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## Mothers' Knowledge Levels on Baby Massage for 0-12 Months Old Babies at PMB Ni Kadek Kurniati, A.Md., Pemogan South Denpasar

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### Abstract

Baby massage is a tactile stimulation on the surface of the baby's skin. In order to increase the baby's growth and development optimally, performing the baby massage activities needs a good knowledge of the mother. The purpose of this study was to describe the level of knowledge mothers have about infant massage aged 0-12 months at private midwife practice Ni Kadek Kurniati, A.Md.Keb Pemogan, South Denpasar. This study used a descriptive method with a cross-sectional design. The samples were 30 mothers with babies aged 0-12 months who met the inclusion criteria. Primary data retrieval using a questionnaire. The results obtained were that most of the respondents are aged 20-35 years, have a high school education level, and have sources of information obtained through health workers (83.33%, 60%, and 36.67%, respectively). Most mothers with good knowledge were aged 20-35, had a high school education level, and obtained knowledge from health workers (88%, 88.89%, and 100%, respectively). In conclusion, almost all respondents have good knowledge about baby massage. It is expected that mothers who have babies aged 0-12 months to increase their knowledge further so that they can apply the practice of baby massage at home independently and for health workers to educate the public better and strengthen counseling, training, and information dissemination, especially through social media so that the information provided becomes appropriate. and right on target.

**Keywords:** Knowledge Level, Baby Massage, Babies Aged 0-12 Months, Good Knowledge, Mother

### INTRODUCTION

The infant stage is referred to as the golden period because it is brief and irreplaceable. During this phase, the child experiences rapid growth and development; any disturbances can affect their future.(1) The Indonesian Ministry of Health Regulation No. 28 of 2017 on Midwifery Practice permits midwives to monitor growth and development through early detection, intervention, and stimulation. One form of stimulation is baby massage, which is essential for motor and sensory nerve stimulation and contributes to optimal baby growth and development.(2)

Baby massage has been practiced in

Indonesia since ancient times. It involves soft strokes or tactile stimulation on the baby's skin and is known as a touch therapy that strengthens the bond between the baby and its mother or other family members.(3) Regular interaction during massage, including eye contact and talking, can reduce anxiety, manage stress, and strengthen emotional connections.(2,4) Studies have shown that baby massage can increase weight gain, improve digestion, and promote better sleep, as gentle touch relaxes muscles and enhances blood circulation.(5)

Proper maternal knowledge of baby massage is crucial for understanding its benefits, preparation, and techniques, al-

lowing mothers to perform it at home confidently.(5) Preliminary studies conducted in December 2021 with 10 mothers of 0-12 month-old babies revealed that seven mothers were unaware of baby massage and hesitant to perform it independently, while three mothers were informed about it. Daily massage at home before bath time and bedtime can provide babies comfort and joy.(5)

The results of a preliminary study conducted on 10 mothers with infants aged 0 to 12 months at Praktik Mandiri Bidan (PMB) Ni Kadek Kurniati, A.Md.Keb, in December 2021 showed that most respondents were not familiar with baby massage techniques. Out of 10 respondents, seven mothers reported not knowing about baby massage and felt afraid to practice it at home. Meanwhile, three other mothers were aware of baby massage. Baby massage can be done quickly at home, ideally every day before bathing in the morning or at night before sleeping. Involving mothers or other family members in the massage provides positive benefits for the baby, such as increasing their comfort and happiness after massaging. Introducing and training these mothers about baby massage could be important in enhancing their knowledge and confidence in practicing these beneficial techniques. (6)

**METHODS**

This descriptive research used a cross-sectional design, collecting data at a

single point in time. The study was conducted at PMB Ni Kadek Kurniati, A.Md.Keb, located in Pemogan, South Denpasar, Bali, from February to May 2022. The population consisted of mothers with 0-12-month-old babies visiting PMB Ni Kadek Kurniati during the study period. The sample included 30 mothers meeting the inclusion criteria: mothers willing to participate and those visiting PMB Ni Kadek Kurniati with babies aged 0-12 months. Exclusion criteria included mothers unwilling to participate. Accidental sampling, a non-probability sampling technique, was used to select the sample. Researchers approached the responsible midwife for permission to conduct the study and collect data. Upon approval, respondents were selected based on inclusion criteria. Respondents were asked to sign a consent form before participating. A questionnaire was distributed, with instructions provided, and completed forms were immediately collected by the researcher.

**RESULTS AND DISCUSSION**

**Subject Characteristics**

The characteristics of respondents, such as age, education, and information sources, were analyzed to determine their knowledge levels on baby massage for babies aged 0-12 months at PMB Ni Kadek Kurniati in 2022, as shown in the table below:

**Age Characteristics**

**Table 1.** Frequency Distribution of Respondent Characteristics Based on Age

No	Age (years old)	Frekuensi	Presentase (%)
1.	< 20	3	10
2.	20 – 35	25	83.33
3.	> 35	2	6.67
Total		30	100

Out of the 30 respondents in Table 1, a small portion were aged below 20 years, totaling three (10%). Almost all respondents were aged between 20–35 years,

totaling 25 respondents (83.33%). A small portion of respondents were over 35 years old, totaling two respondents (6.67%).

**Educational Level Characteristics**

**Table 2.** Frequency Distribution of Respondent Characteristics Based on Education

No	Education Level	Frekuensi	Percentage (%)
1.	SD	2	6.67
2.	SMP	5	16.67
3.	SMA	18	60
4.	Diploma	2	6.67
5.	Sarjana	3	10
Total		30	100

Table 2 shows that among the 30 respondents, most respondents had a high school education (SMA), totaling 18 respondents (60%). A small portion had a junior high school education (SMP), with five respondents (16.7%). Additionally, a

small portion of respondents had a university degree (10%), and a small number had an elementary school education (SD) and a diploma, each with two respondents (6.7%).

**Table 3.** Frequency Distribution of Respondent Characteristics Based on Sources of Information about Baby Massage

No	Level of Education	Frekuensi	Presentase (%)
1.	Online Mass Media	5	16.67
2.	Health cares	11	36.67
3.	Friends	4	13.33
4.	Family	10	33.33
Total		30	100

Table 3 shows that among the 30 respondents, the sources of information were as follows: healthcare workers: 11 respondents (36.67%), family members: 10 respondents (33.33%), online media: 5 respondents (16.67%), and friends: 4 respondents (13.33%). This indicates that almost half of the respondents received information from healthcare workers, while nearly the same number obtained information from family members. A smaller portion of respondents relied on online media and friends as their sources of information.

**Level of Mother's Knowledge About Infant Massage Aged 0-12 Months**

The level of mothers' knowledge about infant massage aged 0-12 months at PMB Ni Kadek Kurniati, A.Md. Keb was measured by administering a questionnaire. Each mother willing to be a respondent received a questionnaire containing respondent data and 20 statements about knowledge of infant massage aged 0-12 months. The results of the study regarding the level of mothers' knowledge about infant massage aged 0-12 months at PMB Ni Kadek Kurniati, A.Md.Keb will be presented in the form of a table.

**Table 4.** Frequency Distribution of Mothers' Knowledge Levels on Baby Massage

No	Tingkat Pengetahuan	Frekuensi	Presentase (%)
1.	High	25	83.33
2.	Moderate	5	16.67
3.	Low	0	0
Total		30	100

Table 4 shows that almost all respondents had a good level of knowledge, with 25 respondents (83.33%), while a

small portion of respondents had a moderate level of expertise, with five respondents (16.67%).

### Mothers' Knowledge of Baby Massage for 0-12 Month-Olds Based on Age Characteristics

**Table 5.** Frequency Distribution of Mothers' Knowledge Levels on Baby Massage Based on Age Characteristics

No	Level of Knowledge	Age						Total	
		< 20yo		20 – 35yo		> 35yo		f	%
		F	%	f	%	f	%		
1	Good	2	66.67	22	88	1	50	25	83.33
2	Moderate	1	33.33	3	12	1	50	5	16.67
3	Poor	0	0	0	0	0	0	0	0
Total		3	100	25	100	2	100	30	100

Table 5 shows that among the three respondents aged < 20 years, most had a good knowledge level, with two respondents (66.67%), and nearly half had a moderate knowledge level, with one respondent (33.33%). Among the 25 respondents aged 20-35, the results indicated that almost all had a good knowledge level, totaling 22 respondents (88%), while a small portion

had a moderate knowledge level, totaling three respondents (12%). The results of the two respondents aged > 35 showed that half had a good knowledge level and half had a moderate knowledge level, with one respondent in each category. Across all age groups had no respondents with a poor knowledge level

### Mothers' Knowledge of Baby Massage for 0-12 Month-Olds Based on Educational Characteristics

**Table 6.** Frequency Distribution of Mothers' Knowledge Levels on Baby Massage Based on Educational Characteristics

No	Level of Knowledge	Level of Education										Total	
		SD		SMP		SMA		Diploma		Sarjana		f	%
		f	%	f	%	f	%	f	%	f	%		
1	Good	0	0	4	80	16	88.89	2	100	3	100	25	83.33
2	Moderate	2	100	1	20	2	11.11	0	0	0	0	5	16.67
3	Poor	0	0	0	0	0	0	0	0	0	0	0	0
Total		2	100	5	100	18	100	2	100	3	100	30	100

Table 6 shows that among the two respondents with an elementary school education (SD), both had a moderate knowledge level (100%), with no respondents having a good or poor knowledge level. Among the five respondents with a junior high school education (SMP), almost all had a good knowledge level, totaling four respondents (80%). In contrast, a small por-

tion had a moderate knowledge level (20%), and none had a poor knowledge level. For the 18 respondents with a high school education (SMA), the results showed that nearly all had a good knowledge level, totaling 16 respondents (88.89%), with two respondents (11.11%) having a moderate knowledge level and none having a poor knowledge level.

Among the two respondents with a diploma and three with a university degree, all had a good knowledge level, with no respondents

falling into the moderate or poor knowledge categories.

**Mothers' Knowledge of Baby Massage for 0-12 Month-Olds Based on Information Source Characteristics**

Table 7. Frequency Distribution of Mothers' Knowledge Levels on Baby Massage Based on Sources of Information

No	Level of Knowledge	Source of Information									
		Online Mass Media		Health care		Friends		Family		Total	
		f	%	f	%	f	%	f	%	f	%
1	Good	5	100	11	100	3	75	6	60	25	83.33
2	Moderate	0	0	0	0	1	25	4	40	5	16.67
3	Poor	0	0	0	0	0	0	0	0	0	0
Total		5	100	11	100	4	100	10	100	30	100

**DISCUSSION**

Age is a significant factor influencing knowledge. The 20-35 age range is considered an ideal reproductive age, during which mothers are typically more active in seeking information and experiences, enhancing their understanding of baby massage. This aligns with the theory that as individuals age, their mental and psychological aspects mature, leading to increased knowledge.(7) The maturity associated with this age group also facilitates gaining trust from the surrounding community. Research on mothers' knowledge about baby massage in Semarang found that most mothers aged 20-35 had a good knowledge level, indicating that this is an optimal age for caring for infants and receiving information about baby massage.(8)

Education strongly correlates with knowledge acquisition. Higher education typically leads to broader and better knowledge about baby massage, as education provides guidance and opportunities to develop skills through formal and non-formal learning experiences. The study involving 30 mothers with infants aged 0-12 months showed that the majority (83.33%) possessed good knowledge about baby massage, emphasizing the role of accurate information sources in shaping knowledge

levels.(9,10)

This is in line with research from 10 regarding the knowledge of mothers about baby massage in Nanga Kemangai Village, Ambalau District, Sintang Regency, which found that out of 20 respondents with a high school education, nearly all had a good level of knowledge, precisely 18 respondents (90%). Among 16 respondents with diploma and bachelor's degrees, all had a good level of knowledge, with four respondents (100%) from the diploma group and 12 respondents (100%) from the bachelor's group. There is a relationship between the level of knowledge and education. Educated women tend to be better at processing information and learning to acquire knowledge, skills, and positive parenting behaviors. (11,12,13)

A study conducted on 30 mothers with infants aged 0-12 months at PMB Ni Kadek Kurniati, A.Md Keb showed that almost all respondents had a good level of knowledge, totaling 25 respondents (83.33%). In contrast, a small portion had sufficient expertise, totaling five respondents (16.67%). According to Notoadmojo (7), information sources serve as media or educational tools for delivering health information, as these tools facilitate the reception of health messages. Information



sources play an important role in obtaining accurate information, meaning that information obtained from various sources will influence an individual's level of knowledge. The more information working mothers receive, the higher their knowledge and understanding of baby massage will be. (14)

According to Indonesian Health Law No. 36 of 2014, healthcare workers, such as doctors and midwives, play a crucial role in enhancing mothers' knowledge through interpersonal communication, including seminars and counseling on baby massage. Trust in healthcare providers leads to better information absorption, enabling mothers to practice baby massage independently at home. Moreover, mass media significantly influences knowledge. Advertisements and articles in mass media contribute to the public's perception of the benefits of baby massage, highlighting its importance for child development. (15)

This aligns with the research by Marwang et al., who found that the socialization conducted to provide information to the community about strategies for improving nutritional status through baby massage, carried out by a service team, posyandu cadres, and involving health workers, especially midwives, had a positive impact on mothers and the community in Moncongloe Village (16). Before the activity, participants were given a questionnaire with an average score of 62.67, and after the activity, their knowledge increased to an average of 80.33. This health education can enhance the community's health status regarding the importance of infant nutritional status in reducing stunting through baby massage activities, thereby helping to increase infants' weight, which is one of the positive benefits of massage. (17)

In addition to health workers, information from mass media also influences an individual's level of knowledge. Mass media are present within the community. Various studies show that photos or advertisements in mass media build public attitudes that baby massage is very beneficial for children's growth and development. (18)

Based on the results of this study, among the five respondents who chose information sources from mass media, it was shown that mothers had a good level of knowledge. Although the information provided by health workers and mass media indicated that mothers' knowledge was suitable, the information will become wasted and unhelpful if mothers do not desire to apply that knowledge. (18)

## CONCLUSION

In summary, the study indicates that nearly all respondents have good knowledge of baby massage. Mothers with good knowledge tend to be in the 20-35 age range, have a high school education, and gain information from healthcare professionals. It is essential for mothers with infants aged 0-12 months to enhance their knowledge further to practice baby massage effectively at home, optimizing child development. Healthcare workers should focus on community education through outreach and information dissemination, primarily via social media, to ensure that the information provided is practical and targeted.

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