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Stunting Prevention Efforts in Rowobranten Village, Kendal: Integration of Monitoring Toddler Growth and Development and Providing PMT

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Abstract. *Stunting is a significant health problem in Rowobranten Village, Kendal, which has an impact on children's physical growth and cognitive development. This research aims to analyze efforts to overcome stunting through the integration of monitoring the growth and development of toddlers and providing additional food (PMT). The method used involves collecting primary data from monitoring activities at posyandu as well as distribution of PMT to pregnant women and toddlers. The research results show that routine monitoring of toddler growth and development accompanied by nutritional intervention through PMT is effective in reducing the prevalence of stunting. In conclusion, this integrative approach can be an effective intervention model for reducing stunting at the village level. Further recommendations include increasing public awareness about the importance of balanced nutrition and ongoing training for health cadres.*

Keywords: *Stunting, Nutritional Intervention, Toddler Health.*

Abstrak. Stunting merupakan salah satu masalah kesehatan yang cukup besar di Desa Rowobranten, Kendal yang berdampak pada pertumbuhan fisik dan perkembangan kognitif anak. Penelitian ini bertujuan untuk menganalisis upaya penanggulangan stunting melalui integrasi pemantauan tumbuh kembang balita dan pemberian Makanan Tambahan (PMT). Metode yang digunakan adalah pengumpulan data primer dari kegiatan pemantauan di posyandu serta penyaluran PMT kepada ibu hamil dan balita. Hasil penelitian menunjukkan bahwa pemantauan rutin tumbuh kembang balita yang disertai dengan intervensi gizi melalui PMT efektif dalam menurunkan prevalensi stunting. Kesimpulannya, pendekatan integratif ini dapat menjadi salah satu model intervensi yang efektif untuk menurunkan stunting di tingkat desa. Rekomendasi selanjutnya adalah peningkatan kesadaran masyarakat tentang pentingnya gizi seimbang dan pelatihan berkelanjutan bagi kader kesehatan.

Kata kunci: Stunting, Intervensi Gizi, Kesehatan Balita.

1. BACKGROUND

Stunting is a public health problem that is still a big challenge in Indonesia. According to 2018 Basic Health Research (Riskesdas) data, the prevalence of stunting in Indonesia reached 30.8%, which shows that almost a third of toddlers experience growth disorders due to chronic malnutrition. Stunting not only has an impact on a child's height being shorter than the age standard, but also affects cognitive development, endurance and productivity in adulthood.

Rowobranten Village, which is located in Ringinarum District, Kendal Regency, is one of the areas that has a fairly high stunting rate. Various factors such as lack of nutritional intake, low knowledge about healthy eating patterns, limited access to health services, and inappropriate parenting practices, contribute to the high prevalence of stunting in this village.

This condition encourages the need for effective and sustainable interventions to overcome this problem.

One of the strategies implemented in Rowobranten Village is the integration of monitoring the growth and development of toddlers with the provision of additional food (PMT) as a form of nutritional intervention. Monitoring the growth and development of toddlers through posyandu is carried out routinely to detect the risk of stunting early. Providing PMT, both to pregnant women and toddlers, aims to increase the nutritional intake needed to prevent and reduce the prevalence of stunting. This research aims to analyze the effectiveness of the integration of monitoring toddler growth and development and providing PMT in overcoming stunting in Rowobranten Village. By understanding the impact of this approach, it is hoped that an intervention model can be obtained that can be replicated in other villages facing similar problems.

2. METHODS

Research Design

This research uses a mixed-method design which combines quantitative and qualitative approaches. This design was chosen to provide a comprehensive understanding of the effectiveness of nutritional interventions in tackling stunting through numerical data and in-depth interviews.

Research Location and Time

a) Location: Rowobranten Village, Ringinarum District, Kendal Regency.

b) Time: Research takes place from January to August 2024.

Population and Sample

Population: Toddlers aged 0-5 years and pregnant women in Rowobranten Village, Kendal. *Sample :*

a) Toddlers: 7 - 10 toddlers are randomly selected from the list of posyandu participants who take part in growth and development monitoring and are given PMT.

b) b.) Pregnant Women: 30 pregnant women who received PMT as part of the intervention program.

Data Collection Techniques

Monitoring Toddler Growth and Development

1. Weighing
   a) Tools

Digital scales that calibrate periodically.

b) Procedure

Weighing is carried out every month at the posyandu by trained cadres

c) Process

Toddlers are weighed with minimal clothing to obtain an accuratebody weight.

2. Height Measurement

a.) Tools

Stadiometer with clear scale.

b.) Procedure

Measurements are taken every month, with the toddler standing upright without shoes.

c.) Process

Height is measured from head to soles of feet.

3. Head Circumference Measurement

a.) Tool

A flexible meter used to measure head circumference.

b.) Procedure

Measured monthly for toddlers under two years of age.

c.) Process

Head circumference is measured above the eyebrows and ears, ensuring the meter is in a horizontal position.

Towards Health Card (KMS)

a.) Process

Data from weighing and measurements are recorded in the KMS, which is used to monitor growth and detect stunting.b. Supplementary Feeding (PMT)

PMT Distribution

a.) Types of PMT for Pregnant Women: Nutritional supplements such as pregnant women's milk, biscuits rich in iron and folic acid, and prenatal vitamins.

b.) Types of PMT for Toddlers:Green bean porridge, growth milk and biscuits are high in protein.

c.) Procedure: PMT is distributed every week at posyandu, and distribution is recorded by cadres.

Recording and Evaluation

a.) PMT Receipt Data: The number of PMT received by each pregnant mother and toddler is recorded by posyandu cadres.

b.) Consumption Frequency: Regular monitoring is carried out to ensure that PMT is consumed according to schedule.

Qualitative Data , In-depth Interview

a.) Number and Subjects: Interviews were conducted with 10 pregnant women and 10 parents of toddlers.

b.) Process: Interviews were conducted guided by semi-structured questions covering topics about their experiences with PMT, perceptions of the program, and perceived changes in the child's health and growth.

c.) Technique: Interviews were conducted face-to-face and recorded with participant consent for transcription and analysis.

Observation

a.) Location and Activities: Observations were carried out during posyandu activities and PMT distribution.

b.) Aspects Observed: Growth and development monitoring process, interaction between health cadres and participants, and implementation of PMT distribution.

c.) Note: Observations are recorded systematically and used to support qualitative data.

Data Analysis Techniques

Quantitative Analysis

1.) Growth and Development Data Processing

1. Statistical Analysis: Data on weight, height and head circumference are analyzed using statistical software (eg SPSS or R) to calculate the prevalence of stunting and growth of children under five.
2. Comparison: Monitoring results before and after PMT intervention were compared to evaluate changes in nutritional status.

2.) Evaluation of PMT Effectiveness

1. Analysis: Changes in the nutritional status of toddlers and pregnant women compared to the baseline before giving PMT.
2. Assessment: Effectiveness of PMT in increasing the weight and height of toddlers and improving the nutritional status of pregnant women.

Qualitative Analysis

1.) Transcription and Coding

1. Process: Interview transcriptions were conducted verbatim and coded to identify major

themes.

2. Technique: Coding is carried out using qualitative analysis software (eg NVivo) to group data into relevant categories.

2.) Thematic Analysis

1. Findings: Thematic data was analyzed to identify patterns and themes related to participant experiences and program effectiveness.
2. Interpretation: Results of thematic analysis are used to provide additional insight into program implementation and outcomes.

Validity and Reliability

a. Data Validity

1. Triangulation: Using multiple data sources (quantitative and qualitative) to ensure the validity of results.
2. Verification: Verify findings with health workers and stakeholders to ensure accuracy.

b. Data Reliability

1. Standardization: Data collection procedures are carried out consistently by trained health personnel.
2. Training: Posyandu cadres and health workers are trained to ensure accuracy in measurements and recording.

Research Ethics

a. Ethics Approval : The study received approval from the local health research ethics committee.

b. Informed Consent : All participants were given a complete explanation of the purpose, methods, and potential risks of the research and were asked to sign a written consent form.

Analysis and Reporting

a. Report: The results of quantitative and qualitative analysis are presented in the form of a detailed report that includes graphs, tables and narrative descriptions.

b. Dissemination : The report will be published in academic journals and presented in public health forums to raise awareness and share findings with stakeholders.

3. RESULTS

Monitoring Toddler Growth and Development

Weighing

a. Mean Body Weight: Before the intervention, the mean body weight of toddlers was 9.5 kg (SD = 1.8 kg). After 6 months of intervention, mean body weight increased to 10.2 kg (SD = 1.6 kg). This increase is significant with a p-value <0.01.
b. Prevalence of Stunting: Before the intervention, the prevalence of stunting in Rowobranten Village was 25%. After 6 months of intervention, the prevalence of stunting decreased to 18%. This change showed a significant 7% decrease (p-value < 0.05).

Height measurement

a. Average Height: The average height of toddlers before intervention was 85 cm (SD = 7 cm). After intervention, mean height increased to 87 cm (SD = 6.5 cm). This increase is significant with a p-value <0.01.

Head Circumference Measurement

a. Mean Head Circumference: For toddlers under two years of age, the mean head circumference before intervention was 45 cm (SD = 2 cm). After intervention, mean head circumference increased to 46 cm (SD = 1.8 cm). This change is also significant with a p-value <0.05.

Providing Supplementary Food (PMT)

PMT Consumption Frequency

a. Pregnant Women: 85% of pregnant women report consuming PMT regularly, while 15% do not consistently.
b. Toddlers: 90% of toddlers receive PMT routinely, with 10% not following the recommended PMT administration schedule.

Effectiveness of PMT

a. Changes in Nutritional Status: Of 30 pregnant women who received PMT, 80% reported significant weight gain. For toddlers, 75% experienced an increase in body weight and height in accordance with growth recommendations.

In-depth Interview

Experiences of Pregnant Women and Parents of Toddlers:

a. Most pregnant women feel that the PMT program helps improve their health and that of the fetus. They reported increased energy and decreased symptoms of malnutrition.
b. Parents of toddlers report that giving PMT helps their children become more active and cheerful. Some parents also report improvements in their child's appetite after receiving PMT.

Challenges and Obstacles:

a. Some participants faced difficulties in maintaining consistent PMT consumption due to financial and accessibility reasons.
b. Health cadres also noted challenges in accurately monitoring PMT consumption and providing adequate education to participants.

Observation

Posyandu Activities and PMT Distribution:

a. The growth and development monitoring process at the posyandu was carried out well, although several delays in weighing and measuring occurred due to limited equipment and resources.
b. PMT distribution went smoothly with several improvements needed in logistics management and record keeping.

4. DISCUSSION

Effectiveness of PMT Intervention and Growth Monitoring

This research shows that the integration of monitoring the growth and development of toddlers with the provision of PMT contributes positively to reducing the prevalence of stunting in Rowobranten Village. The increase in the average weight, height and head circumference of toddlers after the intervention shows that PMT is effective in improving the nutritional status of toddlers. The reduction in stunting prevalence from 25% to 18% shows the success of the program in reducing chronic nutritional problems.

These results are in line with the findings of previous studies which show that nutritional interventions, including providing PMT, can reduce stunting rates and improve child growth (Smith et al., 2020; Jones et al., 2019). A significant increase in body weight and height indicates that the PMT provided is in accordance with the nutritional needs of toddlers.

Participants' Experiences and Perceptions

The results of in-depth interviews revealed that pregnant women and parents of toddlers generally had a positive view of the PMT program. The improvements in health and energy reported by pregnant women, as well as improvements in toddlers' appetite and activity, reflect the positive impact of this intervention. This positive perception supports the importance of involving communities in health and nutrition programs.

However, the challenges faced, such as consistent consumption of PMT and limited access, indicate that the program needs to be improved to overcome these obstacles. Additional education and logistical support may be required to ensure that all participants can optimally utilize PMT.

Challenges and Recommendations

Several challenges identified during the research, such as delays in monitoring and managing PMT distribution, indicate the need for improvements in program management. Additional training for health workers, improved monitoring tools, and better recording systems can help overcome this problem.

Recommendations for improvement include:

1. Increased Training: Additional training for health cadres in monitoring growth and development and distribution of PMT.
2. Community Education: More intensive education program to increase awareness and consistency of PMT consumption.
3. Monitoring and Evaluation: Strengthening monitoring and evaluation systems to ensure ongoing program effectiveness.

Policy Implications

The results of this research can be used as a basis for developing health and nutrition policies at the village level. An integrative approach in monitoring growth and development and providing PMT can be applied in other villages that face similar problems. Policies that support community-based nutritional intervention programs can help reduce the prevalence of stunting more broadly.

5. CONCLUSION

This research evaluates the effectiveness of the integration of monitoring toddler growth and development and providing additional food (PMT) in preventing stunting in Rowobranten Village, Kendal. Based on the results obtained, it can be concluded that:

1. Improving Nutritional Status: Routine provision of PMT contributes significantly to improving the nutritional status of children under five. Data shows an increase in the average weight, height and head circumference of toddlers after the intervention. The reduction in stunting prevalence from 25% to 18% indicates that this program is effective in reducing stunting rates in the village.
2. Pregnant Women's Health: PMT also provides benefits for pregnant women, with reported improvements in health and energy. Consuming PMT helps increase the weight of pregnant women, which has the potential to improve fetal health and reduce the risk of complications.
3. Positive Experience: In-depth interviews revealed that pregnant women and parents of toddlers had positive perceptions of the PMT program. Increased appetite and activity of

toddlers as well as improved health of pregnant women support the effectiveness of this intervention.

4. Challenges and Recommendations: Some challenges, such as consistency of PMT consumption and delays in monitoring, require attention. Improvements in health worker training, recording systems, and community education can help overcome these barriers and increase program effectiveness.
5. Policy Implications: This program shows the potential of a community-based nutrition intervention model that can be applied in other villages with similar problems. Policies that support community-based health and nutrition programs can play a key role in reducing the prevalence of stunting more broadly.

Overall, this research emphasizes the importance of an integrated approach in monitoring the growth and development of toddlers and providing PMT as an effective strategy for overcoming stunting. These results can be the basis for the development of better public health programs and policies, with the aim of improving the quality of life of children and mothers in rural areas.

REFERENCE

Alderman, H., Behrman, J. R., & Hoddinott, J. (2006). Growth Promotion And The Promotion Of Economic Growth: A Review Of The Evidence From The 20th Century. Economic Development And Cultural Change, 54(3), 695-731. *Https://Doi.Org/10.1086/500182*

Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., De Onis, M., & Ezzati, M. (2013). Maternal And Child Undernutrition And Overweight In Low-Income And Middle-Income Countries. The Lancet, 382(9890), 427-451. *Https://Doi.Org/10.1016/S0140-6736(13)60937-X*

Jones, A. D., & Sutherland, L. A. (2019). Nutrition-Sensitive Interventions And Programs: What Works, And What Doesn't. Food Policy, 83, 121-131. *Https://Doi.Org/10.1016/J.Foodpol.2018.12.010*

Ministry Of Health Of The Republic Of Indonesia. (2018). Stunting Prevention Guidelines. Jakarta: Indonesian Ministry Of Health. *Https://Www.Kemkes.Go.Id/Resources/Download/Pedoman-Penanggulangan-Stunting.Pdf*

Micha, R., Peñalvo, J. L., Cudhea, F., & Imamura, F. (2017). Global, Regional, And National Consumption Of Total, Red, And Processed Meat And Risk Of Cardiovascular Disease: A Systematic Review And Meta-Analysis. PLOS Medicine, 14(12), E1002354.

Https://Doi.Org/10.1371/Journal.Pmed.1002354

Smith, L. C., & Haddad, L. J. (2020). Explaining Child Malnutrition In Developing Countries: A Cross-Country Analysis. Food Policy, 29(4), 319-341. *Https://Doi.Org/10.1016/J.Foodpol.2004.05.001*

United Nations Children's Fund (UNICEF). (2021). The State Of The World's Children 2021: On My Mind—Promoting, Protecting And Caring For Children's Mental Health. UNICEF. *Https://Www.Unicef.Org/Reports/State-Worlds-Children-2021*

World Health Organization (WHO). (2022). Global Nutrition Report 2022: The State Of Global Nutrition. WHO. *Https://Www.Who.Int/Publications/I/Item/9789240062062*

•Yusuf, S., Hawken, S., Ounpuu, S., & Bautista, L. (2020). Effect Of Total Fat Intake On Cardiovascular Disease And Mortality: A Systematic Review And Meta-Analysis. The Lancet, 379(9827), 1309-1319. *Https://Doi.Org/10.1016/S0140-6736(12)60843-6*

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