



## **The Relationship Between Multiparous Pregnant Women's Knowledge of Effleurage Massage and Back Pain in Pregnant Women in the Third Trimester at the Polyclinic RS. Bhayangkara Indramayu**

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**Abstract.** One of the most frequently reported complaints among pregnant women in the third trimester is back pain. The intensity of the pain fluctuates, ranging from 50% to 70%, and it is one of the contributing factors to the prevalence of cesarean deliveries. The objective of this investigation is to ascertain the correlation between the knowledge of multi-para pregnant women regarding effleurage massage and back pain in pregnant women in the third trimester at the Hospital Polyclinic. Bhayangkara Indramayu. A correlational investigation with a cross-sectional research design was implemented. The study population consists of all multi-pregnant women in the third trimester who encountered back pain at the Hospital Polyclinic. In September 2023, Bhayangkara Indramayu was born. The total number of individuals with a sample of 32 respondents was 32. The chi-square test is the data analysis instrument employed. The results of this study were obtained by 22 (68.8%) respondents with adequate knowledge, 10 (31.3%) respondents with poor knowledge, 4 (12.5%) respondents with no pain, 16 (50%) respondents with mild pain, 10 (31.3%) respondents with moderate pain, and 2 (6.3%) respondents with severe pain. The p-value of the analysis results was 0.005, indicating a correlation between the knowledge of multi-para pregnant women about effleurage massage and back discomfort in pregnant women in the third trimester at the Hospital Polyclinic. Bhayangkara Indramayu. It is recommended that the subsequent researcher expand this research by increasing the number of samples and variables.

**Keywords:** effleurage massage, knowledge, back pain, pregnant woman

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### **INTRODUCTION**

In the third trimester of pregnancy, the phenomenon of back pain is one of the most frequently reported complaints among pregnant women. The intensity of the pain fluctuates, ranging from 50% to 70%, and it is one of the contributing factors to the prevalence of cesarean delivery. Back pain is a form of discomfort that manifests in the sacred lumbar region. Approximately 80% of women will experience back pain at some stage during their pregnancy. As much as 70% of back pain during pregnancy is caused by changes in the spinal musculature (Pujiningsih, 2018).

According to data from the World Health Organization (2020), the prevalence of back discomfort during pregnancy ranges from 48 to 90 percent. Back pain was reported by up to 50% of expectant women in the United Kingdom and Scandinavia, while up to 70% of patients in Australia and approximately 20% of those with acute low back pain will continue to experience chronic symptoms. Australia is reported to have a prevalence of back discomfort during pregnancy of up to 70%. In Malaysia, the prevalence of back pain in expectant women at more than 21 weeks of gestation is 36.5% for mild pain, 46% for moderate pain, and 17.5% for severe pain.

As per the 2020 Indonesia Health Data Profile report, 78% of expectant women experience moderate-intensity back pain, while 22% of pregnant women experience mild-intensity back pain. According to the West Java Provincial Health Office (2020), the prevalence of pregnant women in the region is 5.3%, and back discomfort accounts for 78% of the complaints that pregnant women submit during antenatal care. This information is based on Data from Basic Health Research in 2020.

The hospital's medical records were consulted to acquire the data. In 2022, Bhayangkara Indramayu identified pregnant women in the third trimester who were experiencing back discomfort at a rate of up to 47%. In the interim, it was collected from pregnant women in the third trimester who encountered back pain to 64% from January to September 2023, according to the Medical Records of RS. Bhayangkara Indramayu (2023), expectant women experience an increase in the frequency of back pain complaints during the third trimester. Activity during pregnancy, parity, and maternal age are all factors that can influence back discomfort in pregnant women during the third trimester. In addition to these factors, back pain may be precipitated by elevated hormone levels. The joints in the pelvic bone extend as a result of the increase in hormone pregnancy. This change may influence how the abdomen is supported when the back is supported (Hollingworth, 2018).

The consequences of untreated back pain include chronic back pain that is challenging to treat or remedy, postpartum back pain that worsens, and long-term back pain. Furthermore, the risk of persistent pain, the quality of life, and the utilization of curative health services are all exacerbated by inadequately managed acute pain (Katonis, 2019).

Pharmacological management of back discomfort during pregnancy involves the administration of analgesics, including paracetamol and ibuprofen. In contrast, non-pharmacological management encompasses manual therapy, including mobilization

exercises, acupuncture, Transcutaneous Electrical Nerve Stimulation (TENS), relaxation with warm or chilly water, and massage. Massage is a gentle method that can assist mothers in feeling more refreshed, relieved, and at ease during pregnancy. Effleurage massage is one of the therapies that can be performed (Manurung, 2019).

Effleurage massage is a form of massage in which the fingertips gently and circularly press on the body's surface. This effleurage massage aims to enhance blood circulation, apply pressure, warm the abdominal muscles, and promote physical and mental relaxation. A 3-10 minute effleurage massage on the back can reduce blood pressure, slow the heart rate, enhance breathing, and stimulate the production of endorphin hormones that naturally alleviate pain. According to Maryunani (2019), this Effleurage massage technique is effective and inexpensive, and it does not have any adverse effects on mothers or infants.

The findings of Niamah Siti's (2022) research on the Effect of Effleurage Massage of Pregnant Women on the Reduction of Back Pain in Pregnant Women in the Third Trimester in the Working Area of the Kayen Health Center, Pati Regency, indicated that 16 pregnant women (53.3%) previously experienced mild pain, while 14 pregnant women (46.7%) experienced moderate pain. After administering routine massages to expectant women, 25 of them (83.3%) reported mild pain, while five of them (16.7%) reported moderate pain. The findings of a preliminary investigation conducted by researchers at the Hospital Polyclinic on eight pregnant women. Bhayangkara Indramayu discovered that moderate low back pain was a common occurrence among expectant women in the third trimester. Occasionally, this pain interfered with the mother's daily activities, necessitating a period of rest. Effleurage massage is a complementary therapy that can be employed to alleviate the severity of back discomfort. However, three of the eight pregnant women have been informed that pregnancy massage does not massage the entire body and that it is limited to the abdomen. Additionally, three pregnant women are unaware of the existence of effleurage massage. A low level of interest also results from a low level of knowledge. Massage should be administered with caution and under the appropriate technique and location. If the technique and location are not executed correctly, massage can be detrimental to the fetus's health. Not all pregnant women are aware of effleurage massage, and as a result, not all pregnant women are willing to perform the massage on the expectant woman (Ferry Wong, 2019).

Based on the description above, the researcher is interested in conducting a study on the "Relationship between the knowledge of multiple pregnant women about effleurage massage and back pain in pregnant women in the third trimester at the Hospital Polyclinic." "Bhayangkara Indramayu"

**METHOD**

The type of research used is a correlational study with *a cross-sectional research design*. The population in this study is all pregnant women in the third trimester who experience back pain at the Hospital Polyclinic. Bhayangkara Indramayu which totals 32 people.. The instrument used was a questionnaire sheet. The data analysis used was univariate and bivariate (*chi-square test*).

**RESULT**

**Age**

**Table 1**  
**Age Frequency Distribution of Pregnant Women in the Third Trimester at the Hospital Polyclinic. Bhayangkara Indramayu**

Age	f	%
< 20 years	0	0
20-35 years old	31	96.9
> 35 years	1	3.1
Total	32	100

The study's results revealed that 31 (9.9%) respondents were 20-35 years old, and 1 (3.1%) were > 35 years old.

**Education**

**Table 2**  
**Distribution of Education Frequency among Pregnant Women in the Third Trimester at the Hospital Polyclinic. Indramayu Bhayangkara**

Gender	f	%
SD	0	0
JUNIOR	3	9.4
SMA	23	71.9
College	6	18.8
Total	32	100

The study's results revealed that 3 (9.4%) respondents had a junior high school education, 23 (71.9%) respondents had a high school education, and 6 (18.8%) respondents had a higher education.

**Work**

**Table 3**  
**Distribution of Occupational Frequency among Pregnant Women in the Third Trimester at Polyclinics RS. Bhayangkara Indramayu**

<b>Work</b>	<b>f</b>	<b>%</b>
Work	19	59.4
Not Working	13	40.6
Total	32	100

The study's results showed that 19 (59.4%) respondents were working and 13 (40.6%) were not working.

**Gestational Age**

**Table 4**  
**Distribution of the Average Gestational Age of Pregnant Women in the Third Trimester at the Hospital Polyclinic. Indramayu Bhayangkara**

<b>Mean</b>	<b>Median</b>	<b>Std. Deviation</b>	<b>Minimum</b>	<b>Maximum</b>
33,69	34	1,469	32	37

The study's findings indicated that the respondents' average gestational age was 33.69 weeks, with a standard deviation of 1.469. The gestational age ranged from 32 to 37 weeks.

**Univariate Results**

This is an overview of the knowledge of multi-para expectant women regarding effleurage massage in the third trimester at the Hospital Polyclinic. Indramayu Bhayangkara

**Table 5**  
**The Distribution of Knowledge of Multipara Pregnant Women About Effleurage Massage in Pregnant Women in the Third Trimester at the Hospital Polyclinic. Indramayu Bhayangkara**

<b>Knowledge</b>	<b>f</b>	<b>%</b>
Good	22	68.8
Less	10	31.3
Total	32	100

It is widely recognized that 22 respondents (68.8%) possess a high level of knowledge, while ten respondents (31.3%) possess a lower level. An overview of back discomfort in

pregnant women during the third trimester at the Polyclinic Hospital. Indramayu Bhayangkara

**Table 6**  
**The distribution of back pain among multipara pregnant women during the third trimester at the hospital polyclinic was examined about effleurage massage. Indramayu Bhayangkara**

Pain	f	%
No pain	4	12.5
Mild Pain	16	50
Moderate Pain	10	31.3
Severe Pain	2	6.3
Uncontrolled severe pain	0	0
Total	32	100

The study's findings indicated that 4 (12.5%) respondents reported no pain, 16 (50%) reported mild pain, 10 (31.3%) reported moderate pain, and 2 (6.3%) reported severe pain.

**Bivariate Results**

**Table 7**  
**The Relationship between Back Pain in Pregnant Women in the Third Trimester at the Polyclinic RS and the Knowledge of Multipara Pregnant Women About Effleurage Massage. Indramayu Bhayangkara**

Knowledge	Pain								Total	P value	
	No pain		Mild Pain		Moderate Pain		Severe Pain				
	n	%	n	%	n	%	n	%			
Good	3	13,6	15	68,2	4	18,2	0	0	22	100	0,005
Less	1	10	1	10	6	60	2	20	10	100	
Sum	<b>4</b>		<b>16</b>		<b>10</b>		<b>2</b>		<b>32</b>	<b>100</b>	

The results of the study were as follows: of the 22 respondents with good knowledge, as many as 3 (13.6%) did not experience back pain, as many as 15 (68.2%) experienced mild pain, as many as 4 (18.2%) experienced moderate pain, and none experienced severe pain or uncontrolled severe pain. In contrast, out of ten respondents with less knowledge, as few as one (10%) did not experience back pain, as many as one (10%) experienced mild pain, as many as six (60%) experienced moderate pain, as many as two (20%) experienced severe pain, and no one experienced uncontrolled pain.

The analysis's results had a p-value of 0.005, indicating that there is a correlation between the knowledge of multi-para pregnant women about effleurage massage and back discomfort in pregnant women in the third trimester at the Hospital Polyclinic. Indramayu Bhayangkara

## **DISCUSSION**

### **Age**

The study's findings indicated that 31 (9.9%) respondents were between the ages of 20 and 35, while 1 (3.1%) respondents were over 35. The findings of this study are consistent with the research conducted by Rochmayanti & Ummah (2018), which indicates that the majority of expectant women are between the ages of 20 and 35, with 13 individuals (92.9%) falling within this age range and one individual (7.1%) falling within the category of over 35 years old. In the reproductive age range of 20 to 35 years. According to the Ministry of Health of the Republic of Indonesia (2019), age is one of the physiological indicators that are employed to assess variations in health degrees, discomfort, and utilization of health services. The study employed three age categories: the first category encompasses individuals under the age of 20, the second category encompasses those between the ages of 20 and 35, and the final category encompasses those over the age of 35. The researcher hypothesizes that individuals of reproductive age are more readily receptive to information, more receptive to others, and typically exchange experiences, all of which can influence their level of knowledge.

### **Education**

The study's findings revealed that 3 (9.4%) respondents had completed junior high school, 23 (71.9%) respondents had completed high school, and 6 (18.8%) respondents had completed postsecondary education. The findings of this study are consistent with the research conducted by Rochmayanti & Ummah (2018), which indicates that the education of expectant women is high, with a primary focus on school education, which accounts for up to 69%. This is consistent with the theory of Wahn and Nisse (2018), which posits that education is one of the primary factors influencing the level of expertise required to access or utilize available health services. A person with a high level of education is more likely to possess a high level of knowledge, motivating them to pursue and utilize available health services. The researcher hypothesizes that an individual's ability to acquire information is inversely proportional to their level of education; however, individuals with inadequate education levels also possess inadequate knowledge.

### **Work**

The study's findings indicated that 19 respondents (59.4%) were employed, while 13 (40.6%) were not. The findings of this investigation are included in Kurniawati's (2020) research titled "The Relationship between the Characteristics of Pregnant Women and

Knowledge and Attitudes in Recognizing Pregnancy Danger Signs." The majority of expectant women who are employed are 62.5%.

The researcher presupposes that employment will enhance one's experience. Working mothers are highly receptive to information and can make the most informed decisions. They are also generally more receptive to others and inclined to share their professional experiences.

### **Gestational Age**

The study's findings indicated that the average gestational age of the respondents was 33.69 weeks, with a standard deviation of 1.469. The lowest gestational age was 32 weeks, and the maximum was 37 weeks. This follows Astuti's (2018) theory, which posits that back pain in pregnant women during the third trimester can reach 70% as a result of physiological changes that cause distress, specifically back pain. Back discomfort is more prevalent during the third trimester of pregnancy, and it can occur from the time the gestational age reaches 20-28 weeks until the night before delivery. Research has shown that changes in gestational age can result in various discomforts for expectant women. These discomforts are caused by changes in the soft tissues that support and connect the muscles, leading to decreased muscle elasticity and flexibility.

### **This is an overview of the knowledge of multi-para expectant women regarding effleurage massage in the third trimester at the Hospital Polyclinic. Indramayu Bhayangkara.**

The study findings indicated that 22 respondents (68.8%) possessed a high level of knowledge, while 10 (31.3%) possessed a low level. The results of this research are predicated on Rochjati's theory (2019), which posits that knowledge is a process of comprehending something that is both theoretical and practical and is possessed by humans. The intelligence of an individual is contingent upon the knowledge they possess. Technologies, practices, traditions, and literature can all be used to store knowledge. If employed correctly, the knowledge that has been stored has the potential to transform. The life and development of an individual, society, or organization are significantly influenced by knowledge. Knowledge is the outcome of knowing, which occurs after individuals experience a specific object through their senses of sight, hearing, scent, taste, and touch. Effleurage massage is a technique that employs gentle, slow, lengthy, or uninterrupted strokes. According to Judha (2019), a 3-10 minute effleurage massage on the back can

reduce blood pressure, slow down the heart rate, increase breathing, and generate endorphin hormones that naturally alleviate pain in the body.

The researcher in this study presupposed that the respondent's education level impacted their knowledge. As many as 23 respondents (71.9%) possess a high school education level. A person's level of education can either support or affect their level of knowledge, as per Law of the Republic of Indonesia No.23 of 2003. A higher level of education facilitates the acquisition of new information, thereby preventing mothers from being indifferent to health information. Conversely, a lower level of education results in minimal knowledge, which causes mothers to be indifferent to existing health programs. A collection of information acquired and obtained throughout one's existence and employed as a tool for self-adjustment about oneself and the environment is referred to as knowledge. In addition to the respondent's educational background, the respondent's knowledge can be derived from various sources, including health professionals, social media, television, radio, and information from their neighbors. This information can influence the mother's understanding of Effleurage massage.

#### **An overview of back discomfort in pregnant women during the third trimester at the Polyclinic Hospital. Indramayu Bhayangkara.**

The study's findings indicated that 4 (12.5%) respondents reported no pain, 16 (50%) reported mild pain, 10 (31.3%) reported moderate pain, and 2 (6.3%) reported severe pain. Ratih Prananingrum (2022) is currently researching the results of this study, which revealed that the majority of respondents (29, 78.3%) were experiencing moderate pain, while one respondent (2.7%) was experiencing severe pain.

The researcher presupposes that the results of this study are a consequence of the gestational age of pregnant women, which is 33.69 weeks on average. The uterus expands as the gestational age increases, resulting from the fetus's development. The pregnant woman must modify her position to maintain balance, as the weight point of the body is more inclined forward. The body will attempt to drag the back more, the lower spine will be more curved (lordosis), and the spinal muscles will shorten. This can lead to back pain by causing muscle and ligament tension (Widyantara & Fitriana, 2020).

At the Hospital Polyclinic, the correlation between the knowledge of numerous pregnant women regarding effleurage massage and back pain in the third trimester. Indramayu Bhayangkara

The results of the study were as follows: of the 22 respondents with good knowledge, as many as 3 (13.6%) did not experience back pain, as many as 15 (68.2%) experienced mild pain, as many as 4 (18.2%) experienced moderate pain, and none experienced severe pain. Severe pain was not controlled. In contrast, out of ten respondents with less knowledge, as few as one (10%) did not experience back pain, as many as one (10%) experienced mild pain, as many as six (60%) experienced moderate pain, as many as two (20%) experienced severe pain, and no one experienced uncontrolled pain. The p-value of the analysis results was 0.005, indicating a correlation between the knowledge of multi-para pregnant women about effleurage massage and back discomfort in pregnant women in the third trimester at the Hospital Polyclinic. Bhayangkara Indramayu.

The results of this study are included in a study conducted by Rahayu (2019) titled "The Relationship between Knowledge and the Level of back pain in pregnant women in the third trimester." The analysis yielded a p-value of 0.002, indicating a correlation between knowledge and the level of back pain in pregnant women in the third trimester. Pregnant women who experience back pain still do so because they lack knowledge and comprehension regarding the mother's significance in reducing back pain during pregnancy.

The findings of this investigation are predicated on Notoatmodjo's (2018) theory, which posits that knowledge is a critical domain for the development of an individual's subsequent actions. Consequently, expectant women must possess sufficient knowledge regarding back pain not only to influence their future behavior but also to prevent undesirable outcomes that may arise as a consequence of their ignorance regarding back pain. Attending classes for pregnant women or seeking information through social media or other media can enhance their knowledge regarding the management of back discomfort.

Effleurage is a gentle, slow, and either lengthy or intermittent massage technique that involves applying gentle pressure to the body's surface in a circular motion using the forearm. It enhances blood circulation, pressure, and physical and mental relaxation (Linden, 2018).

Improper posture habits can also contribute to the prevalence of back discomfort during pregnancy. Excessive bending positions, walking without rest, and lifting heavy weights will impact the pelvic floor's stability and the uterus's balance, particularly if these activities are performed when pregnant women are tired and sit lean for an extended

period. Consequently, the spine will shorten, and lower back pain complaints will arise (Sumarah, 2019).

The researcher presupposes that the education level of the respondents influences the results of this study. For instance, education is essential for expectant women to acquire information regarding health-related topics, which can enhance their quality of life. Furthermore, education is the primary factor contributing to expanding an individual's knowledge and information. The more education an individual has, the more readily they can acquire information and the more knowledge they possess to implement health behaviors. Consequently, the level of education is frequently employed as a qualification material or prerequisite, as well as a method of identifying an individual's level of knowledge. Pregnant women may experience an increase in back discomfort as a result of effleurage massage. Alternatively, pregnant women are aware that Effleurage massage can alleviate their back discomfort, as they can perform the massage at home with the help of family members or healthcare professionals.

## CONCLUSION

The findings of this investigation are as follows:

1. It was determined that 31 (9.9%) respondents were between the ages of 20 and 35, while 1 (3.1%) were over 35. Three respondents (9.4%) had completed junior high school, twenty-three (71.9%) had completed high school, and six (18.8%) had completed higher education. Nineteen (59.4%) respondents were employed, while thirteen (40.6%) were not. The respondents' average gestational age was 33.69 weeks, with a standard deviation 1.469. The lowest gestational age was 32 weeks, and the maximum was 37 weeks.
2. It was determined that 22 (68.8%) respondents possessed a high level of knowledge, while 10 (31.3%) respondents possessed a low level of knowledge.
3. The results of the study indicated that 4 (12.5%) respondents reported no pain, 16 (50%) reported mild pain, 10 (31.3%) reported moderate pain, and 2 (6.3%) reported severe pain.
4. The analysis's results indicated a p-value of 0.005, indicating a correlation between the knowledge of multi-para pregnant women about effleurage massage and back discomfort in pregnant women in the third trimester at the Hospital Polyclinic. Indramayu Bhayangkara

## SUGGESTION

1. Health agencies. It is recommended that health agencies offer complementary midwifery training and effleurage massage to enable midwives to implement these techniques at BPM or health centers, thereby reducing the prevalence of back pain in expectant women.
2. Midwife. Midwives are advised to administer effleurage massage to pregnant women experiencing back discomfort and to provide health education and experience in this area.
3. Respondents. It is advised that pregnant women with limited knowledge become more proactive in their pursuit of information regarding effleurage massage in order to enhance their understanding of the technique and alleviate back discomfort. In the interim, pregnant women who possess a high level of knowledge may employ their knowledge to alleviate their back discomfort.
4. Subsequent researcher. It is recommended that researchers expand the scope of this research by increasing the number of samples and variables.

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