

Reminder Message as an effort to Increase the Compliance of Mother Toddler Visits to Posyandu



Ariani Pongoh

Department of Midwifery, Poltekkes Kemenkes Sorong, Indonesia

ABSTRACT: Posyandu is a monthly routine activity designed to monitor the weight gain of toddlers by using the "Menuju Sehat" (KMS) card, providing nutrition counseling, and providing basic health services (immunization and diarrhea control). Reminder Message is a message that helps someone to remember something. Reminders can be more useful when contextual information is used to present information at the right time and in the right place. Reminder messages can be used to remind mothers of toddlers to schedule visits to their children's posyandu and increase the compliance of mothers with toddlers to posyandu. Objective: This study aims to determine the effectiveness of reminder messages on the compliance of mothers with toddlers visiting the posyandu in the working area of the Malaimsimsa Health Center Sorong City in 2021. Methods: The research design is a quasi-experimental approach with a one group pre-post test design. Sampling with purposive sampling technique, as many as 30 respondents consisting of 15 mothers and 15 toddlers. Data analysis was tested by Wilcoxon test. Results: there was an increase in the compliance of mothers toddlers to the posyandu where the p-value was 0.002 (<0.05). Conclusion: reminder messages are effective in increasing compliance with visits by mothers toddlers visit to posyandu.

KEYWORDS: Reminder messages, compliance, mothers toddlers, posyandu

I. INTRODUCTION

Posyandu is a monthly routine activity designed to monitor the weight gain of toddlers by using the "Menuju Sehat" (KMS) card, providing nutrition counseling, and providing basic health services (immunization and diarrhea control) [1]. Posyandu is a very precise place for monitoring the nutritional status and growth of children so that by coming to the posyandu, the level of weight and height gain will be measured regularly and every month. The level of attendance at an active posyandu has a great influence on monitoring nutritional status, and mothers of toddlers who come to the posyandu will get the latest health information that is useful in determining a healthy lifestyle every day [2]. Posyandu visits to toddlers are related to the mother's role as the person in charge of toddler health, because toddlers are very dependent on their mother [3].

Basic health research data in 2018 showed that the coverage of weighing children under five in Indonesia had decreased. From the coverage rate for weighing children under five at Posyandu with an average of 77.95% in 2017 to 67.48% in 2018. The coverage figure tends to increase in 2019 with an average figure of 73.86%. The coverage of weighing children under five in 2017 in West Papua with a percentage figure of 73.42%. However, this is still below the minimum posyandu target in Indonesia, which is 80% [4,5].

The coverage of weighing toddlers at the Posyandu in the working area of the Malaimsimsa Health Center Sorong City in 2020 is 1355 babies and toddlers registered at the Posyandu and the average number of toddlers who weighed in that year was 388 toddlers. Based on the initial survey conducted in March 2021, 10 mothers of children under five were interviewed in the Posyandu working area of the Malaimsimsa Health Center, Sorong City, there were 7 mothers of children under five who gave reasons for not visiting because they often forgot the date of the posyandu so they did not make a visit, 2 of them said they were outside city, and 1 mother did not visit because her child was sick.

Reminder Message is a message that helps someone to remember something. Reminders can be more useful when contextual information is used to present information at the right time and in the right place [6]. A study has shown that reminders can be accepted as a useful strategy to increase pregnant women's adherence to iron tablets. In addition, reminder messages can also save costs and time [7]. Other studies have also shown that Reminder Messages are effective not only among groups, but also within a group. This proves the importance of Reminder Messages not only to increase compliance, but also to maintain

Reminder Message as an effort to Increase the Compliance of Mother Toddler Visits to Posyandu

compliance. Reminder Message is effective as a reminder to reduce forgetfulness, and events reduce the frequency of treatment or they may resume their treatment again. Reminder messages can encourage mothers of toddlers to comply with posyandu visits [8]. Most of the mothers of toddlers in the study area have cellphones, but they have not been used as reminders. Based on the background described, the authors are interested in conducting research on the effectiveness of reminder messages on the compliance of mothers' visits to the Posyandu in the working area of the Malaimsimsa Public Health Center, Sorong City.

II. METHOD AND MATERIAL

The type of research used is a quasi-experiment with a one group pre-post test design. The population of this study were all mothers of children under five who were registered at the Matahari Posyandu in the working area of the Malaimsimsa Health Center, Sorong City. This sampling technique used a purposive sampling technique with a total sample of 30 consisting of 15 mothers and 15 toddlers. The inclusion criteria of this study include: being registered at the posyandu, having a cellphone with the WhatsApp application, being able to read, write and communicate fluently. While the exclusion criteria in this study were mothers of toddlers who could not operate mobile phones to open or reply to messages.

The independent variable in this study is the reminder message and the dependent variable is the compliance of mothers' visits to the posyandu. Data collection techniques were carried out by interviewing respondents using a questionnaire before being given an intervention as a form of pre-test. After the pre-test, the intervention was carried out by sending a reminder message after maghrib time on Days-3 to Day-1 of the Posyandu visit schedule and 2 hours before the posyandu started which contained greetings, schedule for posyandu visits and an invitation to attend posyandu visits. Then the researcher filled in the data reminder message checklist. After giving the intervention, the researcher conducted a post-test by giving back the questionnaire to observe the quality of compliance with visits by mothers of children under five at the posyandu.

Data analysis was carried out using two analytical techniques, namely univariate and bivariate analysis. Univariate analysis to determine the general and specific percentages, namely demographics and compliance questionnaire data. Meanwhile, bivariate analysis was conducted to determine the relationship between reminder messages and adherence to visits by mothers of children under five at the posyandu. This analysis was tested with the Wilcoxon test to measure the significance of the difference in the 2 groups of compliance data on visits by mothers of children under five at the posyandu which correlated with ordinal data that required observation (pre-post test), namely in the reminder message intervention group.

III. RESULT

Table 1. Frequency distribution of respondent characteristics

Respondent characteristics	n	%
Toddler age (months)		
0-23 months	13	86.7
24-36 months	2	13.3
27-60 months	0	0
Mother age		
< 25 years	3	20
25-35 years	9	60
> 35 years	3	20
Mother education		
Junior high school	1	6.7
Senior high school	11	73.3
Diploma	2	13.3
Bachelor	1	6.7
Mother occupation		
Entrepreneur	12	80
Housewife	2	13.3
Government employees	1	6.7

Table 1 shows that the highest proportion of children under five years of age was 0-23 months with 13 respondents (86.7%) while the highest proportion of mothers aged 25-35 years was 9 respondents (60%) with the last education being high school as many as 11 respondents (73.3%) and occupation housewives as many as 12 respondents (80%).

Reminder Message as an effort to Increase the Compliance of Mother Toddler Visits to Posyandu

Table 2. Frequency distribution of distance from residence to Posyandu

Distance from residence to Posyandu	n	%
< 200 meters	11	73.3
200-400 meters	3	20
> 200 meters	1	6.7

Table 2 shows that the most places of residence of by mothers toddlers <200 meters from the Posyandu, namely 11 people (73.3%), living places with a distance of 200-400 meters as many as 3 people (6.7%) and only 1 person (6.3%) who live >400 meters from the posyandu.

Table 3. Frequency distribution of mother toddler compliance at posyandu before giving reminder message

Level of compliance	n	%
Low compliance	8	53.3
Moderate compliance	5	33.3
High compliance	2	13.3

Table 3 shows that the highest frequency was at the low level of compliance, namely 8 people (53.3%), then with the moderate level of compliance as many as 5 people (33.3%) and only 2 people with the high level of compliance (13.3%).

Table 4. Frequency distribution of mother toddler compliance at posyandu after giving reminder message

Level of compliance	n	%
Low compliance	2	13.3
Moderate compliance	10	66.7
High compliance	3	20

Table 4 shows that the highest frequency was at the moderate level of compliance, namely 10 people (66.7%), then the high level of compliance was 3 people (20%) and only 2 people (13.3%) with low compliance.

Table 5. Wilcoxon test for mothers of toddlers at the posyandu before and after being given a reminder message

Level of compliance	Mean	p-value
Pre-test	5.27	0.002
Post-test	6.67	

Table 5 shows that the mean before being given a Reminder Message is 5.27 while after being given a Reminder Message the mean value is 6.67. The results of the statistical test obtained p-value 0.002 (<0.05), meaning that the reminder message was effective in increasing the compliance of mothers toddlers at the posyandu.

V. DISCUSSION

Compliance is the extent of behavior with the provisions given by the health profession. The best adherence to coming to the posyandu is regularly every month or 12 times a year. For this reason, weighing toddlers is limited to 8 times per year. Posyandu whose weighing frequency is less than 8 times per year are considered vulnerable [9,10].

The intervention in this research is giving a Reminder Message which is a planned effort to change the behavior of the individual. Where respondents will be given a reminder message 3 days before the posyandu is sent successively after sunset and 2 hours before the posyandu is held. The results of this study showed that the level of adherence of mothers under five to the posyandu before being given a reminder message with a low level of compliance was 8 respondents (53.3%), respondents with moderate compliance were 5 respondents (33.3%), and respondents with high compliance were 2 respondents. (13.3%) while the level of compliance of mothers under five after being given a reminder message with a low level of compliance was 2 respondents (13.3%), respondents with moderate compliance were 10 respondents (66.7%), and respondents with high compliance were 3 respondents (20%). At the time of measurement after being given a reminder message there was an increase in the frequency of moderate compliance from 5 to 10 respondents with high compliance from 2 to 3 respondents. From this data, after respondents were given a reminder message, the majority experienced behavioral changes for the better, namely in the form of

Reminder Message as an effort to Increase the Compliance of Mother Toddler Visits to Posyandu

compliance with visits by mothers of children under five at the posyandu. This is in accordance with what was stated by Pool et al who said that one intervention strategy that has proven effective in improving the care that clients receive is reminding clients to ask their provider specific questions that lead to changes in their care [8]. A number of studies have observed that this method is effective in improving prevention services such as immunization.

According to Wilcoxon's statistical test, after being given a reminder message, the average value increased from 5.27 to 6.67. These results indicate that the use of reminder messages is effective on the level of adherence to visits by mothers of children under five to the posyandu ($p = 0.002$). Studies show Reminder messages are effective as reminders to reduce the number of forgetting, and events reduce the frequency of treatment, or they may resume their treatment again. Reminder messages can encourage them to comply.

Research by Van Ryswyk et al. reported that reminder messages can improve compliance and can be a very cost-effective reminder system in the future [11]. In an article describes the long-term effects of reminder message services. In health care outcomes obtained from 13 articles included, 3 reminder messages were assessed as a tool to improve attendance at a hospital or clinic [12]. From the results of statistical tests and from the results of previous studies, researchers can conclude that the presence of a reminder message can remind mothers of toddlers to schedule visits to their child's posyandu.

VI. CONCLUSIONS

Based on the results of the study, it can be concluded there is reminder messages are effective in increasing compliance with visits by mothers toddlers visit to posyandu.

ACKNOWLEDGMENT

The authors thank Poltekkes Ministry of Health Sorong for funding this research, all participants and research assistants.

REFERENCES

- 1) Susilowati E. Mother Toddler Compliance Visits Posyandu in Karangrejo Village, Wonosalam District, Demak Regency. *Midwife Prada* 2017;8.
- 2) Destiadi A, Nindya TS, Sumarmi S. Frequency of Posyandu Visits and History of Weight Gain as a Risk Factor for Stunting in Children aged 3-5 years. *Indonesian Nutrition Media* 2015;10:71–5.
- 3) Idaningsih A. Factors related to toddler visits to posyandu. *Syntax Lit J Ilm Indonesia* 2016;1:16–29.
- 4) Ministry of Health RI. The main results of riskesdas 2018. Jakarta Ministry of Health RI 2018.
- 5) Ministry of Health RI. *Indonesia Health Profile 2017* 2017.
- 6) Cocidin RNF. Android Based Reminder Mobile Application Modeling. *Semin. Nas. technol. inf. and Commun.*, 2016.
- 7) Lestari DD. The Effect of Health Education and Reminder SMS on Obedience of Pregnant Women in Consuming Iron Tablets in the Work Area of the Pisangan Health Center in 2015.
- 8) Nirmala N. The Effectiveness of Reminder Messages on Compliance with Mother Toddler Visits at Posyandu Rw 05 and Rw 15 Manukan Kulon Surabaya 2019.
- 9) Pundar Y. Analysis of Factors Affecting Nurse Compliance Performing Hand Hygiene According to Spo in the Kelimutu and Cempaka Rooms Hospital. Prof. Dr. WZ Johannes Kupang. *CHMK Nurs Sci J* 2019;3:138–44.
- 10) Wahyudi Diagama YES, Hasneli Y. The Relationship between the Number of Posyandu Visits and the Nutritional Status of Toddlers (1-5 years). *J Ners Indonesia* 2019;9.
- 11) Van Ryswyk EM, Middleton PF, Hague WM, Crowther CA. Postpartum SMS reminders to women who have experienced gestational diabetes to test for type 2 diabetes: the DIAMIND randomized trial. *Diabetes Med* 2015;32:1368–76.
- 12) Househ M. The role of short messaging service in supporting the delivery of healthcare: An umbrella systematic review. *Health Informatics J* 2016;22:140–50.



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.