for the control group was 64.33 with a standard deviation of 9.35. The

results of statistical tests of the mean knowledge in the treatment group and the control group showed a significant difference, which could be seen from the p value = 0.000.

Characteristic of Respondents in Treatment Group and Control Group Based on Knowledge in Time of Posttest

Table 10. Posttest Result on Treatment Group and Control Group in Kuan Noel Village

Knowledge	Group	N	Mean	SD	SE	P value
Posttest	Treatment	30	87,67	7,73	1,41	0,000
Posttest	Control	30	64,33	9,35	1,70	

Analysis on the Effect of Education towards Knowledge After Giving Education on Preventing Stunting Using Moringa Oleifera

Based on the Table 11, the mean of knowledge in time of posttest for the experimental group was 87.67 with a standard deviation of 7.73. While the posttest results for the control group obtained an average knowledge of 64.33 with a standard deviation of 9.35. The statistical test results obtained p value = 0.000 $\alpha = 0.05$ or H_0 is rejected, with the conclusion that the independent variable has an effect on the dependent variable or there is an effect of education on mother's knowledge about stunting prevention with moringa oleifera in Kuan Noel Village, Fatumnasi District, South Central Timor Regency .

Table 11. Analysis on the Effect of Education towards Knowledge in the Time of Posttest About Stunting Prevention Using Moringa Oleifera in Kuan Noel Village

Knowledge	Group	N	Mean	SD	SE	P value
Pretest	Treatment	30	87,67	7,73	1,41	0,000
Posttest	Control	30	64,33	9,35	1,70	

Discussion

Based on research in Kuan Noel Village, the education level of mothers who graduated

from elementary school reached 60%. This shows that the level of education directly affects knowledge, because the lower the education, the lower the ability to transform information so that it automatically affects knowledge. It cannot be denied that the more educated a person is, the easier it is to receive information, and in the end the more knowledge one will have. Conversely, if the level of education is low, it will hinder the development of the subject towards receiving information (16).

Another factor affecting knowledge is age. It affects one's perceptive and mindset, in this case the research subject. Increasing age will lead to increased comprehension and mindset, so that the knowledge obtained is better. Based on the results of research in Kuan Noel Village, the maternal age range is 19-43 years. Age affects intelligence, comprehension and ability to observe (16).

The results showed that the most dominant occupation was housewives (IRT) reaching 96.7%. Living in a rural area, with this type of occupation, indirectly affects knowledge because when a subject works in a certain environment, his/her knowledge can be further developed through the process of observing, hearing (hearing information), which is seen and heard directly from his work environment. When the process runs from time to time, the ability to transform information will get better, so that the results can be seen from the increasing of knowledge (16).

Housewives (IRT) are the same as mothers who do not work. Mothers who do not work are less well informed because they are only at home and do not gather with other people to be able to discuss and obtain information. It is different with working mothers, they can exchange information because they are in a wider environment, so that it will affect knowledge (17).

Increasing knowledge through educational efforts is an activity to empower and increase

public knowledge in order to be able to control health determinants so that the negative impact on health can be reduced. Education is an effort to disseminate information to the public in order to recognize and receive health messages (13).

Education is an educational and teaching method that includes how a research subject can memorize, remember and reproduce something that is learned. Education is an effort to add new things that were not previously known, so that they can be known and understood, and there are changes in the educated individual or community (16).

The Comparison of Mother's Knowledge About Stunting Prevention Using Moringa Oleifera Between Treatment Group and Control Group at Pretest

The pretest was carried out to determine the initial knowledge of the two groups, and the p value was obtained = 0.963, which means that there was no difference in initial knowledge between the treatment group and the control group. At the time of the pretest, the majority of mothers in the treatment group and the control group were in the sufficient category, and these two groups met the homogeneity requirements, meaning that they had the same initial knowledge or were not significantly different. At the time of the pretest, these two groups had the same knowledge category and had never been exposed to information about stunting prevention using moringa oleifera. Research subjects in these two groups were active in Posyandu or health facilities, but they only explained about nutrition education in general, but the research subjects had never received information about how to allocate good nutrition to prevent stunting. Furthermore, the level of education between these two groups is similar, namely about 60% of research subjects only graduated from elementary school. The members of the treatment and control groups

had the same educational level, which means that the two groups had no differences from the beginning. The mean score between each group is also not significantly different, which means that they have the same average value and have the same knowledge category, which is in the sufficient knowledge category.

This is in line with the opinion of Notoatmodjo (2010), that when someone is not exposed to information about something, it can affect their knowledge (12). Knowledge is very closely related to education, but it needs to be emphasized that someone with low education does not necessarily mean that (s)he has low knowledge either. Increased knowledge is not absolutely obtained in formal education but can also be obtained in non-formal education. One of the sources of information obtained by mothers is through health facilities, namely Posyandu and by the advancement of technology where various kinds of mass media such as radio, television, newspapers, counseling and others have a big influence on the formation of mother's knowledge. In delivering information, the media provide messages containing suggestions that can direct the mother's knowledge. The existence of new information about certain things can provide a new cognitive foundation for the formation of knowledge in each individual.

The Comparison of Mother's Knowledge About Stunting Prevention Using Moringa Oleifera Between Treatment Group and Control Group at Posttest

Based on the results of research conducted on 30 research subjects for the treatment group and 30 research subjects for the control group in Kuan Noel Village, Fatumnasi District, South Central Timor Regency, the mean knowledge of mothers about preventing stunting with moringa oleifera in the treatment group and the control group differed significantly. The results of statistical tests using the independent t-test

obtained $p = 0.000$. This difference occurs due to the result of the treatment given, where in the group that was not given education the average did not increase, while the group that was given education had an increase and the different between these two groups was significant.

The results of this study are supported by the research of Soffiya, Izka and Wahyurin (2018) which shows that the mean score of mothers knowledge at the pretest and at the posttest has increased after being given education (1). The analysis showed that there was a significant difference on mothers knowledge about stunting after posttest. The results of this study are also supported by research of Maryati Dewi & Mimin Aminah (2016) which shows that there are significant mean differences in knowledge scores after the intervention in the treatment group and the control group (7).

Based on the results of the study, the mean of mothers knowledge at the time of the posttest for the experimental group and the control group showed a significant difference with p value = 0.000. The difference in the mean of knowledge for the experimental group and the control group indicates that there has been an increase in knowledge for the treatment group and there is no increase in knowledge for the control group which was not given education.

According to Notoatmodjo (2010), education is very effective in raising awareness, providing or increasing public knowledge about health maintenance and improvement for themselves, their families and communities (12). In addition, in the context of health promotion, education also provides an understanding of traditions, public beliefs, and so on, both beneficial and detrimental to health. Based on the results of this study, it can be interpreted that the education provided has increased mothers knowledge about the prevention of stunting using moringa oleifera. This is supported by Izka's research (2019) which reveals that education is effective

in increasing knowledge and that the effect of education provided can achieve efficiency in realizing changes of the knowledge level for the group given treatment (1). In this study, the change that can be assessed is the mean of mothers knowledge which has increased after being given education, so it can be said that the education carried out is effective for the research subjects.

CONCLUSION AND RECOMMENDATION

From the results of research on the effect of education on maternal knowledge about the prevention of stunting with moringa oleifera in Kuan Noel Village, Fatumnasi District, South Central Timor Regency, it can be concluded that, . The mean knowledge of mothers about stunting prevention with moringa oleifera for the treatment group after education was 18.80. The mean knowledge of mothers about stunting prevention with moringa oleifera for the control group at pretest was 15.27. The mean of maternal knowledge about stunting prevention with moringa oleifera for the control group at posttest was 14.27. So that it can be seen that there is a significant influence, the effect of education on maternal knowledge about stunting prevention with moringa oleifera in Kuan Noel Village, Fatumnasi District, South Central Timor Regency. It is hoped that more education will be provided to the public about stunting and moringa oleifera so that people can understand and understand and apply what should be done especially for pregnant women and mothers with toddlers.

REFERENCES

1. Ade, I.K., & Firsta, N. (2018, 31 October). Menkes : Angka Prevalensi Stunting Turun Jadi 30,8%. Didapatkan dari <http://www.suara.com>
2. A, D, Krisnadi. (2015). Kelor Super Nutrisi. Jakarta: Pusat Informasi dan Pengembangan Tanaman Kelor Indonesia

3. Budi, Setiawan. (2018). Faktor-Faktor Penyebab Stunting Pada Anak Usia Dini. Bekasi: Yayasan Rumah Komunitas Kreatif
4. Dinda, Z.H., & Luki, M. (2018). Daya Terima dan Zat Gizi Pancake Substitusi Kacang Merah (*Phaseolus Vulgaris L*) Dan Daun Kelor (*Moringa Oleifera*) Sebagai Alternatif Jajanan Anak Sekolah. *Media Gizi Indonesia*, 13,(2),134. Juli-Desember 2018. doi: 10.20473/mgi.v13i2
5. Doddy, Izwardy. (2018). Peran Kementerian Kesehatan Dalam Pencegahan dan Penanganan Stunting di Indonesia. *Direktur Gizi Masyarakat*
6. Eni, Gustina. (2017). Intervensi Perubahan Perilaku Kesehatan Keluarga Dalam Rangka Pencegahan Stunting. *Direktur Kesehatan Keluarga*
7. Hidayatus, S. D., & Seyla, I.C. (2017). Efektivitas Puding Kelor Terhadap Perubahan Berat Badan Balita Gizi Kurang Pada Keluarga Nelayan di RT 03 Kelurahan Kedung Cowek Kecamatan Bulak Kenjeran Surabaya. *Widyakarya Nasional Pangan dan Gizi*
8. Ihda, Mauliyah. (2016). Peningkatan Status Gizi Anak Dengan Menggunakan Ekstrak Daun Kelor (*Moringa*). 08 (03), 90-94. *Dosen D3 Kebidanan STIKes Muhammadiyah Lamongan*
9. Indriyani, A. (2018, 2 November). Riset Kesehatan Nasional : Angka Stunting Turun. *Media Indonesia*. Didapatkan dari <http://www.mediaindonesia.com>
10. Izka, S.W., Arfiyanti, N.A., Hiya, A.R., Ade, U.H., Chisty, N.B.S. (2019). Pengaruh Edukasi Stunting Menggunakan Metode Brainstorming dan Audivisual Terhadap Pengetahuan Ibu Dengan Anak Stunting. *Journal Ilmu Gizi Indonesia*, 2 (2), 142. Februari, 2019. Universitas Jenderal Soedirman
11. Kementerian Desa, Pembangunan Daerah Tertinggal dan Transmigrasi. (2017). *Buku Saku Desa Dalam Penanganan Stunting*. Jakarta
12. Kementerian Kesehatan Republik Indonesia. (2017). *Buku Saku Pemantauan Status Gizi*. Jakarta
13. Maryati, D., & Mimin, A. (2016). Pengaruh Edukasi Gizi Terhadap Feeding Practise Ibu Balita Stunting Usia 6-24 Bulan. *Indonesian Journal of Human Nutrition*, 3(1). Juli, 2016. Poltekes Bandung
14. Millenium Challenge Account-Indonesia. (2015). *Memahami Perilaku Masyarakat Indonesia Tentang Gizi dan Kebersihan*. Jakarta
15. Mitra. (2015). Stunting Problems and Interventions to Prevent Stunting. *Jurnal Kesehatan Komunitas*, 2, (6), 255-257. Mei, 2015. LPPM STIKes Hang Tuah Pekanbaru
16. Notoatmodjo. (2010). *Promosi Kesehatan Teori & Aplikasi*. Jakarta: Rineka Cipta
17. Nabillah, E.P., & Annis, C.A. (2018). Daya Terima dan Kandungan Gizi (Energi, Protein) Yang Disubstitusi Pila Ampullacea dan *Moringa Oleifera*. *Journal Media Gizi Indonesia*,13,(1),63.1 Januari-Juni2018.doi: 10.20473/mgi.v13i1
18. Notoatmodjo. (2018). *Metode Penelitian Kesehatan*. Edisi Revisi Cetakan Pertama. Jakarta: Rineka Cipta
19. Pusat Data dan Informasi Kementerian Kesehatan Republik Indonesia (Infodatin). (2015). *Situasi Balita Pendek*. Jakarta
20. Pusat Data dan Informasi Kementerian Kesehatan Republik Indonesia. (2018). *Situasi Balita Pendek (Stunting) di Indonesia*. Jakarta
21. Rinik, K. (2016). Efektivitas Audivisual Sebagai Media Penyuluhan Kesehatan Terhadap Peningkatan Pengetahuan dan Sikap Ibu Dalam Tatalaksana Balita Dengan

- Diare di Dua Rumah Sakit Kota Malang. *Jurnal Ilmu Keperawatan*, 1, (1). Mei 2013. Universitas Indonesia
22. Roslin, E.M. Sormin., & Maria, V. Nuhan. (2018). Hubungan Konsumsi Daun Kelor Dengan Pemberian ASI Eksklusif Pada Ibu Menyusui Suku Timor di Kelurahan Kolhua Kecamatan Maulafa Kupang. *CHMK Nursing Scientific Journal*, 2, (2), 60. October, 2018. STIKes Maranatha Kupang
 23. Susilowati, Dwi. (2016). Promosi Kesehatan. Kementerian Kesehatan Republik Indonesia
 24. Syarifah, A., Tezar, R., & Muflihani., Y. (2015). Kandungan Nutrisi dan Sifat Fungsional Tanaman Kelor. 5 (2), 36-41. Balai Pengkajian Teknologi Pertanian Jakarta
 25. Tim Percepatan Penanggulangan Kemiskinan (TNP2K). (2017). 100 Kabupaten/Kota Prioritas Untuk Intervensi Anak Kerdil (Stunting). Jakarta
 26. Trihino., Atmarita., Dwi, H.T., Anies, I., Nur, H.U., Teti, T., lin, N. (2015). Pendek (Stunting) Di Indonesia, Masalah dan Solusinya. Jakarta: Badan Penelitian dan Pengembangan Kesehatan
 27. Wahyudi, I., & Nurhaedah, M. (2017). Ragam Manfaat Tanaman Kelor (*Moringa Oleifera* Lamk) Bagi Masyarakat. *Info Teknis Eboni*, 14, (1), 66-68. Juli, 2017. Balai Litbang Lingkungan Hidup dan Kehutanan Makassar
 28. Zilda, O., & Trini, S. (2013). Faktor Resiko Stunting Pada Balita (24-59 Bulan) di Sumatera. *Jurnal Gizi dan Pangan*, 8, (3), 176. November, 2013. Universitas Indonesia Depok