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The Effect of Midwives 'Assistance in Giving Solid Foods Containing Prebiotics on the Frequency of Digestive Disorders in Infants

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ABSTRACT

Digestive disorders such as diarrhea, constipation, and colic are common among infants aged 6–12 months, particularly during the introduction of complementary feeding (MPASI). These conditions are often associated with inappropriate food choices and feeding practices. Complementary foods containing prebiotics may help maintain gut microbiota balance and reduce the occurrence of digestive problems. However, proper implementation of prebiotic-based complementary feeding requires guidance from health professionals, especially midwives. This study aimed to analyze the influence of midwives on the provision of prebiotic-containing complementary foods and its effect on the frequency of digestive disorders in infants. A quasi-experimental study with a pretest-posttest control group design was conducted in the working area of Ibuh Health Center, Payakumbuh City, in 2025. The sample consisted of 60 mothers with infants aged 6–12 months selected through purposive sampling and divided into intervention and control groups. The intervention group received midwife assistance regarding the provision of prebiotic-containing complementary foods for four weeks. Data were collected using questionnaires, observation sheets, and logbooks recording digestive disorder frequency. Data were analyzed using univariate and bivariate methods with the chi-square test at a 95% confidence level (α=0.05). The results showed that midwife assistance significantly reduced the frequency of digestive disorders in infants (p=0.001). Therefore, midwife assistance in providing prebiotic complementary foods is effective in reducing digestive disorders among infants.

Keywords: *MPASI, Prebiotics, Digestion*

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INTRODUCTION

Indigestion in infants is one of the health problems that often occur in early life, especially in the transition period from exclusive breastfeeding to complementary feeding of breast milk (MPASI). The baby's digestive system that is still in the developmental stage makes the baby more susceptible to various disorders such as diarrhea, constipation, colic, and bloating. This condition can have an impact on decreasing the absorption of nutrients needed for the growth and development of the baby. Therefore, the management of the baby's diet during complementary feeding is an important aspect in maintaining the baby's digestive health. (WHO, 2021)

Globally, the problem of indigestion in infants is still a concern in children's health. Data show that digestive disorders, in particular diarrhea, are still one of the leading causes of morbidity in infants and toddlers in various developing countries. This condition is often related to improper feeding practices during solid foods. In addition, the lack of understanding of parents about the composition and safety of baby food also exacerbates the condition. (UNICEF, 2022)

In Southeast Asian regions, the incidence of digestive disorders in infants is still relatively high. Several studies have shown that the practice of giving complementary foods that do not comply with health recommendations can increase the risk of digestive disorders in infants. Inaccuracy in the timing of complementary foods, the type of food that is not suitable, and the cleanliness of food processing are factors that are often found. This shows the importance of education to parents regarding the correct practice of giving solid food. (UNICEF, 2021)

In Indonesia, indigestion in infants is still a significant public health problem. Based on National Health reports, diarrhea is still included in the top ten most common diseases in infants and toddlers. This problem is often associated with feeding patterns that have not been optimal during the period of complementary foods. In addition, the mother's lack of knowledge about the baby's nutrition is also a factor that contributes to the appearance of digestive disorders. (Ministry of Health, 2023)

Proper complementary feeding is very important to support the growth and development of the baby after six months of age. At that age, the baby's energy and nutritional needs can no longer be met only from breast milk so that additional, nutritionally balanced food is needed. However, the process of introducing new foods should be gradual and pay attention to the readiness of the baby's digestive system. If not done correctly, giving solid food can actually cause various digestive disorders. (WHO, 2021)

One component that is currently widely studied in MPASI is prebiotics. Prebiotics are food components that cannot be digested by the body but function to stimulate the growth of good bacteria in the digestive tract. The presence of a balanced gut microbiota is essential for maintaining the health of the baby's digestive system. Therefore, MPASI containing prebiotics is considered to help reduce the risk of digestive disorders in infants. (Gibson & Hutkins, 2020)

Research shows that prebiotics can increase the number of good bacteria such as bifidobacteria and lactobacillus in the baby's intestines. This increase in good bacteria plays a role in maintaining the balance of the intestinal microbiota and improving the immune system. In

addition, prebiotics also help improve digestive function and nutrient absorption. Thus, the provision of complementary foods containing prebiotics has the potential to provide significant health benefits for infants. (Arrieta et al., 2021)

Although the benefits of prebiotics have been widely known, the implementation of MPASI containing prebiotics in the community is still not optimal. Many mothers do not understand the food sources that contain prebiotics and how to process them properly. In addition, information about the benefits of prebiotics in MPASI has not been fully conveyed widely to the public. This condition indicates the need for more intensive education to mothers about the practice of giving healthy solids. (Raiten et al., 2020)

The role of health workers is very important in increasing the knowledge of mothers about the provision of appropriate complementary foods. Health workers, especially midwives, are the closest parties to the community in maternal and Child Health Services. Midwives have a responsibility to provide education and assistance to mothers regarding the practice of giving solid food in accordance with health recommendations. Through proper assistance, it is expected that mothers can apply better MPASI practices. (Ministry of Health, 2022)

Assistance by midwives is not only in the form of information delivery, but also includes demonstrations, counseling, and monitoring the practice of giving solid food at home. This approach is considered more effective than one-way education because mothers can get direct guidance. In addition, assistance also allows midwives to identify problems faced by mothers in the provision of complementary foods. Thus, the interventions provided can be more targeted. (Sari et al., 2021)

Several studies have shown that mentoring programs by health workers are able to improve the knowledge and skills of mothers in the provision of complementary foods. The increase in knowledge has an impact on improving the practice of infant feeding at home. In addition, mentoring has also been shown to reduce the incidence of health problems related to the baby's diet. This shows that educational intervention has an important role in the Prevention of children's health problems. (Pratiwi et al., 2022)

Other studies have also shown that education about solid food that is carried out on an ongoing basis can improve the quality of food given to babies. Mothers who get assistance tend to pay more attention to nutritional content and hygiene in food processing. This condition contributes to the improvement of the overall health status of the baby. Therefore, a structured educational approach is indispensable in public health programs. (Rahmawati et al., 2023)

On the other hand, digestive disorders in infants are still often found in first-rate health services. This shows that the practice of giving solid food in the community still needs improvement. Without proper intervention, indigestion problems in infants have the potential to have long-term impacts on children's growth. Therefore, prevention efforts need to be done early through promotive and preventive approaches. (WHO, 2022)

Efforts to prevent digestive disorders in infants can be done through improving the quality of complementary foods provided by the mother. One strategy that can be done is to introduce

foods that contain functional components such as prebiotics. Foods with prebiotic content can be obtained from a variety of natural foods that are easily found in the community. With proper processing, these foods can be a healthy alternative to complementary foods for babies. (Gibson et al., 2021)

However, the utilization of food containing prebiotics in MPASI is still not widely done by mothers. This is due to the limited information and skills in the processing of baby food. In addition, some mothers still rely on instant baby food products without considering the optimal nutritional content. This condition indicates the need for more effective educational interventions at the level of basic health services. (Putri et al., 2022)

Basic health services such as health centers have a strategic role in providing education to the public about infant health. Posyandu Program under the Coordination of puskesmas can be an effective means to convey information about MPASI. Through this activity, mothers can gain knowledge and skills in preparing healthy and safe baby food. Therefore, the involvement of health workers is very important in improving the quality of MPASI provision in the community. (Ministry of Health, 2022)

In Payakumbuh City, maternal and child health services are carried out through various health facilities including health centers. One of the health care facilities that actively provide maternal and infant health services is the Ibuh Health Center. This Puskesmas routinely carries out posyandu activities and Baby growth and Development Monitoring Programs. However, cases of indigestion in infants are still found at health service visits. (Payakumbuh City Health Office, 2023)

Based on these problems, an intervention is needed that can help mothers in improving the quality of complementary feeding to infants. Assistance by midwives is one approach that is considered effective to improve the knowledge and skills of mothers directly. Through structured assistance, mothers can get guidance in choosing food ingredients, processing solid foods, and monitoring the baby's digestive response. This study is expected to provide scientific evidence on the effectiveness of midwife assistance in reducing the frequency of digestive disorders in infants.. Therefore, researchers are interested in conducting research on the influence of midwifery assistance in the provision of complementary foods containing prebiotics on the frequency of digestive disorders in infants.

METHODS

This study used a quasi experiment design with pretest–posttest with control group design approach to assess the effect of midwife assistance in the provision of MPASI containing prebiotics on the frequency of digestive disorders in infants. The study was carried out in 2025 in the working area of the Ibuh Health Center. The population in this study is all mothers who have babies aged 6-12 months who are registered in posyandu activities in the working area of the health center. The sample of 60 respondents were selected using purposive sampling technique and divided into two groups, the intervention group of 30 respondents and a control group of 30 respondents. Inclusion criteria in this study include mothers who have babies aged 6-12 months,

willing to be respondents, babies in good health, and mothers who actively participate in posyandu activities. Meanwhile, the exclusion criteria included babies who had a history of chronic gastrointestinal diseases, were undergoing certain medications that affect the digestive system, as well as respondents who did not take part in the entire series of studies.

The intervention group received midwife assistance related to the provision of solids containing prebiotics for four weeks through educational activities, demonstrations of processing solids made from local foods containing prebiotics, and weekly monitoring of the practice of giving solids at home. The control group only received routine services from the health center without special intervention. The study Data were collected using questionnaires of respondents ' characteristics, observation sheets of complementary feeding practices, and a diary to record the frequency of infant digestive disorders such as diarrhea, constipation, and colic during the study period. Data analysis was conducted univariate to describe the distribution of characteristics of respondents and the frequency of digestive disorders, as well as bivariate analysis using Chi-square test to determine the effect of intervention with a confidence level of 95% (α=0.05). In addition, the strength of the intervention effect was analyzed using Cohen's d to determine the magnitude of the effect of midwife assistance on reducing the frequency of digestive disorders in infants. This study has taken into account the ethical aspects of research by providing explanations to respondents about the objectives and procedures of the study, as well as obtaining written consent (informed consent) before data collection.

RESULTS

1. Distribution of the Frequency of Digestive Disorders in Infants Before and After the Intervention in the Intervention and Control Groups

Univariate analysis was performed to describe the average distribution of the frequency of digestive disorders in infants before and after the intervention in the intervention and control groups. The results of univariate analysis can be seen in Table 1.

Table 1. Average Frequency of Infant Indigestion in Intervention and Control Groups

Groups	Pengantar	Mean (Times/week)	SD
Intervention (n=30)	**Pretest**	**3,1**	**1,2**
Intervention (n=30)	**Posttest**	**1,2**	**0,8**
Control (n=30)	**Pretest**	**3,0**	**1,1**
Control (n=30)	**Posttest**	**2,6**	**1,0**

Based on Table 1, it is known that in the intervention group there was a decrease in the average frequency of infant digestive disorders from 3.1 times/week before assistance to 1.2 times/week after the intervention. Meanwhile, in the control group the decrease was relatively small, from 3.0 times / week to 2.6 times / week. This shows that infants in the group who received midwife assistance in the provision of complementary foods containing prebiotics experienced a greater decrease in the frequency of digestive disorders than the control group.

2. Influence of Midwives in the Provision of Complementary Foods Containing Prebiotics on the Frequency of Digestive Disorders in Infants

Bivariate analysis was conducted to determine the effect of midwife assistance in the provision of MPASI containing prebiotics on the frequency of digestive disorders in infants using the Chi-square test. The results of the analysis can be seen in Table 2.

Table 2. Influence of Midwife Assistance on the Frequency of Digestive Disorders in Infants

Groups	The frequency of indigestion is low n (%)	High frequency n (%)	Total	p-value	Cohen's d
Intervention	**24 (80,0%)**	**6 (20,0%)**	**30**		
Control	**13 (43,3%)**	**17 (56,7%)**	**30**	**0,001**	**0,88**

Table 2 shows that most infants in the intervention group had a low frequency of digestive disorders, namely 24 infants (80.0%), while in the control group only 13 infants (43.3%). The results of the Chi-square test showed a p value = 0.001 ($p < 0.05$), which means there is a significant effect between midwife assistance in providing MPASI containing prebiotics and a decrease in the frequency of digestive disorders in infants. Cohen's d value of 0.88 indicates that the intervention has a large effect size in reducing the frequency of digestive disorders in infants.

DISCUSSION

1. Distribution of the Frequency of Digestive Disorders in Infants Before and After the Intervention in the Intervention and Control Groups

The results showed that in the intervention group there was a decrease in the average frequency of infant digestive disorders from 3.1 times per week before assistance to 1.2 times per week after the intervention. This decrease indicates a considerable change after the mother gets the assistance of a midwife in the provision of MPASI containing prebiotics. Meanwhile, in the control group the decrease was relatively small, from 3.0 times to 2.6 times per week. This difference in decline indicates that the intervention of midwife assistance has a contribution in reducing the frequency of digestive disorders in infants.

Indigestion in infants is a common condition, especially in the early days of complementary feeding. At this time the baby's digestive system is still adapting to foods other than breast milk so it is more prone to experiencing disorders such as diarrhea, constipation, and colic. Inaccuracy in the type of food, the way it is processed, as well as the frequency of feeding can provoke such digestive disorders. Therefore, the practice of giving proper complementary foods is very important to maintain the health of the baby's digestive tract. (WHO, 2021)

A greater decrease in the frequency of digestive disorders in the intervention group indicates that the accompaniment of Midwives plays an important role in improving the practice of giving complementary foods by mothers. The assistance provided is not only in the form of education but also demonstrations and monitoring of infant feeding practices. Through this

approach, mothers can understand how to choose the right food ingredients and how to process safe solid foods. This condition ultimately has an impact on improving the baby's digestive health.

In theory, the health of the baby's digestive tract is strongly influenced by the balance of the intestinal microbiota. The gut microbiota has an important role in the process of digestion, nutrient metabolism, as well as protection against pathogens. An imbalance in the gut microbiota can increase the risk of digestive disorders in babies. Therefore, nutritional interventions capable of maintaining the balance of the intestinal microbiota are essential for the health of the baby. (Arrieta et al., 2021)

One of the nutritional components known to be able to support the balance of the gut microbiota is prebiotics. Prebiotics are food components that cannot be digested by human digestive enzymes but can be fermented by good bacteria in the intestine. The fermentation produces metabolite compounds that are beneficial to the health of the digestive tract. Therefore, foods containing prebiotics can help maintain the baby's digestive health. (Gibson et al., 2021)

The results of this study also showed that the control group experienced only a slight decrease in the frequency of digestive disorders. This shows that without mentoring intervention, changes in the practice of giving complementary foods by mothers tend not to be significant. The mother may still use the same way of feeding as before. As a result, the frequency of digestive disorders in infants does not undergo significant changes.

Previous research has shown that education given to mothers can improve knowledge and skills in the provision of complementary foods. Mothers who have good knowledge tend to be better able to choose food ingredients that suit the nutritional needs of infants. In addition, mothers also pay more attention to hygiene and how to process baby food. This condition can reduce the risk of digestive disorders in infants. (Rahmawati et al., 2023)

In addition to nutritional factors, hygiene factors in food processing also greatly affect the baby's digestive health. Food prepared in an unhygienic way can become a medium for the transmission of pathogenic microorganisms that cause diarrhea. Therefore, education on sanitation and food hygiene is an important part of the MPASI program. Hygienic practices in food processing can help prevent indigestion in infants. (UNICEF, 2022)

Mentoring by health workers has proven to be more effective than one-way education. This is because in the process of assistance, there is direct interaction between health workers and mothers. Health workers can provide feedback and correct mistakes made by mothers in the practice of complementary feeding. Thus, the learning process becomes more effective and sustainable.

Other studies have also shown that community-based interventions involving health workers can improve the quality of infant feeding. The mentoring Program conducted on an ongoing basis is able to improve the skills of mothers in preparing nutritious baby food. In addition, mothers are also more confident in giving new foods to babies. This ultimately has an impact on improving the health of the baby. (Pratiwi et al., 2022)

Prebiotics contained in foods such as bananas, onions, and some types of vegetables are known to support the growth of good bacteria in the intestine. These good bacteria help the fermentation process of food and produce short-chain fatty acids that are beneficial for intestinal health. The compound also helps to improve the immune function of the gastrointestinal tract. Therefore, the consumption of foods containing prebiotics is highly recommended during solid foods. (Raiten et al., 2020)

In addition, the balance of the intestinal microbiota in infants plays a role in the maturation process of the immune system. The gut microbiota helps the body recognize pathogenic microorganisms as well as prevent infections in the digestive tract. When the balance of the microbiota is disturbed, the risk of indigestion in the baby may increase. Therefore, nutrients that support the balance of the microbiota are essential in the early days of life. (Arrieta et al., 2021)

A considerable decrease in the frequency of digestive disorders in the intervention group also indicates that the interventions administered in this study are doing well. Education, demonstrations, and monitoring carried out for four weeks provide an opportunity for mothers to put into practice directly the knowledge gained. The mentoring process helps mothers in improving the habit of giving MPASI to babies. Thus, changes in the mother's behavior can occur gradually.

Giving the right MPASI is not only related to the type of food but also the texture, frequency, and amount of food given to the baby. The introduction of new foods should be gradual so that the baby's digestive system can adapt properly. If this process is carried out correctly, the risk of indigestion can be minimized. Therefore, the mother's knowledge of the principles of complementary feeding is very important. (WHO, 2021)

Nutrition education programs involving health workers are proven to improve infant feeding practices. Interventions carried out directly to the mother are more effective than the delivery of information in general. This is because mothers can get information that suits their baby's condition. In addition, mothers can also consult directly about the problem at hand. (Sari et al., 2021)

Midwife assistance also has an important role in increasing the mother's confidence in caring for the baby. Mothers who get support from health workers tend to be more confident in making decisions related to baby feeding. Such support also helps the mother in overcoming various difficulties that may arise during the period of complementary feeding. Thus, the quality of care for the baby can improve.

Previous research has shown that community-based interventions in infant nutrition can reduce the incidence of diet-related diseases. Education programs that are carried out on an ongoing basis can increase public awareness of the importance of nutrition in early life. This condition is very important in supporting efforts to prevent children's health problems. (Ministry of Health, 2022)

The results of this study indicate that the approach of midwife assistance can be an effective strategy in improving the quality of MPASI provision in the community. The intervention

provided is able to help mothers understand the importance of foods containing prebiotics for the baby's digestive health. With assistance, mothers are also better able to apply the knowledge gained in daily practice. This has an impact on reducing the frequency of digestive disorders in infants.

Researchers assume that the success of the intervention in this study is influenced by several factors, including the intensity of assistance, educational methods used, as well as the active involvement of mothers during the research process. The demonstration of MPASI processing allows mothers to understand in a practical way how to prepare healthy baby food. In addition, regular monitoring also helps ensure that the practice of giving MPASI is done correctly. These factors most likely contributed to the decrease in the frequency of indigestion in infants in the study.

Overall, the results of this study indicate that the assistance of midwives in the provision of MPASI containing prebiotics is a potential intervention to improve the digestive health of infants. This approach not only improves maternal knowledge but also improves infant feeding practices. Thus, assistance programs by health workers can be an effective strategy in preventing digestive disorders in infants at the basic health service level.

2. Influence of Midwives in the Provision of Complementary Foods Containing Prebiotics on the Frequency of Digestive Disorders in Infants.

The results showed that most of the infants in the intervention group had a low frequency of digestive disorders as many as 24 infants (80.0%), while in the control group only 13 infants (43.3%). Chi-square test results showed a value of $p=0.001$ ($p<0.05$) which means that there is a significant influence between the assistance of midwives in the provision of complementary foods containing prebiotics with a decrease in the frequency of digestive disorders in infants. In addition, a Cohen's d value of 0.88 indicates that the given intervention has a great power of influence. These findings indicate that midwife assistance plays an important role in improving the quality of complementary feeding practices that have an impact on the digestive health of infants.

Indigestion in infants is one of the health problems that often occur in early life. In this period the baby's digestive system is still in the developmental stage so it is more susceptible to changes in diet. The transition from exclusive breastfeeding to complementary feeding is often a critical period for the health of the baby's digestive tract. Therefore, the practice of giving proper complementary foods is very important to prevent digestive disorders in infants. (WHO, 2021)

The results of this study indicate a significant effect of midwifery assistance intervention on reducing the frequency of digestive disorders in infants. The difference in the proportion of infants who had low digestive disorders between the intervention group and the control group showed that the assistance program had a real impact on changes in maternal behavior in complementary feeding. Direct assistance allows mothers to gain a better understanding of the proper way of feeding babies. This ultimately has an impact on improving the baby's digestive health condition.

Prebiotics are food components that have an important role in maintaining the health of the digestive tract. Prebiotics are not digested by the body but can be fermented by the gut microbiota thus supporting the growth of good bacteria. The growth of these good bacteria helps maintain the balance of the gut microbiota and improves the health of the digestive tract. Therefore, foods containing prebiotics have the potential to prevent digestive disorders in infants. (Gibson et al., 2021)

In addition to playing a role in maintaining the balance of the gut microbiota, prebiotics also contribute to improving immune function in the digestive tract. Prebiotic fermented metabolites such as short-chain fatty acids can improve the integrity of the intestinal mucosa and inhibit the growth of pathogenic bacteria. This condition helps protect the baby from various digestive disorders such as diarrhea and gastrointestinal infections. Therefore, feeding foods containing prebiotics during solidification is highly recommended. (Arrieta et al., 2021)

Previous studies have also shown that nutritional education interventions to mothers can improve the quality of infant feeding. Mothers who get education tend to better understand the nutritional needs of babies and how to process food properly. The increase in such knowledge contributes to a decrease in the incidence of health disorders related to the baby's diet. Thus, education is an important strategy in the Prevention of digestive disorders in infants. (Rahmawati et al., 2023)

Assistance by health workers has advantages over one-way education. In the process of mentoring, there is an interaction that allows mothers to ask questions and obtain explanations directly. In addition, health workers can also provide examples of correct practices in the processing of solid foods. This approach has been shown to be more effective in improving mothers ' skills in preparing baby food. (Sari et al., 2021)

The mentoring Program also allows health workers to monitor infant feeding practices at home. With such monitoring, the mistakes made by the mother can be immediately corrected. This is very important because improper complementary feeding practices can increase the risk of digestive disorders in infants. Therefore, the mentoring approach is considered more effective in improving the quality of MPASI provision. (Pratiwi et al., 2022)

Cohen's d value of 0.88 in this study shows that the intervention given has a great power of influence. The large Effect size indicates that the changes are not only statistically significant but also have practical significance in the context of Public Health. This shows that the assistance of Midwives is an effective intervention in improving the practice of complementary feeding. Thus, mentoring programs can be one of the strategies in improving the health of babies.

A baby's digestive health is greatly influenced by the balance of the gut microbiota. The gut microbiota plays a role in helping the process of food digestion as well as protecting the body from pathogenic microorganisms. Imbalances in the gut microbiota can increase the risk of digestive disorders in infants. Therefore, nutritional interventions that support the balance of the microbiota are essential in the early days of life. (Arrieta et al., 2021)

In addition to nutritional factors, hygiene in food processing also plays an important role in preventing digestive disorders in infants. Food prepared in an unhygienic way can become a source of contamination with pathogenic bacteria. Therefore, education on sanitation and food hygiene is an important part of the MPASI program. Hygienic practices in food processing can help prevent indigestion in infants. (UNICEF, 2022)

Other studies have also shown that the involvement of health workers in nutrition education programs can increase the success of interventions. Health workers have a role as a source of information that is trusted by the public. Through intensive interaction, health workers can help mothers understand the importance of proper nutrition for babies. This can increase the mother's compliance in implementing the practice of giving healthy solid food. (Ministry of Health, 2022)

Continuing education programs also have a positive impact on improving the health of babies. Regular education can increase mothers ' awareness of the importance of nutrition in early life. In addition, mothers can also get the latest information on healthy baby feeding practices. Thus, educational programs have an important role in improving the quality of children's health. (WHO, 2021)

The study also shows that community-based intervention approaches can have a significant impact on infant health. Programs conducted through basic health care facilities such as health centers allow interventions to reach the wider community. In addition, posyandu activities can be an effective means of delivering education on MPASI provision. This approach is very important in supporting efforts to improve the health of children in the community. (Ministry of Health, 2022)

Giving the right MPASI is not only related to nutritional content but also to the texture and frequency of feeding. The food given should be in accordance with the age and digestive ability of the baby. The introduction of new foods should be gradual so that the baby can adapt well. In this way, the risk of indigestion in the baby can be minimized. (WHO, 2021)

Researchers assume that the success of the intervention in this study is influenced by the method of assistance conducted directly to the mother. Demonstrations of MPASI processing help mothers understand how to prepare baby food in a practical way. In addition, monitoring carried out during the study allows mothers to obtain guidance on an ongoing basis. This most likely contributes to a decrease in the frequency of digestive disorders in infants.

Researchers also assume that the use of foods containing prebiotics in MPASI contributes to the health of the baby's digestive tract. These foods help increase the growth of good bacteria in the intestine. This condition helps maintain the balance of the gut microbiota so as to reduce the risk of digestive disorders. Thus, the combination of education and nutrition intervention provides a more optimal impact.

Overall, the results of this study indicate that the assistance of midwives in the provision of solids containing prebiotics has a positive impact on the digestive health of infants. The interventions provided not only improve maternal knowledge but also improve infant feeding

practices. Changes in the mother's behavior ultimately have an impact on reducing the frequency of digestive disorders in infants. Thus, the mentoring approach can be an effective strategy in maternal and child health programs.

The results of this study are in line with various studies showing that nutrition education interventions involving health workers can improve infant feeding practices. Mentoring programs that are carried out on an ongoing basis can improve the quality of MPASI provision in the community. This shows that education-based interventions have great potential in improving infant health. Therefore, similar programs need to be developed more widely. (Pratiwi et al., 2022)

Overall, this study provides evidence that the intervention of midwives in the provision of complementary foods containing prebiotics is an effective approach in reducing the frequency of digestive disorders in infants. This intervention has a great power of influence and therefore has the potential to be applied in public health programs. With the support of health workers, mothers can acquire the knowledge and skills necessary to provide healthy baby food. This effort is expected to improve the quality of health of infants on an ongoing basis.

CONCLUSIONS

The results showed that the assistance of midwives in complementary feeding containing prebiotics proved effective in reducing the frequency of digestive disorders in infants aged 6-12 months. The average frequency of digestive disorders in the intervention group decreased significantly from 3.1 ° 1.2 times/week to 1.2 ° 0.8 times/week, while in the control group the decrease was relatively small, namely from 3.0 ° 1.1 times/week to 2.6 ° 1.0 times/week. Bivariate analysis showed a significant effect of midwife assistance to decrease the frequency of digestive disorders ($p = 0.001$), with Cohen's d value of 0.88 indicating a large intervention effect. These findings confirm that the direct involvement of health workers can improve the practice of proper complementary feeding and have a positive impact on the digestive health of infants.

This study also recognizes that the success of the intervention is not only influenced by the assistance of midwives, but also by the active participation of mothers in implementing the recommendations for complementary feeding at home. Consistent assistance helps improve the knowledge and skills of mothers in choosing and providing complementary foods that suit the needs of the baby. Thus, collaboration between health workers and families is an important factor in supporting the baby's digestive health. Although the results showed a significant positive effect, the study had some limitations. The limited number of samples, namely only 60 mothers in the work area of the Payakumbuh City Health Center, led to the results of the study can not be generalized widely. In addition, other factors that can affect the frequency of digestive disorders, such as variations in the type of food other than prebiotic complementary feeding, environmental sanitary conditions, and the baby's medical history, have not been fully controlled in this study.

This study also recognizes that the measurement of digestive disorders is still based on the mother's report, thus allowing subjectivity in the assessment of the frequency of disorders experienced by infants. Therefore, subsequent studies are recommended to use more objective

measurement methods and involve periodic clinical monitoring so that the results obtained are more accurate. Going forward, follow-up studies are expected to involve larger sample sizes, wider coverage areas, and longer duration of intervention to strengthen the validity of the findings. In addition, the development of midwife assistance programs based on prebiotic complementary feeding education can be one of the promotive and preventive strategies in improving the digestive health of infants in the community.

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