



KNOWLEDGE, ATTITUDE AND BEHAVIOR OF BABY CAREGIVER'S ABOUT MANAGEMENT OF DAIRY MILK

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ABSTRACT

Breast milk is a staple food for babies. The World Health Organization (WHO) and the Indonesian Pediatric Association (IDAI) recommend that exclusive breastfeeding for 6 months be continued for up to 2 years. Daycare is one of the facilities provided to help mothers in providing breastfeeding while being at work. This study was undertaken to document the knowledge, attitude, and behavior among baby caregivers and identify the related factors influencing the behavior of baby caregivers in breast milk management. A cross sectional study was conducted to collect self-administered questionnaires from 60 baby caregivers in 2018. The validity test using the product moment obtained a value of 0.886 while the r table was 0.444, so this questionnaire was declared valid. Reliability test using Cronbach's alpha obtained a value of 0.660. Bivariate analysis test was performed using the Spearman's rank correlation statistical test. Multiple regression models were used to analyze the association between knowledge, attitude, and breast milk management behaviors of baby caregivers. 42 of the respondents (70%) had a good level of knowledge on breast milk management, while 49 (81.66%) were good in terms of attitude, and 34 (56.77%) had satisfactory breast milk management behavior. Correlation of caregivers' breast milk management knowledge, attitude, and behavior is statistically significant shown by the F-test result of $0,014 < 0,05$. From the test results, it is found that there is an influence between knowledge and caregivers' breast milk management behavior ($p \ 0,000 < 0,05$), and between knowledge and caregivers' breast milk management attitude ($p \ 0,001 < 0,05$), but not between attitude and caregivers breast milk management behavior ($p \ 0,395 > 0,05$). The determining factors of baby caregivers' breast milk management behavior was knowledge. Knowledge and attitude did not affect caregivers' behavior in conducting breast milk management equally. Adequate knowledge is the major factor of baby caregivers from favorable breast milk management attitude and behavior.

Keywords: attitude; baby caregivers; behavior; breast milk management; knowledge

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INTRODUCTION

Breast milk is a staple food for babies. *World Health Organization* (WHO), *American Academy of Pediatrics* (AAP), *American Academy of Family Physicians* (AAFP) and *Indonesian Pediatrician Association* recommends exclusive breastmilk for 6 months and continued for up to 2 years (WHO, 2019), (AAP, 2020), (AAFP, 2014), (Ananta *et al.*, 2016). Daycare is one of the facilities provided to help mothers in child care while working. They can keep babies aged 3 months to 6 years old. Daycare consists of 3 criteria of foster children, including children aged 3 months - 2 years, 3-5 years and 6 - 7 years. Mothers should be able to choose daycare that supports exclusive breastfeeding programs and supports breastfeeding management (Glynn, Farrell and Wu, 2013). So

that the baby is guaranteed to get only expressed breast milk without it being mixed with other foods or drinks (Boushey and Wright, 2004).

The results of the 2012 Indonesian Health Demographic Survey (IDHS) showed a decrease in the number of babies who received exclusive breastfeeding by up to 7.2%. At the same time, the number of infants under 6 months who were given formula milk increased from 16.7% in 2002 to 27.9% in 2007 (ICF, 2013). Meanwhile, The United Nations Children's Fund (UNICEF) concluded that exclusive breastfeeding for the first 6 months coverage in Indonesia is still far from the world average of 38%. According to data from the Health and Nutrition Section of the Yogyakarta City Health Office, the coverage of exclusive breastfeeding has increased, even though it has not met the target of the Yogyakarta City Health Office's Strategic Plan of 60% and the Ministry of Health's Strategic Plan of 80%. Exclusive breastfeeding coverage in 2011, 2012, and 2013 were 35.51%, 34.7%, and 51.6% respectively and rose to as much as 54.9% in 2014 (Nurhayati, Ilyas and Murhan, 2015).

One of the factors that caused the decrease in exclusive breastfeeding was the busy work of mothers who work outside the home. The 2012 Indonesian Health Demographic Survey (IDHS) shows that 57% of the workforce in Indonesia are women (ICF, 2013). Working mothers only get very short maternity leave. Therefore, the length of time breastfeeding also affects exclusive breastfeeding for babies. However, currently working mothers can still provide milk for their babies, namely by expressing them. Expressed breast milk or ASIP is obtained by squeezing milk from the breast and then placing it in containers to be given to the baby later. Dairy milk is generally given when the baby is away from the mother for a long time.

Mothers should be able to choose daycare that supports exclusive breast milk programs and supports breast milk management. So that the baby will be guaranteed to only get breastmilk without being given food or other drinks. However, breast milk management in some of the daycares, especially in Pleret and Banguntapan areas, has not been in accordance with the standard operational procedures for breast milk management according to IDAI. As shown by the results of observations in February 2017 conducted by researchers on the management of expressed breast milk, the caregiver took out the expressed milk from the refrigerator, then immediately put it in boiling hot water until the milk became warm and proceeded to give it to the baby in his care, even though the milk given should be the one that came straight out of the bottle. The refrigerated milk should simply be warmed by placing the bottle in a container filled with warm water for 15 minutes while shaking it slowly. It was also found that the caregiver was not precise in the process of thawing frozen breast milk from the refrigerator. If the warming does not comply with the standard, it will cause the milk content given to the baby to change or cause hot spots in the milk that cause burns in the baby's mouth and throat.

This study was undertaken to document the knowledge, attitude, and behavior among baby caregivers, and identify the related factors influencing their behavior in breast milk management. With this research, it is hoped that an overview of daycare owners related to the knowledge, attitudes and behavior of their baby caregivers will be provided. Therefore, it is hoped that the foundation owners will provide proper training to baby sitters in the management of expressed breast milk.

METHOD

A cross sectional study was conducted in July 2018. We invited all special baby caregivers in daycare around the region of Bantul to participate in this study. Eight daycares agreed to participate in this research. Baby caregivers who manage the breast milk in daycare from 215 baby caregivers, and used *purposive sampling* with criteria agreed to participate in this research, we found 60 baby caregivers. The procedure, content of the survey and a questionnaire were explained to the baby caregivers and informed consent was obtained from those baby caregivers who agreed to participate. Sixty baby caregivers complete the questionnaire. The questionnaire has been tested for validity and reliability. The validity test using the product moment obtained a value of 0.886 while the r table was 0.444, so this questionnaire was declared valid. Meanwhile, the reliability test using Cronbach's alpha obtained a value of 0.660 which indicates that the questionnaire is reliable.

Data processing started from input editing, coding, to tabulation stages. Bivariate analysis test was done using the Spearman's rank correlation statistical test. Multiple regression models were used to analyze the association between breast milk management knowledge, attitude, and behaviors of baby caregivers. This research has obtained eligibility from health research ethics committee Institute of Health Science Surya Global Yogyakarta with number 028/KEPK/SG/05/2018.

RESULTS

Baby Caregivers Demographic

Demographic characteristic of baby caregivers consisted of age, education level, length of employment, economic state, time spent at work per day, number of babies cared for, number of baby still exclusively breastfed, and training followed. Sample in this research are baby caregivers in Pleret, Bantul.

Table 1.
Demographic characteristic of baby caregivers (n=60)

Characteristic	f	%
Age		
17 - 20 year	0	0
21 - 30 year	12	20
31 - 40 year	21	35
41 - 50 year	27	45
>50 year	0	0
Highest Level of Education		
SD	3	5
SMP	6	10
SMA	33	55
PT	18	30
Length of employment		
1 - 3 year	18	30
4 - 6 year	9	15
> 6 year	33	55
Average Income		
< Rp 1.000.000,00	48	80
Rp 1.000.000,00- Rp 2.000.000,00	12	20
Rp 2.000.100,00- Rp 3.000.000,00	0	0
Rp 3.000.100,00- Rp 4.000.000,00	0	0
>Rp 4.000.100,00	0	0
Average Expenditure		
< Rp 1.000.000,00	15	25
Rp 1.000.000,00- Rp 2.000.000,00	33	55
Rp 2.000.100,00- Rp 3.000.000,00	12	20
Rp 3.000.100,00- Rp 4.000.000,00	0	0
> Rp 4.000.100,00	0	0
Time spent at work in one day		
7 time	12	20
8 – 9 time	48	80
> 9 time	0	0
Number of babies cared for		
3 - 5	15	40
6-10	27	20
> 10	18	40
Number of babies still exclusively breastfed		
3 - 5	27	20
6-10	18	40
> 10		
Training that want followed		
Yes	0	0
No	60	100

Table 2.
Frequency of baby caregiver knowledge, attitude, and behavior (n=60)

Characteristic	f	%
Knowledge		
Less	6	10
Enough	12	20
Good	42	70
Attitude		
Less	4	7
Enough	7	12
Good	49	81
Behavior		
Less	23	38
Enough	34	57
Good	3	5

Factors Associated with Baby Caregivers of Breast Milk Management Behavior

Table 3.
Correlation Knowledge*Attitude, Knowledge*Behavior, Attitude*Behavior of Baby Caregivers (n=60)

Spearman rho	Knowledge*Attitude	Knowledge*Behavior	Attitude*Behavior
Correlation Coefficient	0,480	0,406	0,112
(Sig.(2-tailed))	0,000	0,001	0,395

Table 3 correlation test, data suggests that knowledge influence attitude and breast milk management behavior.

Table 4.
Correlation Knowledge *Behavior of baby caregivers with t-Test (n=60)

Model	Sig
Knowledge	0,004
Attitude	0,343

Table 4 shows the Sig value for knowledge is 0.004 <0.05, which means there is a variable of knowledge that significantly influences the behavior of baby caregivers in managing breast milk.

Table 5.
Correlation Knowledge and Attitude*Behavior of Baby Caregivers with F-test

Model	Sig
Regression	0,014 ^b

The data from table 5 shows that the variables of knowledge and attitude, together, have a significant effect on the behavior of baby caregivers in managing breast milk

DISCUSSION

Characteristics of Caregivers

1. The level of knowledge of baby caregivers about the management of breast milk

Based on Table 1, it is explained that the level of caregiver's knowledge about the management of breast milk in the day care of Bantul Yogyakarta region are mostly good, with as many as 42 out of 60 caregivers having such result. In this study respondents came from a variety of different backgrounds, for example, respondents, the last education of whom was Higher Education, were as many as 18 respondents. while as many as 33 respondents were high school graduates, 6 respondents were of junior high school education, and 3 respondents last attended elementary schools. Judging from the length of employment as a baby sitter, there were 18 respondents who have 1-3 years of working experience, 9 who have 4-6 years of experience, and 33 who have amassed more than 6 years of experience

This shows a person's experience of being exposed to something similar affects one's knowledge. In Nurhayati and Nurlatifah, (2018) the results showed that of the 49 respondents those with good knowledge are as many as 28 respondents (57,1%), and the majority of respondents are of junior high school education, numbering as many as 25 respondents (50.1%). The results of the P value ($0.036 < 0.05$) means there is a significant relationship between mother's knowledge about breast milk with the education of the mother.

2. Attitudes of caregivers about management of breast milk

Based on Table 1 in the study of the attitude of caregivers about the management of breast milk in Bantul Yogyakarta daycare, the results obtained show that the majority of the caregivers have a good attitude in breastmilk management, with as many as 49 of them in good category, 7 in sufficient category, and 4 in less than sufficient category. Based on Azwar's (2015) theory, it is very appropriate that attitude has 3 main components in forming or determining one's attitude, namely the cognitive component or belief of a person, the affective component or emotional life, and the behavioral component.

3. Behavior of baby sitters about management of breast milk

Based on Table 1 in the study of the caregiver's behavior about the management of breast milk in the daycare area of Bantul, Yogyakarta, it was found that 23 respondents had poor behavior, 34 had moderate behavior, and 3 were in good behavior. Even so, 3 caregivers who manage dairy milk well are not enough to be bragged about, it is necessary that the stakeholders conduct an evaluation, so that it does not affect the quality of breastfeeding of their caregivers.

Factors Associated with Baby Behavior Baby Caregivers of Breast Milk Management

From the results of the correlation test conducted, the data obtained showed that the knowledge of baby caregivers affect attitudes and behaviors in managing breast milk.

1. Relationship between the caregiver's knowledge about the management of breast milk and the behavior of implementing breast milk management

Based on Table 2, which shows the level of strength of the relationship between variables, the result between the knowledge and attitude variables towards the

management of dairy milk is signified with a value of 0.480, which, according to SPSS guidelines, is included in the criteria of having a sufficient relationship.

When viewed from the direction of correlation, the positive value is 0.480 which means that the two variables are unidirectional. Thus, it can be interpreted that the better a caregiver's knowledge, the better their attitude towards the management of dairy milk. If you look at the significance of the relationship between the two variables with a value of 0.000 that is smaller than 0.05, it means that there is a relationship between the knowledge and attitude variables.

This research's finding is in accordance with Ashkanani and Al-Sane, (2012) which showed that caregivers had weak knowledge and practice in relation to caring for the oral health of preschool children. Mother and caregivers with higher education had better knowledge and practice.

2. The relationship between the caregiver's knowledge about the management of breast milk with the behavior of implementing breast milk management

Based on Table 2, which shows the level of strength of the relationship between variables, the result between knowledge and behavior variables on the management of dairy milk is signified with a value of 0.406, which, according to SPSS guidelines, is included in the criteria of having a sufficient relationship.

When viewed from the direction of correlation, the positive value is 0.406 which means that the two variables are unidirectional. Thus, it can be interpreted the better a caregiver's knowledge, the better their behavior towards the management of dairy milk. If you look at the significance of the relationship between the two variables with a value of 0.001 that is smaller than 0.05, it means that there is a relationship between the knowledge and behavior variables.

Its same with (Wu *et al.*, 2017) who stated that inadequate knowledge is a major factor preventing caregivers from encouraging favorable oral health behavior. In this study, caregivers who have a higher level of knowledge will actively assist their children brushing their teeth and improve their attitude promoting the frequency of their brushing a child's teeth in this study.

3. The relationship between caregivers' breast milk management attitudes and behavior of breast milk and the behavior of implementing breast milk management

Based on Table 2, which shows the level of strength of the relationship between variables, the results between the attitude and behavior variables on the management of dairy milk is shown by a value of 0.112, which, according to SPSS guidelines, signifies a very weak relationship.

When viewed from the direction of correlation, the positive value 0.112 means that the two variables are unidirectional. Thus, it can be interpreted the better a caregiver's attitude, the better the behavior towards the management of dairy milk. If you see the significance of the relationship between the two variables, which is 0.395, it is greater than 0.05, meaning that there is no relationship between the attitude and behavior variable.

This is in contrast with Wu *et al.*'s (2017) research who observed that caregiver's behaviors have significantly correlated with attitude. Attitude was the key factor being more important than knowledge and dominantly influencing caregivers' oral health behavior.

4. Correlation between Variable

This multivariate test was conducted to analyze the relationship of variables with each other.

a. Partial T Test

The significance value of the knowledge variable is $0.004 < 0.05$. So it can be concluded that there is an influence of the caregiver's knowledge about the management of dairy milk on milk management behavior. The significance value of the attitude variable is $0.343 > 0.05$. So it can be concluded that there is no influence between the caregiver's attitude on milk management behavior.

b. F test

F test is performed to determine whether the knowledge and attitude variables simultaneously or jointly influence the caregiver's behavior in carrying out dairy milk management. Based on the results of the SPSS output, it is known that the Sig value in the F Test is $0.14 < 0.05$. Therefore, it can be concluded that the caregiver's knowledge and attitude do not equally affect the caregiver's behavior in carrying out milk management.

Seeing the results of the data obtained, high knowledge may not necessarily translate to good attitude and behavior in breast milk management. Nevertheless, between those variables, there is still a mutual relationship. Knowledge about the management of dairy milk is the main thing that needs to be clearly understood by the caregiver so that their breastmilk management is appropriate.

CONCLUSION

The results of the research that has been done concluded that the level of knowledge of baby caregivers about the management of breast milk in the majority of the respondents is high with 42 respondents (70%) being in the category. It also showed that attitude of caregivers about the breastmilk management among the majority of the respondents is good which is shown by the 49 respondents (81.66%) who belong in the category. And the behavior of baby caregivers in the management of breastmilk in the majority of the respondents are sufficient, with 34 of them (56.77%) tested as such.. Results of the bivariate correlation test between the relationship of the caregiver's knowledge about the management of breast milk and the behavior of the implementation of the management of breast milk yielded a value of 0.480, which means that the relationship is adequate. If the significance of the relationship between the two variables is observed, its value is 0.000, which is smaller than 0.05, which, in turn, means that there is a relationship between the knowledge and attitude variables. Correlation test between the caregiver's knowledge about the management of breast milk with the behavior of the implementation of the management of breast milk has a value of 0.406, which means the variables have a sufficient relationship. If you the significance of the relationship

between the two variables is observed, its value is 0.001 which is smaller than 0.05, meaning that there is a relationship between the knowledge and behavior variables.

The relationship between caregivers' attitudes about the management of breast milk with the behavior of the implementation of management of breast milk has a value of 0.112, which means it has a very weak relationship. If the significance of the relationship between the two variables is observed, the value yielded is 0.395 which is greater than 0.05, meaning that there is no relationship between attitude and behavior variables. The multivariate analysis test is used to analyze the relationship of variables to each other. The obtained significance value of the T test of knowledge variable is $0.004 < 0.05$, therefore, it can be concluded that there is an influence of caregiver knowledge about the management of dairy milk with the behavior of dairy milk management. The significance value of the attitude variable is $0.343 > 0.05$. So, it can be concluded that there is no influence between the caregiver's attitude and the behavior of milk management. F test results are used to determine the effect together between variables, from which it is known that the Sig value is $0.14 < 0.05$, which means that the caregiver's knowledge and attitude does not affect the caregiver's behavior in carrying out dairy milk management.

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