

Analysis Of Differences In Pregnant Women's Knowledge About Stunting Before And After Being Counseled Using Smart Posters By Posyandu Cadres Assisted By The 1000 Days Fund Foundation In Bayur Kidul Village For The Period Of May 2024

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ABSTRACT

The stunting condition in Indonesia in 2023 is 21.5%, West Java 21.7%, Karawang 17.1%, Bayur Lor Health Center 1.3%, Bayur Kidul Village 2.2%. This research aims to determine the difference in pregnant women's knowledge about stunting before and after being given counseling using Smart Poster media by posyandu cadres assisted by the 1000 Days Fund Foundation in Bayur Kidul Village, Cilamaya Karawang for the period May 2024. The research method is Pre-Experiment Designs. The design is One Group Pre-test and Post-test Design. The sampling technique was total sampling with a total of 38 pregnant women. The instrument uses a questionnaire. Dependent variable: pregnant women's knowledge about stunting before and after being given counseling. Independent variables: age, education, occupation, gravida and family income. The results of the research showed differences in pregnant women's knowledge about stunting before and after being given counseling using Smart Poster media. Before the counseling, most of the respondents had good knowledge, namely 20 people (52.6%) and after the counseling showed that almost all respondents had good knowledge, namely 37 people (97.4%). In terms of respondent characteristics, it is known that almost all respondents are of a non-risk age, namely 30 people (78.9%), most of the respondents are respondents with low education, namely 20 people (52.6%), almost all respondents are not working, namely 36 people (94.7%), most of the respondents were multigravida or grandemultigravida, namely 25 people (65.8%) and almost all respondents had low family income, namely 33 people (86.8%). There is no relationship between maternal characteristics and maternal knowledge. It is hoped that this research can provide input and consideration for implementing training for health workers and cadres.

Keywords: Bayur Kidul, Knowledge of pregnant women, Posyandu Cadres, Smart Posters, Stunting

1. INTRODUCTION

The World Health Organization (WHO) through its Sustainable Development Goals (SDGs) targets zero stunting by 2030 for children under two years old in every country, with a maximum prevalence target of 2.3%.¹ The reduction target in 2023 is 18% according to the National Medium Term Development Plan (RPJMN) 2020-2024, one of the efforts of which is to increase the skills of posyandu cadres in terms of measuring, weighing and providing brief counseling to posyandu targets, which are the key to improving primary services which are the main part of the Primary Service Transformation pillar launched by the Minister of Health Budi G, Sadikin.²

Stunting is a chronic nutritional problem caused by inadequate nutritional intake over a long period of time due to providing food that does not meet nutritional needs.³ Stunting is a condition of failure to grow and develop in children under two years of age (under-2 years old) due to chronic malnutrition and poor hygiene, especially during the First 1,000 Days of Life (HPK), namely from the fetus to the child aged 23 months.⁴ Stunting is short or very short stature based on length/height for age that is less than -2 Standard Deviation (SD) on the WHO (World Health Organization) growth curve, caused by chronic malnutrition related to low socioeconomic status, nutritional intake and maternal health. poor health, history of recurrent illness and inappropriate feeding practices for infants and children. The growth curve used to diagnose stunting is the 2006 WHO child growth standard curve, which is the gold standard for optimal growth of a child.⁵ According to the 1000 Days Fund Foundation, in order to accelerate the national commitment to zero stunting by 2030, it is very important to access information on stunting prevention through Information Communication and Education (KIE) media that is appropriate and understood at the household level.⁶ According to the results of the Indonesian Nutrition Status Survey (SSGI), the condition of stunting in Indonesia in 2023 is 21.5%, the condition of stunting in West Java in 2023 is 21.7%, the condition of stunting in Karawang is 17.1%,⁷ the condition of stunting in the Bayur Lor Community Health Center is 1.3%, in Bayur Kidul Village 2.2%. The stunting

rate in Bayur Kidul Village is in the first place, highest compared to the other 4 villages that are areas under the guidance of the Bayur Lor Health Center.⁸ This condition has not yet reached the target where there is a 3.5% difference to the national achievement. Karawang Regency's 2023 target is 8%,⁹ there is still a difference of 9.1% for the Regency's achievement.

Posyandu is a form of Community Resource Health Effort (UKBM) which develops community empowerment efforts in the health sector which are managed and organized from, by, for and with the community in implementing health development, in order to empower the community and make it easier for the community to obtain services. basic health, especially to accelerate the reduction in maternal and infant mortality rates. Efforts to increase cadre capacity through Posyandu cadre training are one step in providing education to the community to support Posyandu development.¹⁰ Carrying out home visits and implementing Interpersonal Communication (KAP) are some of the posyandu management skills that cadres need to have.⁶ It is very important to provide knowledge about the duties and roles of posyandu cadres, so that it is hoped that in the future posyandu services will be better through increasing cadre capacity.¹¹

Prevention of stunting that occurs in the community is one part of the program. The assumption that stunting or pygmy as commonly used in society is a hereditary factor is because the majority of people do not properly understand the meaning of stunting.¹² Based on the results of a baseline carried out by the Foundation and researchers in May 2023 with a target of 5 Melati VI Posyandu cadres, 16 pregnant women and 31 toddler mothers registered in RW 004 Bayur Kidul Village, data showed that only 2.13% knew what stunting was (3 key messages about stunting), 97.87% didn't know. Carrying out training and mentoring is very useful in improving health status for increasing posyandu cadres.¹³

The Foundation's Pilot Project in the villages of Rincah, Messah and Komodo in East Nusa Tenggara (NTT) found that only 4% of parents or caregivers understood what stunting was. The Foundation conducted training for cadres and health workers for approximately 6 months, equipped cadres with Smart Posters as

a tool for outreach and this succeeded in increasing knowledge to 65%.⁶

Therefore, it is necessary to conduct research analyzing differences in pregnant women's knowledge about stunting before and after being given counseling using Smart Poster media carried out by Posyandu cadres assisted by the 1000 Days Fund Foundation in Bayur Kidul Village, Cilamaya Karawang, as well as a good next step in proposing the implementation of cadre training. at other posyandu.

Research purposes

a. General purpose

To find out how pregnant women's knowledge about stunting differs before and after being given counseling using Smart Poster media by posyandu cadres assisted by the 1000 Days Fund Foundation in Bayur Kidul Village for the period May 2024.

b. Special purpose

- 1) To determine the frequency distribution of pregnant women's knowledge about stunting before and after being given counseling using Smart Poster media by posyandu cadres assisted by the 1000 Days Fund Foundation in Bayur Kidul Village for the period May 2024.
- 2) To determine the frequency distribution of characteristics of pregnant women based on age, education, occupation, gravida and family income in Bayur Kidul Village for the period May 2024.
- 3) To find out the relationship between the characteristics of pregnant women (age, education, occupation, gravida and family income) with pregnant women's knowledge about stunting after being given counseling using Smart Poster media by posyandu cadres assisted by the 1000 Days Fund Foundation in Bayur Kidul Village for the period May 2024 .

2. RESEARCH METHODS

This research method uses a Pre-Experiment Designs research design. The research design used is One Group Pre-test and Post-test Design, namely carrying out

measurements once in front (pre-test) before any treatment (treatment), namely counseling by cadres and sticking Smart Posters after which measurements are carried out again (post-test).). The sampling technique in this research was total sampling. The number of samples was set at 38 pregnant women.

Calculations for minimum sampling in this study use the pairwise categorical comparative formula for repeated measurements:

$$n = \frac{(Z_{\alpha} + Z_{\beta})^2 \pi}{(P_1 - P_2)^2}$$

Information :

n = f = The number of subjects who received the intervention

Alpha = Type one error, set at 5%

Z_α = Standard alpha value of 5% one-way hypothesis, namely 1.96.

Beta = Type two error, set at 20%.

Z_β = Standard value of 20% beta, namely 0.84.

P₁ = Proportion of good knowledge before counseling, based on literature is 0.37.⁵⁹

Q₁ = 1 - P₁ = 1-0,37 = 0,63

P₁ - P₂ = The minimum proportion difference that is considered significant between the first measurement and the second measurement.

P₁ - P₂ = 0,37 - 0,73 = -0,36

P₂ = The proportion of good knowledge after counseling, based on the literature, is 0.73.⁵⁹

Q₂ = 1 - P₂ = 1-0,73 = 0,27

π = discordant cells, calculated by Eq

π = (P₁Q₂) + (P₂Q₁)

= (0,37.0,27) + (0,73.0,63) = 0,56

$$n = \frac{(Z_{\alpha} + Z_{\beta})^2 \pi}{(P_1 - P_2)^2} = \frac{(1,96 + 0,84)^2 0,56}{(-0,36)^2} = \frac{7,84 \cdot 0,56}{0,13} = \frac{4,3904}{0,13} = 33,77 \approx 34$$

Sample size correction to anticipate drop out

$$n' = \frac{n}{(1-f)^2}$$

n = calculated sample size

f = estimated proportion of dropouts or non-compliance with the protocol = 10% = 0.1

$$n' = \frac{34}{(1-0,1)^2} = \frac{34}{(0,9)^2} = 37,78 \approx 38$$

Table 3.1
Validity Test Results

| Pertanyaan | Nilai pearson correlation | Nilai r tabel | Keterangan |
|------------|---------------------------|---------------|-------------|
| 1 | -0,052 | 0,3246 | Tidak Valid |
| 2 | 0,168 | 0,3246 | Tidak Valid |
| 3 | -0,443 | 0,3246 | Tidak Valid |
| 4 | 0,000 | 0,3246 | Tidak Valid |
| 5 | 0,556 | 0,3246 | Valid |
| 6 | 0,682 | 0,3246 | Valid |
| 7 | 0,586 | 0,3246 | Valid |
| 8 | -0,379 | 0,3246 | Tidak Valid |
| 9 | 0,315 | 0,3246 | Tidak Valid |
| 10 | 0,675 | 0,3246 | Valid |
| 11 | 0,303 | 0,3246 | Tidak Valid |
| 12 | 0,332 | 0,3246 | Valid |
| 13 | 0,423 | 0,3246 | Valid |
| 14 | 0,027 | 0,3246 | Tidak Valid |
| 15 | 0,649 | 0,3246 | Valid |
| 16 | 0,365 | 0,3246 | Valid |
| 17 | 0,558 | 0,3246 | Valid |
| 18 | 0,438 | 0,3246 | Valid |
| 19 | 0,473 | 0,3246 | Valid |
| 20 | 0,261 | 0,3246 | Tidak Valid |
| 21 | 0,343 | 0,3246 | Valid |
| 22 | 0,133 | 0,3246 | Tidak Valid |
| 23 | 0,615 | 0,3246 | Valid |
| 24 | -0,035 | 0,3246 | Tidak Valid |
| 25 | 0,424 | 0,3246 | Valid |
| 26 | 0,261 | 0,3246 | Tidak Valid |
| 27 | -0,043 | 0,3246 | Tidak Valid |
| 28 | 0,170 | 0,3246 | Tidak Valid |
| 29 | 0,004 | 0,3246 | Tidak Valid |
| 30 | 0,504 | 0,3246 | Valid |

So the minimum sample size plus the corrections required in the research is 38 pregnant women.

The inclusion and exclusion criteria in this study are as follows:

Inclusion criteria: pregnant women who are registered and domiciled in Bayur Kidul Village during the current period, have not installed a Smart Poster, have never received counseling about stunting from cadres through a Smart Poster, are willing to have a Smart Poster attached to their house.

Exclusion criteria: mothers who experience health problems, mothers who refuse visits from cadres.

The research design was carried out starting from planning, namely guidance, research preparation by studying literature studies, preparing research proposals, undergoing proposal hearings, revisions, making permission letters for preliminary studies, distributing questionnaires to test validity and reliability 2 times (2 week process), then making an ethical approval and processing a permit letter through Bappeda to the Health Service (2 week process), then carrying out the research (from 21 to 30 May 2024) starting from briefing with cadres, respondent approval to data collection, processing and results, thesis trial , trial revision, publication.

Information:

The r table value uses the r table for f = 1-50. Df = (N-2) is 0.3246.

Interpretation: it is said to be valid if the Pearson correlation value > the table r value & meets the requirements to continue with the next test.

Reliability test on 37 pregnant women in the area supported by the Bayur Lor Health Center in the villages of Kiara, Bayur Lor, Langensari and Sukamulya which represent the characteristics and have no influence on the respondents who will be tested in the research, namely in Bayur Kidul Village. The reliability test functions to determine whether the instrument, in this case the questionnaire, can be used more than once, at least by the same respondent, and will produce consistent data. If the Cronbach Alpha value is > 0.60 then it is reliable.

Tabel 3.2

| Reliability Statistics | |
|------------------------|------------|
| Cronbach's Alpha | N of Items |
| 0,610 | 30 |

Data processing :

1. Editing Data
2. Data coding
3. Scoring
4. Data entry
5. Cleaning
6. Tabulating

Data analysis :

- Univariate Analysis

Univariate analysis was used to describe knowledge before and after counseling, characteristics of pregnant women (age, education, occupation, gravida, family income) using a computerized system with Excel and SPSS applications, then the results were interpreted as follows:

$$N = \frac{X}{Y} \times 100$$

Keterangan:

N : Nilai

X : Kriteria tertentu

Y : Kriteria semua

The proportion values obtained are in the form of percentages which are interpreted using categories:

- 0 % : Tidak satupun
- 1%-25% : Sebagian kecil
- 26%-49% : Hampir sebagian
- 50% : Setengah dari kejadian
- 51%-75% : Sebagian besar
- 76%-99% : Hampir seluruh
- 100% : Seluruh^{65,26}

- Analisis Bivariat

Uji beda pada uji statistik nonparametrik yang digunakan adalah uji *Wilcoxon*. Uji hubungan antar variabel pada uji statistik nonparametrik adalah korelasi *Spearman*.

3. DISCUSSION

Research limitations during the research process do not always go according to what the researcher planned. Some of the limitations faced include:

- a. The researcher's knowledge is limited in creating and compiling this paper.
- b. Limited time and energy.

- c. The limited literature that researchers obtained is still inadequate in terms of results and analysis.
- d. In the process of collecting data, the information provided by respondents through questionnaires sometimes does not show the respondents' true opinions, this happens because sometimes there are differences in thoughts, assumptions and different understandings for each respondent, as well as other factors such as honesty in filling in respondents' opinions in their questionnaires.
- e. The limitations of the data used in this research are still not optimal.
- f. This research is far from perfect, so it is hoped that future research will be better and more optimal.

RESULT

a. Bivariate Analysis

Table 3.1

Results of Wilcoxon Signed Ranks Test Values Differences in Pregnant Women's Knowledge About Stunting Before and After Being Given Counseling with Smart Poster Media by Posyandu Cadres Assisted by the 1000 Days Fund Foundation for the Period of May 2024

| | Ranks | | | |
|----------------|----------------|-----------------|-----------|--------------|
| | | N | Mean Rank | Sum of Ranks |
| After - Before | Negative Ranks | 0 ^a | ,00 | .00 |
| | Positive Ranks | 19 ^b | 10,00 | 190,00 |
| | Ties | 19 ^c | | |
| | Total | 38 | | |

- a. After < Before
- b. After > Before
- c. After = Before

Table 3.2

Statistical Test Results of Differences in Pregnant Women's Knowledge About Stunting Before and After Being Given Counseling with Smart Poster Media by Posyandu Cadres Assisted by the 1000 Days Fund Foundation for the Period of May 2024

| Test Statistics ^a | Sesudah - Sebelum |
|------------------------------|---------------------|
| Z | -4,359 ^b |
| Asymp. Sig. (2-tailed) | ,000 |

a. Wilcoxon Signed Ranks Test
 b. Based on negative ranks.

b. Univariate Analysis

Table 3.3
 Frequency Distribution of Pregnant Women's Knowledge About Stunting Before and After Being Given Counseling

| Knowledge of Pregnant | Before Counseling | | After Counseling | |
|-----------------------|-------------------|-------|------------------|-------|
| | f | % | f | % |
| Not enough | 20 | 52,6 | 1 | 2,6 |
| Good | 18 | 47,4 | 37 | 97,4 |
| Total | 38 | 100,0 | 38 | 100,0 |

Table 3.4
 Frequency Distribution of Characteristics of Pregnant Women in Bayur Kidul Village, Cilamaya Karawang, May Period 2024 (n=38)

| Respondent Characteristics | Amount | Persen |
|---------------------------------------|--------|--------|
| Age | | |
| Risky (≤20 years and >35 years) | 8 | 21,1 |
| No Risk (21 - 35 years) | 30 | 78,9 |
| Total | 38 | 100,0 |
| Education | | |
| Low Education | 20 | 52,6 |
| Higher Education | 18 | 47,4 |
| Total | 38 | 100,0 |
| Work | | |
| Work | 2 | 5,3 |
| Doesn't work | 36 | 94,7 |
| Total | 38 | 100,0 |
| Gravida | | |
| Primigravida | 13 | 34,2 |
| Multigravida atau grande multigravida | 25 | 65,8 |
| Total | 38 | 100,0 |
| Family Income | | |
| Low | 33 | 86,8 |
| High | 5 | 13,2 |
| Total | 38 | 100,0 |

Tabel 3.5

The Relationship Between Maternal Characteristics and Maternal Knowledge

| No | Characteristic | Correlation Results (p) | Correlation Coefficient (r) |
|----|----------------|-------------------------|-----------------------------|
| 1 | Age | 0,612 | -0,85 |
| 2 | Education | 0,350 | 0,156 |
| 3 | Work | 0,817 | -0,39 |
| 4 | Gravida | 0,169 | 0,228 |
| 5 | Family income | 0,703 | 0,064 |

c. Research Discussion

- 1) Discussion of Differences in Pregnant Women's Knowledge About Stunting Before and After Being Provided with Counseling with Smart Poster Media by Posyandu Cadres Assisted by the 1000 Days Fund Foundation for the Period of May 2024

Based on table 3.1 based on the Wilcoxon Signed Ranks results, it shows that there was no decrease (reduction) from the pre-test score to the post-test score, there were 19 respondents who experienced an increase in knowledge from the pre-test score to the post-test score. There were 19 respondents who experienced the same score from the pre-test score to the post-test score.

Based on the output of "Test Statistics" table 3.2, it is known that Asymp.Sig(2-tailed) has a value of 0.000. Because the value of 0.000 is smaller than 0.05 (< 0.05), it can be concluded that "The hypothesis is accepted", meaning that there is a difference between pregnant women's knowledge about stunting for the pre-test and post-test.

The results of this research are in accordance with Yudistira's research on the effect of education using poster media via WhatsApp group on mothers' attitudes about stunting in the Bengkulu City Decline Health Center which stated that the average knowledge of mothers before being given education using poster media via WhatsApp Group about stunting was 6.50 and after it was carried out 9.70.

There is an influence of education using poster media via the Whatsapp group on mothers' knowledge about stunting in the Bengkulu City reduction health center as seen from the results of the Wilcoxon test with a p value of $0.000 < 0.05$.

2) Discussion of Pregnant Women's Knowledge About Stunting Before and After Giving Counseling Using Smart Posters as Media by Posyandu Cadres Assisted by the 1000 Days Fund Foundation for the Period of May 2024

Based on table 3.3, it shows that before counseling, of the 38 respondents, almost half of the respondents had poor knowledge, namely 18 people (47.4%), most of the respondents had good knowledge, namely 20 people (52.6%). After counseling, it showed that a small portion of respondents had poor knowledge, namely 1 person (2.6%), almost all respondents had good knowledge, namely 37 people (97.4%).

The results of this research are in line with Ike S's research on Increasing Mothers' Knowledge About Stunting Prevention which stated that of the 26 respondents, namely during the pre-test on stunting the number of respondents with good knowledge was 0 people (0%) and during the post-test on stunting the number respondents with good knowledge were 14 people (53.8%).⁵⁰

Based on the research results, it can be analyzed that respondents get more information when they see and hear the material presented by cadres using Smart Poster media which is stuck in their homes. Counseling by cadres using Smart Posters has an important role in increasing the knowledge of pregnant women as a visual medium for learning tools and reminders of health information. There was one person who still had insufficient knowledge after the counseling, this is the researcher's task so that the respondent's knowledge increases.

3) Discussion of the relationship between the characteristics of pregnant women and the knowledge of pregnant women about stunting before and after being given counseling using smart poster media by Posyandu cadres assisted by the 1000 Days Fund Foundation for the period of May 2024.

a) Age

In this study, based on table 3.5 after counseling there was no significant (meaningful) relationship between the variable knowledge of pregnant women after counseling and the mother's age as evidenced by the results of statistical tests between knowledge after counseling and maternal education using Spearman's rho with a value of $p = 0.612$ greater than that determined to be > 0.05 and the percentage of pregnant women with good knowledge is pregnant women with low education, namely 19 people (50.0%)

b) Education

In this study, based on table 3.5 after counseling, there was no significant (meaningful) relationship between the variable knowledge of pregnant women after counseling and the mother's occupation, as evidenced by the results of statistical tests between knowledge after counseling and the mother's occupation using Spearman's rho with a value of $p = 0.817$ which is greater than that determined to be > 0.05 and the percentage of pregnant women with good knowledge was among pregnant women who did not work, namely 35 respondents (92.1%) and the p value = 0.817.

c) Gravida

In this study, based on table 3.5 after counseling there was no significant (meaningful) relationship between the variable

knowledge of pregnant women after counseling and maternal gravida as evidenced by the results of statistical tests between knowledge after counseling and maternal gravida using Spearman rho with a value of $p = 0.169$ which is greater than that determined to be > 0.05 and the percentage of good knowledge was among multigravida or grandemultigravida respondents, namely 25 people (65.8%).

d) Family income

In this study, based on table 3.5 after counseling, there was no significant (meaningful) relationship between the variable knowledge of pregnant women after counseling and the mother's family income, as evidenced by the results of statistical tests between knowledge after counseling and the mother's family income using Spearman's rho with a value of $p = 0.703$ which was greater. from that determined, namely > 0.05 and the percentage of respondents with good knowledge was mothers with low family income, namely 32 people (84.2%).

4. CONCLUSION

There is a difference in pregnant women's knowledge about stunting before and after being given counseling using Smart Poster media. Before the counseling, most of the respondents had good knowledge, namely 20 people (52.6%) and after the counseling showed that almost all respondents had good knowledge, namely 37 people (97.4%). In terms of respondent characteristics, it is known that almost all respondents are of a non-risk age, namely 30 people (78.9%), most of the respondents are respondents with low education, namely 20 people (52.6%), almost all respondents are not working, namely 36 people (94.7%), most of the respondents were multigravida or grandemultigravida, namely 25 people

(65.8%) and almost all respondents had low family income, namely 33 people (86.8%). There is no relationship between maternal characteristics and maternal knowledge.

Suggestions for using this research as a reference in conducting further research and also as input and consideration for conducting training for Health workers and cadres.

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