Open Access Indonesian Journal of Medical Reviews

Journal Homepage: https://hmpublisher.com/index.php/OAIJMR

Post-partum Mothers' Knowledge Related to Vitamin A Consumption in Tanjung Uncang Health Center Batam City in 2021

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ARTICLE INFO

Keywords:
Post-partum
Pregnancy
Vitamin A
Nutrition
Observational study

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All authors have reviewed and approved the final version of the manuscript.

https://doi.org/10.37275/OAIJMR.v2i3.186

A B S T R A C T

This study aims to determine the relationship between knowledge of postpartum mothers and the behavior of consuming vitamin A capsules in the working area of Tanjung Uncang Public Health Center, Batam city in 2021. This study used a cross sectional design. The research was conducted in September 2021 in the working area of the Tanjung Uncang Health Center UPT, Batam city. The sampling technique used is simple random sampling technique. Research respondents consisted of 85 mothers in the postpartum period. Most of the respondents have less knowledge (50.6%). Meanwhile, the behavior of consuming vitamin A during the puerperium was considered good (52.9%). Based on chi-square analysis, p value = 0.015 (p <0.05), so it can be concluded that there is a relationship between knowledge of postpartum mothers and behavior of consuming vitamin A capsules. In conclusion, most of the mothers during the postpartum period have less knowledge and consumption behavior. vitamin A during the good puerperium. There is a relationship between knowledge and behavior in consuming vitamin A capsules during the puerperium.

1. Introduction

The postpartum period begins when the baby is born or the placenta comes out and ends when the uterine organs return to their pre-pregnancy state. The puerperium (puerperium) lasts for approximately 6 weeks after delivery, which is a critical period in the mother's life. During the puerperium, there are several changes, including physical and psychological changes, the uterus shrinks, milk production and changes in body systems during pregnancy. The postpartum period is important because it is a critical period for both mother and baby. It is estimated that 60% of maternal deaths due to pregnancy occur after delivery and 50% of postpartum deaths occur after the first 24 hours.[1]

One of the determinants of achieving national development is the development of the health sector and health policy is a written rule in the health sector that affects the success rate of development in the health sector. The health status of a country is determined by several indicators, one of which is the maternal mortality rate (MMR). The direct causes of maternal death are bleeding 60-70%, puerperal infection 20-30% and deaths due to abortion and prolonged labor 10-20%. Infection during the puerperium is the cause of maternal mortality (MMR).[2,3]

Vitamin A deficiency (VAC) is one of the nutritional problems that are still found in the community. The results of the 2006 micronutrient study conducted in 10 provinces revealed that the prevalence of

xerophthalmia was 0.13% and the serum retinol index <20 g/dL in children under five was 14.6%. Thus, the activity of giving vitamin A (supplementation) still needs to be continued not only for toddlers but also for postpartum mothers because babies will depend on vitamin A contained in breast milk.[4,5]

Recognizing the importance of vitamin A supplementation, the International Vitamin A Consultative Group (IVACG) recommends that 100% of postpartum women receive high-dose vitamin A capsules (200,000 IU). Vitamin A capsules are given 2 times in a row, namely one red vitamin A capsule (200,000 IU) immediately after delivery and one capsule the next day at least 24 hours after the first capsule.[5]

VAC does not only have an impact on eye disorders (xerophthalmia, keratomalacia, night blindness, bitot's spot) because vitamin A is also an antioxidant that can neutralize free radicals that cause cell and tissue damage, and boost the immune system. Therefore, vitamin A deficiency (VAC) can cause infants/toddlers to be susceptible to infectious diseases such as ARI (acute respiratory infection). A study conducted on children aged six months whose mothers received vitamin A capsules after delivery showed that there was a decrease in the number of cases of fever in these children and a faster recovery time when they were exposed to ARI. When children who get enough vitamin A get diarrhea, measles, or other infectious diseases, these diseases do not easily become severe which can be life-threatening for the child.[6]

The deficiency of vitamin A in postpartum women will lead to a decrease in the body's resistance to both postpartum women. Vitamin A is useful for reducing mortality and morbidity because vitamin A can increase the body's resistance to infectious diseases. Therefore, vitamin A is very important for the health and survival of the mother during the puerperium.[7]

Breastfeeding women have a higher need for vitamin A, and the risk of deficiency is exacerbated by low nutritional intake. The World Health Organization (WHO), the United Nations, and the International Vitamin A Consultative Group (IVACG) recommend giving high doses of vitamin A (200,000 IU) to 400,000 IU until the 60th day after delivery in areas where malnutrition is endemic.[6]

Indonesia has implemented a program of giving two capsules of vitamin A to postpartum mothers since 1996, with a high dose of 200,000 IU given after the baby is born, one capsule up to 6 weeks postpartum. One of the essential nutrients that babies, toddlers, and postpartum mothers need is vitamin A. Breast milk serves to help the baby's growth and development and body resistance to disease.[8]

The main cause of retinol deficiency experienced by mothers in developing countries is the low concentration of supplement A in breast milk, the effect of high-dose vitamin A supplementation in postpartum mothers is an effective strategy in improving vitamin A status in infants through breastfeeding. This study aims to determine the relationship between the knowledge of postpartum mothers and the behavior of consuming vitamin A capsules in the Tanjung Uncang Public Health Center, Batam city in 2021.

2. Methods

This study used a cross-sectional design. The research was conducted in September 2021 in the working area of the Tanjung Uncang Health Center UPT, Batam city. The sampling technique used is simple random sampling technique. Research respondents consisted of 85 mothers in the postpartum period. The inclusion criteria of respondents were women aged 20-40 years, currently in the postpartum period and willing to participate in the study. This research has received ethical approval from the ethics committee of the Faculty of Medicine, Universitas Batam. This research instrument uses a questionnaire containing questions to obtain information or answers with a total of 20 questions. Data were analyzed using SPSS for Windows version 25.0 software.

3. Results and Discussion

Table 1 shows that most of the respondents have less knowledge (50.6%). Meanwhile, the behavior of consuming vitamin A during the puerperium was considered good (52.9%). Based on table 2, the p-value = 0.015 ($p < 0.05$), so it can be concluded that there is a relationship between postpartum mothers' knowledge and behavior in consuming vitamin A capsules.

Table 1. Frequency of knowledge and behavior of respondents.

Variable	Frequency (%)
Knowledge	
Less	43 (50.6%)
Good	42 (49.4%)
Behavior	
Less	40 (47.1%)
Good	45 (52.9%)

Table 2. The relationship between post-partum mother's knowledge and vitamin A consumption behavior.

Knowledge	The behavior of taking vitamin A						P-Value
	Less		Good		Total		
	F	%	F	%	F	%	
Less	25	62,5%	17	37,4	43	100	0,015
Good	15	37,5%	28	61,4	42	100	
Total	40		45		85		

The lack of knowledge of postpartum mothers about vitamin A may be due to the lack of information obtained by postpartum mothers regarding vitamin A. This is reinforced by the results of the study which found that of the postpartum mothers who had received information about vitamin A as many as 37 (33.6) of them obtained information from the mass media, health workers and there were 48 (56.4%) postpartum mothers who had not never received counseling from health workers.

Vitamin A is an essential nutrient for humans because this nutrient cannot be made by the body, so it must be supplied from the outside. The body can obtain vitamin A through foodstuffs such as spinach, cassava leaves, ripe papaya, liver, egg yolks, and breast milk. Then it can also be obtained through high-dose vitamin A capsules (Intami, 2020). Vitamin A is found in animal foods, while carotene is mainly found in plant foods. Sources of vitamin A are liver, egg yolks, milk (in the fat), and butter.

Based on the results of the study, the behavior of consuming vitamin A contained 85 respondents, results obtained were, that respondents who had less behavior in consuming vitamin A capsules were 40 (47.1%), respondents who had good behavior consumed vitamin A capsules were 45 (52.9%). Giving vitamin A is one of the behaviors towards nutritional fulfillment (nutrition behavior) which is a response to knowledge, attitudes, perceptions, and practices. This is also consistent with studies that show that behavior is influenced by several factors, including knowledge, education, support from health workers, facilities and infrastructure, as well as laws or regulations.[9]

Steps to increase the coverage of vitamin A capsules need to be done gradually. This step is for example holding an activity program for the consumption of vitamin A in postpartum mothers (e.g. training for posyandu cadres, dropping vitamin A to more affordable health services for the community/expanding distribution channels, or health promotion activities). that the nutrition program for vitamin A focuses more on sweeping infants/toddlers who drop out of vitamin A. In addition, it may be necessary to provide vitamin A by local practice midwives. Furthermore, most postpartum mothers are housewives who have more time at home than working mothers, so the possibility of mothers participating in health promotion activities

is still very possible.

The results of statistical tests with chi-square obtained a p-value = 0.015 <0.05, meaning that there is a relationship between knowledge and behavior in consuming vitamin A capsules during the puerperium in the working area of UPT Puskesmas Tanjung Uncang in 2021. Giving vitamin A capsules to postpartum mothers must be done by health workers and ways to reduce or prevent vitamin A deficiency so that there is no vitamin A deficiency during the puerperium in Indonesia.

Vitamin A plays an important role for pregnant and lactating women, it is associated with the incidence of anemia in the mother, being underweight, malnutrition, increased risk of infection and reproductive diseases, and reduced maternal survival for up to two years after delivery. The need for vitamin A in postpartum women increases to 850 Retinol Equivalent (RE) per day. Based on the latest data, the median intake of vitamin A for mothers in Indonesia is only 150 RE for mothers living in urban slum areas and only 200 RE for mothers living in rural areas. By calculating the average breastfeeding period of 18-20 months for each child and the current fertility rate, it is estimated that a mother will need high vitamin A in 1/3 of the period of childbearing age. This is related to breast milk (ASI), which is the best source of vitamin A for babies. Therefore, it is very important for a mother to increase the intake of foods containing vitamin A so that the vitamin content in breast milk increases. Mothers during puerperium are recommended to consume vitamin A as much as 2x 200,000 IU during the puerperium.[10]

Efforts that need to be made to increase respondents' knowledge about compliance with vitamin A tablet consumption are health counseling from health workers regarding compliance with vitamin A tablet consumption, using language that is easy to understand so that respondents can understand well, and respondents are also expected to actively seek information about compliance with vitamin A tablet consumption in order to increase the knowledge of respondents who are not good. If it is only passive, it will have a bad impact on their level of knowledge. For respondents who already have good knowledge, they must always maintain and remember the materials that have been given previously, so that they know the problem of compliance with vitamin A tablet consumption. The indicator used to evaluate the success of vitamin A supplementation in postpartum mothers is the coverage of vitamin A capsule supplementation according to the target of giving capsules, as well as decreasing morbidity and mortality.

4. Conclusion

Most mothers during puerperium have poor knowledge and good behavior in consuming vitamin A during the puerperium. There is a relationship between knowledge and behavior in consuming vitamin A capsules during the puerperium.

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