THE RELATIONSHIP OF KNOWLEDGE AND MOTHER'S ATTITUDES IN CARRYING OUT BABY SPA FOR BABIES AGED 6-12 MONTHS AT PMB SITI HAJAR MEDAN 2025

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Abstract

Background: Baby SPA is a form of stimulation that supports infant growth and development. However, many mothers lack sufficient understanding of its benefits and procedures. Educational initiatives are necessary to enhance maternal understanding and promote a constructive attitude. Objective: To explore the relationship between mothers' level of knowledge and their attitudes in conducting Baby SPA for infants aged 6–12 months at PMB Siti Hajar Medan in 2025. Methods: The study adopted a quantitative method with a cross-sectional design. A total of 30 mothers participated, selected through total sampling. Data were gathered using questionnaires and examined through the Chi-Square test with a 0.05 level of significance. Results: The results indicated that 56.7% of the respondents had a strong understanding and demonstrated supportive attitudes toward Baby SPA. A statistically significant and moderately strong positive relationship was identified between knowledge and attitude (p = 0.005; r = 0.531). Conclusion: Mothers with better knowledge tend to show more favorable attitudes toward Baby SPA. Continuous health education is essential to ensure proper and safe implementation of Baby SPA practices.

Keywords: Baby SPA, maternal knowledge, attitude, infants aged 6–12 months.

Background of the problem

Baby spa is a special form of care for babies that aims to provide a sense of comfort and safety. Mauliddina (2020) states that parental touch during baby spa can stimulate the development of a baby's senses and brain. Based on public perception, baby spa offers significant benefits for both babies and mothers, especially when performed privately. However, many mothers feel insecure about performing the treatment themselves, preferring to entrust their babies to unprofessional personnel, such as traditional birth attendants. The term "spa" originates from the Belgian town of Spa. Traditionally, spas were used as a place to refresh oneself with fresh air. In modern times, spas have become a relaxing body treatment method using air and water. Some argue that the word "spa" comes from the Latin term "solus per aqua," meaning healing through water. Baby SPA includes activities such as swimming and baby massage, aimed at supporting their motor development. When babies engage in these activities, their bodies become more relaxed and they respond more quickly to their surroundings (Riksani, 2018).

Over time, baby massage techniques have become more modern and are now popular as part of baby care. Baby SPA, or Solus Per Aqua, is a method that nourishes the body through water, massage, and other treatments, which have positive health effects. This relaxation plays a crucial role in supporting growth and development and reducing stress in babies (Maryati et al., 2021). Research shows that baby spas significantly benefit babies' physical and emotional well-being. However, parents should choose a trusted baby spa service managed by professionals. Baby spas should complement basic baby care, not replace it. A study by Tiffany Field and her team from the University of Miami showed that regular baby massage can improve fine and gross motor development. Babies who receive regular massages demonstrate better coordination and muscle strength than babies who do not receive massage (Field et al., 2016). It's important for parents to fully understand the benefits of Baby Spa. Adequate knowledge will boost their confidence in performing it independently. This is where midwives play a crucial role in providing education and counseling. According to Ambarsari, Anggarini, and Nugraheni (2020), counseling can

broaden knowledge and encourage mothers to independently perform Baby Spa for their babies. Based on observations at PMB Siti Hajar Medan in November 2024, there were 100 patients, and 30 of them had undergone Baby SPA. From the results of interviews with 10 mothers, it was found that many of them underwent Baby SPA because they followed the trend. This prompted the researcher to raise the title "The Relationship Between Knowledge and Mothers' Attitudes in Performing Baby SPA on Infants Aged 6–12 Months at PMB Siti Hajar Medan in 2025."

Formulation of the problem

Is there a relationship between maternal knowledge and attitudes towards carrying out Baby SPA for babies aged 6–12 months at PMB Siti Hajar Medan in 2025?

Research Objectives General Objectives:

To determine the relationship between knowledge and maternal attitudes in implementing Baby SPA for babies aged 6–12 months at PMB Siti Hajar Medan in 2025.

Special purpose:
1. Describes the characteristics of respondents according to education, gender, age, and employment status.
2. Find out the mother's level of knowledge regarding Baby SPA.
3. Analyzing mothers' attitudes towards implementing Baby SPA.

Benefits of research

1. **For Educational Institutions:**
   To be a reference material for developing research in the health sector and to increase the insight of midwifery students regarding the relationship between knowledge and attitudes of mothers towards Baby SPA.
2. **For Research Locations:**
   Providing information regarding the importance of baby massage education and lactation management, as well as being the basis for Baby SPA socialization activities.
3. **For Further Researchers:**
   It can be used as a guideline or reference for future research on similar topics regarding baby care.

METHOD

Types of research

This study used a quantitative approach with a cross-sectional design, where data was collected only once at a single point in time. The primary objective was to identify any correlation between the dependent and independent variables using a questionnaire (Nursalam, 2017).

Location and Time of Research

1. Research Location:
   The research was conducted at PMB Siti Hajar Medan in 2025, with an adequate population and sample size and has obtained approval from the relevant institutions.
2. Research Time:
   The research implementation plan will take place from January to February 2025.

Research Population and Sample

1. Population:
   Sugiyono (2017) stated that a population refers to a group of subjects with certain characteristics selected by researchers to be studied and then to draw conclusions. In this study, the research subjects included 100 patients registered at the Siti Hajar Medan PMB.
2. Sample:
   The sampling method used is total sampling, where every individual in the population is included in the sample. According to Sugiyono (2011), this approach is appropriate if the population is under 100 people, so all members of the population are included in the study.

Method of collecting data

1. Primary Data:
   Information obtained directly by researchers from participants by filling out questionnaires.
2. Secondary Data:

This data was collected from indirect sources. The data collection process began with obtaining a permit from the Midwifery Professional Study Program, Faculty of Nursing and Midwifery, Prima Indonesia University, followed by distributing questionnaires to respondents.

Measurement Aspects

Knowledge was measured based on respondents' answers to 15 questions, while attitudes were measured using 10 questions. Before determining knowledge categories such as good, sufficient, and insufficient, reference criteria were first established to guide the research. Mothers' knowledge was measured using a 15-question questionnaire, while attitudes were measured using a 10-question questionnaire. Each correct answer received a score of 1, and each incorrect answer received a score of 0. The total score for each aspect was obtained by multiplying the number of correct answers by the number of questions, while incorrect answers were scored zero.

The total value obtained from respondents was then classified into three knowledge level categories, namely:

1. Good: when respondents answer correctly between 10 to 15 statements with a percentage of 66.7% to 100%
2. Sufficient: when respondents answer correctly between 5 to 9 statements with a percentage of 33.3% to 60%
3. Less: if the correct statements are 0-4, the percentage result is 0-26.7%.

Based on the total score obtained, respondents' attitudes can be divided into two categories, namely:

1. Positive: if you answer correctly between 5 to 10 statements with a percentage of 50% to 100%.
2. Negative: if you answer correctly between 0 to 4 statements with a percentage of 0% to 50%.

Data Processing Method

After collecting the data, the data processing process was carried out in the following stages (Utami et al., 2020):

1. Editing:
   Check the questionnaire data to correct any errors.
2. Coding Sheet:
   Compile code for each question item that will be input into the software.
3. Data Entry:
   Enter data into the coding sheet based on the respondents' answers.
4. Tabulation:
   Arrange data into tables according to analysis needs.

Data analysis

The data were analyzed descriptively to show the frequency distribution of each studied variable. The results are presented in tables and accompanied by discussions based on related theories. A bivariate test using Chi-Square in SPSS was conducted to assess the relationship between the independent and dependent variables. The test was conducted at a 95% confidence level ($\alpha = 0.05$). If the p-score is less than 0.05, H0 is rejected, indicating a significant relationship between the two variables.

RESEARCH RESULTS AND DISCUSSION
RESULTS
Univariate Analysis

Univariate analysis is a statistical technique that aims to assess one variable individually without considering its relationship to other variables. The goal is to provide a general overview or basic characteristics of the data being studied, which is why it is often referred to as descriptive statistics. This analysis is the initial stage in data processing and can be applied to various types of data, whether in numerical form or converted to prevalence, ratios, or percentages. Commonly used measures of central tendency include the mean, median, mode, quartiles, percentiles, and deciles. Measures of dispersion include the range, standard deviation, variance, mean deviation, and coefficient of variation. Univariate data can be presented using tables, graphs, diagrams, or descriptive narratives. Furthermore, data distribution patterns can be visualized using distribution curves that show the degree of skewness.

Table 1: Frequency Distribution of Respondents by Infant Age, Infant Gender, Maternal Education and Maternal Age

Karakteristik	Frekuensi	Persentase %
Jenis Kelamin Bayi		
Laki-laki	21	70.0
Perempuan	9	30.0
Total (N)	**30**	**100.0**
Usia Bayi		
6 bulan	6	20.0
7 bulan	2	6.7
8 bulan	5	16.7
9 bulan	3	10.0
10 bulan	5	16.7
11 bulan	4	13.3
12 bulan	5	16.7
Total (N)	**30**	**100.0**
Pendidikan Ibu		
Tidak Sekolah	5	16.7
SD	8	26.7
SMP	9	30.0
SMA	5	16.7
S1	3	10.0
Total (N)	**30**	**100.0**
Usia Ibu		
17-20 Tahun	4	13.3
21-24 Tahun	9	30.0
25-29 Tahun	5	16.7
30-35 Tahun	6	20.0
36-40 Tahun	6	20.0
Total (N)	**30**	**100.0**

Based on gender, the majority of babies who participated in Baby SPA services were male, namely 21 people

(70%), and female number 9 people (30%). Viewed by age, the most babies were 6 months old (20%), followed by 8, 10, and 12 months old each with 16.7%. Babies aged 11 months were 13.3%, 9 months old 10%, and the least were 7 months old, namely 6.7%. Based on maternal education, the majority had junior high school education (30%), followed by elementary school (26.7%), high school and no school each 16.7%, and the least had a bachelor's degree (10%). Meanwhile, maternal age was dominated by the 21–24 year group (30%), followed by 30–35 year olds and 36–40 year olds each with 20%, 25–29 year olds 16.7%, and 17–20 year olds 13.3%.

Table 2: Frequency Distribution of Mothers' Knowledge in Performing Baby SPA

Pengetahuan	Frekuensi	Persentase %
Baik	9	30.0
Cukup	10	33.3
Kurang	11	36.7
Total (N)	**30**	**100.0**

The majority of mothers had insufficient knowledge about Baby SPA (11 mothers, 36.7%), followed by the sufficient (10 mothers, 33.3%) and good (9 mothers, 30%) categories.

Table 3: Frequency Distribution of Mothers' Attitudes to Perform Baby SPA

Sikap	Frekuensi	Persentase %
Positif	16	53.3
Negatif	14	46.7
Total (N)	**30**	**100.0**

The majority of mothers showed a supportive attitude towards Baby SPA practices, namely 16 people (53.3%), while 14 mothers (46.7%) had a negative attitude.

Table 4: Relationship between Knowledge and Mothers' Attitudes towards Providing Baby SPA

No	Pengetahuan	Sikap Negatif		Sikap Positif		Total		r	P value
		F	%	F	%	F	%		
1	Baik	1	11.1	8	88.9	9	100.0		
2	Cukup	3	30.0	7	70.0	10	100.0	**0,439**	**0,001**
3	Kurang	10	90.9	1	9.1	11	100.0		
	Total (N)	**16**	**46.7**	**16**	**46.7**	**30**	**100.0**		

From Table 4, it can be seen that of the 9 mothers who had good knowledge, the majority (88.9%) or 8 people had a positive attitude, and only 1 person (11.1%) had a negative attitude. Of the 10 respondents with sufficient knowledge, 7 people (70%) had a positive attitude and 3 people (30%) had a negative attitude. Meanwhile, of the 11 respondents who had insufficient knowledge, the majority (90.9%) or 10 people showed a negative attitude, and only 1 person (9.1%) had a positive attitude. The results of statistical tests showed a correlation (r) of 0.439 and a p value of 0.001 (p < 0.05), which indicates a significant relationship between the level of maternal knowledge and attitudes in providing Baby SPA services.

DISCUSSION
Mother's Knowledge Regarding Doing Baby SPA

The research findings revealed that the majority of mothers, 11 respondents (36.7%), had low levels of knowledge regarding Baby Spa. Meanwhile, 10 mothers (33.3%) had moderate knowledge, and 9 mothers (30%) had high levels of knowledge. These findings indicate the need for more intensive education through outreach and counseling. These results are supported by previous research, albeit with varying findings. Sahnawi (2018) found 65.7% of respondents had good knowledge, while Indahayu (2019) noted 72.4% had high knowledge. Ni Putu Elga (2019) reported 48.6% of respondents had good knowledge and 18.9% had fair knowledge. At Tiga Panah Community Health Center, Eka Permata (2021) found 53.3% of mothers had a good understanding of infant massage. Syamiyulianti (2023) reported that the majority of mothers (54.5%) had fair knowledge, and Ani Triana (2024) noted 55.8% had good knowledge. These differences in results indicate that mothers' knowledge levels regarding Baby Spa vary by location and time of the study, likely influenced by educational background, experience, access to information, and level of health promotion received.

Mothers' Attitudes About Baby Spa

The study results showed that 16 mothers (53.3%) had a positive attitude toward Baby SPA, while 14 mothers (46.7%) had a negative attitude. This suggests that positive attitudes are not solely determined by knowledge levels but are also influenced by experience, culture, social factors, and environmental support. Previous research supports these findings. Sahnawi (2018) reported that 68.6% of respondents had a positive attitude towards baby massage. Ni Putu Elga (2019) also noted that 54.1% of respondents had a positive attitude towards Baby Spa. Maya Syaroh (2022) found an increase in attitude scores from 35.82 to 39.63 after health education was provided. Syamiyulianti (2023) reported that 66.7% of mothers showed a positive attitude, which was influenced by non-cognitive factors such as experience and environmental support. Therefore, it can be concluded that although the level of knowledge is not optimal, mothers' attitudes towards Baby Spa are generally positive and can be developed through education, experience, and social and cultural influences.

The Relationship Between Knowledge and Mothers' Attitudes About Baby SPA

The results of the Chi-Square analysis indicated a significant relationship between mothers' knowledge about Baby SPA and their attitudes towards its implementation ($p = 0.001 < 0.05$). Higher levels of knowledge correlated with more positive attitudes. Of the nine mothers with good knowledge, 88.9% had a positive attitude, while only 9.1% of mothers with less knowledge showed a similar attitude. This indicates that understanding the benefits, procedures, and timing of Baby SPA influences mothers' attitudes. These findings are supported by several previous studies. Sahnawi (2018) found a significant relationship between knowledge and infant massage behavior ($p = 0.025$). Indah Ayu (2019) noted a correlation between knowledge and maternal motivation to provide baby spa ($p = 0.002$; $r = 0.559$). Syamiyulianti (2023) reported a similar relationship between knowledge and attitudes toward infant massage ($p = 0.041$), and Ani Triana (2024) found a relationship between mothers' knowledge and interest in massaging babies aged 0–12 months ($p = 0.002$).

CONCLUSION

From the research findings and discussion results, the following conclusions can be drawn:
1. The majority of participants had a high level of knowledge regarding Baby SPA, including an understanding of the benefits, objectives, procedures, implementation time, and frequency.
2. Most respondents also showed a positive attitude in carrying out Baby SPA, which was seen from their support, readiness, and participation in the activity.
3. The results of the Chi-Square analysis revealed a significant relationship between mothers' knowledge levels and their attitudes toward Baby SPA, with a p-value of 0.005, which is below the significance limit ($\alpha = 0.05$). This indicates that as mothers' knowledge increases, their attitudes become more positive.

SUGGESTION

1. Respondents (mothers) are advised to be more proactive in seeking information and knowledge about Baby Spa from trusted sources, such as healthcare professionals, educational media, and in-person training. Adequate understanding will help mothers implement Baby Spa with greater confidence, calm, and effectiveness, thereby maximizing the benefits for their babies' growth and development.
2. Relevant agencies are expected to expand their education and outreach programs regarding Baby Spa on a regular basis. This can be done through classes for mothers and toddlers, individual counseling, or the provision of visual and digital information media. The goal is to ensure that all mothers, especially those who don't fully

understand the process, have access to clear and reliable information, thereby fostering a positive attitude towards Baby Spa.

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