Correlation between Knowledge and Attitude to the Behavior of Health Workers Regarding Acceptance of Human Milk Bank in General Hospital Dr. Soetomo Surabaya

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ABSTRACT

Introduction: Breast milk is a liquid secreted by the mother’s breast glands and is useful for the baby. The World Health Organization (WHO) and the American Academy of Pediatrics (AAP) stated that the best alternative for breast milk is donor human milk (DHM). Until now, there is no donor HMB in Indonesia. This study aims to determine the relationship between knowledge and attitudes with the behavior of health workers regarding the acceptance of Human Milk Banks (HMB).

Methods: An analytical cross-sectional study involved health workers at the pediatric ward of General Hospital Dr. Soetomo in 2020. The study involved 77 subjects consisting of doctors and nurses. Data were collected by questionnaires. A multiple linear regression test was used to determine the correlation between knowledge and attitudes with the behavior of health workers regarding the acceptance of HMB.

Results: Among 77 research subjects, 42/77 subjects were doctors. 48/77 were female. 31/77 subjects were in the 25-29 years age group. 41/77 subjects were married. 38/77 subjects working period in the profession was 1-5 years. 67/77 subjects were Muslim. Knowledge was associated with the behavior of health workers (p=0.003), and attitudes were associated with the behavior of the health workers about the acceptance of the HMB (p=0.008), and there was a simultaneous correlation between knowledge and attitude with the behavior of health workers regarding the acceptance of HMB (p=0.000).

Conclusion: These findings showed that knowledge and attitudes were associated with the behavior of health workers regarding the acceptance of HMB. There is a simultaneous relationship between the knowledge and attitude with the behavior of health workers about the acceptance of HMB.

Keywords: donor human milk; HMB; knowledge; attitude; behavior

INTRODUCTION

Breast milk is the best food for babies in early life. Breast milk has many health benefits for both full-term babies and premature babies. Compared with formula-fed babies, both term babies and premature babies who are breastfed have a much lower risk of developing various medical problems both early on in life and later on, such as infections, necrotizing enterocolitis (NEC), risk of allergies, obesity, and diabetes. In addition, breast milk is proven to increase intelligence [1]. However, not all mothers can give breast milk to their babies for various reasons, ranging from the poor physical condition of the baby, the death of the baby’s mother, the mother’s unsupportive health condition, and the risk of disease transmission between the mother and her baby through breastfeeding contact. WHO states that the best alternative to breast milk itself, is breast milk directly from healthy mothers or donor breast milk from the Human Milk Bank (HMB) [2]. Countries like South Africa and Kenya have established these banks despite facing infectious disease epidemics such as HIV, TB, and hepatitis [3,4,5,6]. Until now, there is no HMB in Indonesia.

This is mostly influenced by problems of belief and religion in the community, besides it taking a long preparation time to make it happen [7]. The role of health workers is very crucial in the success of this bank. Health workers must provide information about the HMB aimed at the community so that they can obtain information, raise awareness, accept changes in behavior and finally be able to take advantage of the information. While, the expected changes from the information dissemination activities are that aspects of knowledge, attitudes, and behavior move towards the proper concept and way. However, the attitude of health workers, a fragmented system, lack of support for government policies, negative perceptions from mothers and the community, and adverse practices are often obstacles to the success of a HMB [8,9].

MATERIAL AND METHODS

The design used in this analytical descriptive study is a cross-sectional research design conducted from February to April 2020. The samples in this study were 77 health workers consisting of doctors and nurses who worked in the Pediatric Inpatient Installation of RSUD Dr. Soetomo. The sampling technique used was proportional random sampling.
The definition of the operational variable, knowledge, is the knowledge possessed by respondents about the benefits of breastfeeding and breast milk donors. The knowledge measurement results: Good (≥80%), Average (60-79%), Poor (<60%). Attitude is the respondent's reaction or response to breast milk donors and breast milk banks. Measuring results: Good (≥80%), Poor (<80%). Behavior is the action of selecting taken by the respondent in determining their acceptance of the HMB. Measuring results: Good (≥80%), Poor (<80%).

This study uses a questionnaire as a research instrument. Data analysis includes processing research data by means of data classification, coding, scoring, and analysis of research data including univariate analysis (to describe the characteristics of the study population) and analysis to determine the relationship between the independent variable and the dependent variable using multiple linear regression test with a p-value <0.05 declared significant.

The relationship between the level of knowledge and the behavior of health workers regarding the acceptance of HMB

**TABLE 1:** The relationship between the knowledge and behavior of health workers regarding the acceptance of HMB at Dr. Soetomo Hospital Surabaya

| Knowledge | HMB Behavior Acceptance | Total | p-value |
|-----------|-------------------------|-------|---------|
|           | Good | Poor | N | % | Good | Poor | N | % |
| Good      | 16   | 25   | 49 | 75 | 65  | 100 |   |     |
| Average   | 5    | 62   | 3  | 38 | 8   | 100 |   |     |
| Poor      | 3    | 75   | 1  | 25 | 4   | 100 |   |     |
| Total     | 24   | 31   | 53 | 69 | 77  | 100 |   |     |

The relationship between the attitude and the behavior of health workers regarding the acceptance of HMB

**TABLE 2:** The relationship between the attitude and behavior of health workers regarding the acceptance of HMB at Dr. Soetomo Hospital Surabaya

| Attitude | HMB Behavior Acceptance | Total | p-value |
|----------|-------------------------|-------|---------|
|          | Good | Poor | N | % | Good | Poor | N | % |
| Good     | 14   | 48   | 15 | 52 | 29  | 100 |   |     |
| Poor     | 10   | 21   | 38 | 79 | 48  | 100 |   |     |
| Total    | 24   | 31   | 53 | 69 | 77  | 100 |   |     |

The relationship of knowledge and attitudes with the behavior of health workers regarding the acceptance of HMB

Based on the data analysis of the relationship of knowledge and attitudes with the behavior of health workers regarding the acceptance of the HMB, it shows that there is a simultaneous relationship between the knowledge and attitudes of the subjects and the behavior of the acceptance of the HMB, this is indicated by a significance value of p = 0.000 (p < 0.05).

**DISCUSSION**

In this study, most of the subjects were doctors, namely 55%. Meanwhile, research conducted in Canada showed that most of the subjects were nurses, which was 47%, followed by doctors, which was 43% [10]. Work is a factor that can affect knowledge because a person can gain experience and knowledge in the work environment, either directly or indirectly. Bad experiences will tend to be forgotten and, pleasant experiences will make a very deep impression that will form a positive attitude in life. In this study, most of the subjects were female (62%) compared to the male (38%). A study on the acceptance of HMBs for health workers conducted in Zimbabwe showed that the majority of health workers were women, which was 72%, while for men it was 28% [11]. According to Sunaryo (2004), a person’s behavior is influenced by several factors, one of which is genetic or endogenous factors, genetic factors originating from within the individual, including gender. Men’s behavior is based on rational considerations or reason, while women are on emotional grounds.
The majority of the research subjects were in the 25-29 year age group, as many as 31 subjects (40%), with the young age group being 11.3% and the age group of 40 years old and above being 9.3%, with a mean age of 30.4±4.6 (years). This result was similar to a study conducted by Karadag et al in 2015 in Turkey which showed that most of the subjects were in the 25-29 year age group, which was 30.8% [12]. In the psychological or mental aspect, a person's level of thinking becomes more mature with increasing age [13]. Age can affect a person's knowledge and attitudes because someone with a relatively young age has little experience and the level of knowledge is still relatively low because of the age factor. Most of the research subjects were married, as many as 53%. This result is similar to the study conducted by Karadag et al in Turkey which showed that most of the subjects were married, namely 98.5% [12]. Someone who is married has a better experience, especially for those who already have children, so their level of knowledge about the benefits of breastfeeding and the benefits of breastfeeding is also better.

This study shows that the longest working period for 49% of the subjects was 1-5 years, followed by 26% who had 6-10 years of work. The length of work is a factor that can affect knowledge because a person can gain experience and knowledge in the workplace environment [14].

This study shows that most subjects' religion was Islam at 87%, followed by Protestantism at 9%. The majority of the Indonesian population is Muslim, around 87.2%, followed by Protestants around 6.9%, Catholics around 2.9%, and Hindus around 1.7% [15]. Factors that can influence a person's attitudes and behavior are external factors, namely the environment. This environmental factor is the dominant factor that affects a person's behavior, including religion. Religion is a living belief that enters into the construction of a person's personality and influences individual behavior.

Based on data analysis between the level of knowledge and behavior of health workers about the acceptance of HMBs, it was obtained with the value of \( p = 0.003 \), so it could be said that there was a relationship between the level of knowledge and the behavior of health workers about the acceptance of HMBs. Knowledge is crucial in determining a person's behavior because knowledge determines a person's perceptions and habits in everyday life. A high level of knowledge can also affect the mindset of a person or even society from negative to positive because it is based on awareness, interest, and positive attitude considerations [16].

Based on data analysis between the attitude and behavior of health workers about the acceptance of HMBs using multiple linear regression tests, \( p \)-value = 0.008, there is a relationship between the attitudes of health workers and the acceptance behavior of HMBs. Attitude is defined as a reaction or response of a person who is still close to a stimulus or object [17]. Attitude is a willingness to behave in a positive (good) or negative (bad) manner that already involves the mind and emotions concerned. Attitude has an important role concerning a person's behavior in making decisions, including decisions in accepting HMBs. Based on the analysis, it was found that the knowledge and attitudes of health workers and the behavior of utilizing HMBs using multiple linear regression tests obtained \( p \)-value = 0.000, so there is a simultaneous relationship between the three. According to Green (1980) in Notoatmodjo (2007), a person's behavior is influenced by three main factors, namely:

(a). predisposing factors, these factors include knowledge and attitudes of the community towards health, traditions, and life, and attitudes of health workers on the benefits of health, the value system adopted by the community, the education level, the socioeconomic level, and so on. These factors, especially positive ones, will facilitate the realization of behavior so they are often referred to as facilitation factors

(b). Enabling factors, these factors include the availability of facilities and infrastructure or health facilities for the community. These facilities basically support or enable the realization of health behaviors, so these factors are called supporting factors or enabling factors

(c). Reinforcing factors, these factors include attitudes and behavior factors of community leaders, religious leaders, and the behavior of officers including health workers, as well as laws and government regulations from both central and local governments [13].

CONCLUSIONS

From this study, it can be concluded that there is a relationship between the knowledge and behavior of health workers about the acceptance of a HMB, there is a relationship between the attitude and behavior of health workers about the acceptance of HMB, and there is a simultaneous relationship between the knowledge and attitude with the behavior of health workers about the acceptance of HMB.

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