



Utilization of Local Papaya In Second-trimester Pregnant Women Toward The Breast Milk (ASI) Quantity In Kontunaga District, Muna Southeast Sulawesi 2019

Sutrisna Altahira

Prodi D III Kebidanan Politeknik Baubau
Email : sutrisnaaltahirah@gmail.com

Abstrak

Air susu ibu (ASI) merupakan asupan nutrisi yang paling baik untuk bayi pada bayi 0 – 24 bulan. Pada ibu hamil trimester II produksi ASI sudah mulai di persiapkan dalam tubuh ibu selain hormone, asupan nutrisi seperti buah – buahan dibutuhkan dalam proses pembentukan ASI dalam tubuh. Kuantitas ASI (Air Susu Ibu) sangat dibutuhkan untuk memenuhi kebutuhan bayi yang semakin meningkat seiring dengan pertumbuhan dan perkembangan bayi. Maka dari ini kebutuhan nutrisi yang cukup sangat dibutuhkan oleh ibu yang hamil dan mempersiapkan diri untuk memberi ASI kepada bayi. Pada ibu hamil trimester II produksi ASI sudah mulai di persiapkan dalam tubuh ibu ,selain hormon asupan nutrisi seperti buah – buahan sangat dibutuhkan dalam proses pembentukan ASI dalam tubuh. Laktogagum yang terkandung dalam buah papaya sangat bermanfaat dan meningkatkan produksi ASI. Penelitian ini bertujuan untuk mengetahui pemanfaatan buah papaya lokal (carica Papaya) pada ibu hamil Trimester II terhadap Kuantitas ASI di Kecamatan Kontunaga Kabupaten Muna Provinsi Sulawesi Tenggara. Pada penelitian ini dilakukan sebuah studi kuantitatif dengan metode quasi eksperimen, dilakukan dengan memberikan intervensi buah papaya (carica papaya) kepada kelompok kasus sebanyak 25 orang dan kelompok tanpa intervensi sebanyak 25 orang yang didapatkan dengan cara total sampling. Dari hasil analisis, didapatkan pengaruh intervensi buah papaya (carica papaya) pada ibu hamil Trimester II terhadap kuantitas ASI hal ini ditunjukkan kuantitas ASI perah > 90 ml sekali perah dari yang biasanya hanya > 60 ml sekali perah dengan nilai $P < 0,05$ maka berarti ada peningkatan yang signifikan. Dengan demikian dapat dinyatakan bahwa pemberian papaya (carica papaya) pada ibu hamil selama kehamilan Trimester II dapat meningkatkan kuantitas ASI.

Kata Kunci : buah papaya lokal, ibu hamil trimester II, kuantitas ASI (air susu ibu).

Abstract

Breast milk (ASI) is the best nutritional intake for infants at 0-24 months. In the second-trimester pregnant women, breast milk production has begun to be prepared in the mother's body besides hormones. The intake of nutrients such as fruits is needed in the process of forming breast milk in the body. Quantity of ASI (Breast Milk) is needed to fulfill the necessity of the baby which is increasing along with baby's growth and development. Therefore, the need for adequate nutrition is needed by pregnant women and preparing to breastfeed the baby. In the second-trimester pregnant women, milk production has begun to be prepared in the body of the mother. The intake hormones such as fruits are needed in the process of forming milk in the body. Lactogagum contained in papaya is very beneficial and increases milk production This research aims to determine utilization of local papaya (carica papaya) in trimester II pregnant women with the quantity of breast milk in the Kontunaga District, Muna Regency, Southeast Sulawesi Province. In this study a quantitative study with a quasi-experimental method was carried out by giving interventions of papaya (carica papaya) to 25 case groups and 25 groups without intervention were

obtained by total sampling. From the analysis results obtained the effect of intervention papaya (*carica papaya*) on Trimester II pregnant women on the quantity of breast milk, it is shown by the quantity of ASI > 90 ml once squeezed milk which is usually only > 60 ml squeezed milk, with a P value < 0.05, it means there is an increase significant. Thus it can be stated that administration of papaya (*carica papaya*) to pregnant women during Trimester II pregnancy can raise the quantity of breast milk

Keywords: local papaya, trimester II pregnant women, quantity of ASI (mother's milk).

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INTRODUCTION

Pregnancy is something that is very desired by a woman who is married and it is very physiological and experienced by women who are married. Pregnancy is divided into three stages namely, Trimester one (age of 0-12 weeks), second-trimester (age of 13-pregnancy 28 weeks), third trimester (29-40 weeks gestational age) (1). Entering the age of the second-trimester of pregnancy, life changing of a pregnant woman is even better. If previously accompanied by complaints of morning sickness, nausea to vomiting, will decrease or disappear altogether, the desire to eat becomes normal again or even increase and cause uncontrolled weight gain, resulting in abnormalities such as hypertension in pregnancy or preeclampsia and diabetes mellitus (2). In the second-trimester, nutritional deficiencies can interfere the formation of neuroblasts that can cause a reduction in the size of the fetal head resulting in microcephaly associated with decreased intelligence. Besides, it will cause degenerative diseases such as coronary heart disease, diabetes mellitus, and cholesterol disease earlier than the fetus is adequately nourished while in the mother's stomach (2).

Lactogagum contained in papaya is a drug that can increase or facilitate the expenditure of milk. Synthetic lactagogum is not widely known

and is relatively expensive. This causes the need to look for alternative lactagogum drugs. The efforts to increase milk production can be done by doing breast care earlier and routinely, improving breastfeeding techniques, and consuming foods that can affect milk production. Some of them are efficacious as lactagogum such as *katuk*, *lampes*, *anise*, *bayam tanduk*, *bidara upas*, *blustru*, *daun dadap*, black cumin, moringa, jackfruit, *patikan kebo*, *pulai*, curcumin, *turi*, and unripe papaya. Papaya as one of the fruits that contains lactagogum is a tropical fruit known as *Carica papaya*. Increasing milk production is influenced by the presence of polyphenols and steroids that affect the prolactin reflex to stimulate the alveoli that are active in the formation of breast milk (34).

From this background, the researcher is interested in knowing the benefits of papaya in the second-trimester pregnant women toward the quantity of breast milk (ASI). The focus of the problem in this study is; How to use local papaya fruit in second-trimester pregnant women toward the Quantity of ASI (ASI) in Kontunaga District, Muna Regency, Southeast Sulawesi in 2019.

MATERIALS AND METHODS

This type of this research is quantitative research with a quasi-experimental method. The population in this study was all pregnant women

in second-trimester gestational age at Waara public health centre and Mabodo public health centre with a total of 50 people obtained by total sampling. Samples were pregnant women who lived around Waara public health centre and Mabodo public health centre whose gestational age entered the second-trimester. The research technique was carried out by giving interventions and without of papaya (*carica papaya*) to case groups, namely trimester II pregnant women as many as 25 people. Data analysis was obtained from independent sample t-test analysis and conducted by using PSS program. While, data processing write the results of research then interpreted and produced in the form of narration.

RESULTS AND DISCUSSION

Results

Based on the research result, the community of Kontunaga sub-district in terms of consumption of vegetables and fruits, still use local fruits and vegetables that can be bought at traditional markets or can be picked in the yard or in privately owned gardens. Furthermore, in pregnant women, the consumption of green vegetables such as papaya is a must to be consumed every day. Consumption of local papaya fruit is considered less because the supply of ripe papaya in the traditional market is rather lacking, so the researcher must provide papaya from the next village (Waara village and the bougenvil farmer group in Kondongia village).

Table I. Distribution of sample distribution

Group	Public Health Center	Sample
Intervention	Waara	13
Control	Waara	12
Intervention	Mabodo	12
Control	Mabodo	13

Source: Primary Data 2019

The sample group was divided into a control group and a case group, in this study conducted in 2 public health centre (*Puskesmas*),

namely Mabodo public health centre and Waara public health centre and it is divided into 2 as an intervention and control groups. In general, people in the Kontunaga sub-district have been using local papaya since their ancestors period.

Table 2. Characteristics of Respondents in Kontunaga District in 2019

respondent characteristics	Intervention group		Control group	
	n	%	n	%
Group of age				
25-30	10	40	12	48
31-38	15	60	13	52
Upper arm circumference				
22-24	22	88	18	72
25-28	3	12	7	28
Weight				
57-64	13	52	14	56
65-73	12	48	11	44

Primary Data Sources 2019.

Based on table 2, pregnant women who have age 25-30 years (intervention group) as much as 40% while age 31-38 as much as 60%, in the control group who have age 25-30 years (48%) and age 31-38 (52%). This states that there are some pregnant women who actually have an at-risk age to get pregnant, but there are still some of them say that many children have a lot of luck so that age at risk is not a concern.

The Effects of Local Papaya Utilization on Second-trimester Pregnant Women toward The Quantity of ASI

Based on table 3 states that 80% of the second-trimester pregnant women in the intervention group have a large quantity of breast milk, this shows that there is an influence of local papaya giving to second-trimester pregnant women on the quantity of ASI, P value (0,000) $p < 0.05$. This shows a significant effect of papaya administration on the quantity of breast milk. The observation result by the researcher in every week, every second-trimester pregnant woman

consumes 100 grams of local papaya, after consuming about 5 months and giving birth on days 3 to 7, the researcher take measurements of breast milk using a breast milk pump. The average mother who consumes local papaya has 70 ml of breast milk per milk (5,6,7).

Table 3. The Effect of Utilization of Local Papaya Fruit in Second-trimester pregnant women on Quantity of ASI

second-trimester pregnant women	Breast Milk quantity		Presentation	P Value
	enough	Many		
Intervention	20%	80%	100%	0,000
Control	72%	28%	100%	

Vegetable and fruit plants are highly utilized by the Kontunaga sub-district community, this is due to the vast yard around the house and the existence of a privately owned garden. Therefore, the community uses land to grow vegetables and fruits such as papaya fruit. The community of Kontunaga sub-district utilizes papaya as an ordinary vegetable and the fruit is consumed after eating as a dessert, even pregnant women consume papaya vegetables as the daily menu. The content of lactogagum in papaya can increase milk production (ASI), so pregnant women who entering the second-trimester pregnancy are encouraged to consume papaya for preparing an abundant increase in breast milk production during the next breastfeeding process (during the breastfeeding process). For the babies, as is the case for pregnant women living in the Kontunaga sub-district they consider that besides being the best food for breast milk it is also a medicine for the babies (8,9,10)

Milk sterility needs to be thought, because in the process of making milk and put it in a bottle there are many possibilities that milk is contaminated with other compounds, whether from the milk itself has been contaminated and the water used is not necessarily sterile. The important thing is the dot bottles used for drinking

a baby is also not necessarily free from germs. Because breast milk has many advantages of important substances contained in it, it can make the baby develop optimally. Breast milk also has other advantages for the formation of the baby's immune system (11,12,13).

The immune system is a very important system for the babies, the better child's immune system will make the child more hurt. Compared to the babies who are not breastfed, the babies who are breastfed have a much better immune system or immune system. Breast milk is the baby's main food, besides its use as a main food. Breast milk also plays a role in bringing the soul between mother and child closer. It is no longer a secret that children who are exclusively breastfed from mothers will tend to have a better closeness and relationship than babies who are not breastfed. When compared to breast milk with canned products or formula milk for babies, breast milk is still superior and unbeatable. It is caused breast milk has all the important substances needed by babies such as; DHA, AA, Omega 6, lactose, taurine, protein, lactobacillus, vitamin A, colostrum, fat, iron, lactoferrin and lysozyme are all in the right size and composition for babies. Therefore breast milk is far superior to any milk. In the research of Sri BanunTitiIstiqomah et al. Stating that there is an influence between papaya consumption on smooth milk production, this has similarities with this study which states that there is an influence on local papaya utilization on breast milk production, although there are several other factors that are affected such as breast care. This research shows that the use of local papaya in the second-trimester pregnant women has a very significant effect on the amount of breast milk. The second-trimester pregnant women consume papaya during pregnancy and before giving birth, so that when the process of breastfeeding is ready / coming out smoothly and the amount exceeds 70 ml of milk (14,15).

This is caused by the content of lactogagum in papaya which increases milk production, and also from the sample of second-trimester pregnant women have no problems entering milk. Therefore milk can come out smoothly and in large quantities. (This study is in line with research by Istiqomah, et al. 2014 about the effect of young papaya on the smooth production of breast milk in nursing mothers. Proving that from the results of 20 respondents who were given young papaya fruit has increased milk production seen from the frequency of breastfeeding infants (8,16).

This study is in line with the study of the Effects of Young Papaya Fruit Water Extract (*CaricaPepeaya L*) on the Histological Picture of Lactation Mamma Mancit Lactation in 2011, the results of the study showed that the average diameter of the mammary lactation mammary girth in the parent of the unripe papaya fruit extract group negative control. Papaya fruit is a type of plant that contains lactagogum which has the potential to stimulate the hormone oxytocin and prolactin such as alkaloids, polyphenols, steroid flavonoids and other substances most effective in increasing and facilitating milk production. The hormonal prolactin reflex to produce breast milk, when the baby sucks the mother's nipples, there are neorohormonal stimuli in the mother's nipple and areola. This stimulation is transmitted to the pituitary through the vagus nerve, then to the anterior lobe. From this lobe will secrete the hormone prolactin into the bloodstream and arrive at the glands of the milk maker. This tendency will stimulate to produce breast milk (8,16,14,17).

CONCLUSION AND RECOMMENDATIONS

From this study it can be concluded that there are benefits of providing local papaya in second-trimester pregnant women in increasing the quantity of breast milk (ASI). This is indicated by the

value of $p < 0.05$ which indicates that there is a very. For the community can increase the utilization of vegetables and fruit plants that can be easily found near the residence, while the academicist can add scientific references about the benefits of papaya on the amount of milk productions.

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