JKM (Jurnal Kebidanan Malahayati), Vol 11, No. 12. Desember 2025,
ISSN (Print) 2476-8944 ISSN (Online) 2579-762X, Hal 1279-1288

PRENATAL YOGA ON BACK PAIN REDUCTION IN TRIMESTER III PREGNANT WOMEN

Sukmala Dewi Laura[1], Dainty Maternity[2], Fitria[3]

[1]Midwifery Division of MalahayatI University Bandar Lampung
[2,3]Midwifery DIV Study Program, Malahayati University
E-mail : sukmaladewilaura@gmail.com, denty.mf@gmail.com, jimmy.margono@gmail.com

ABSTRAK : PRENATAL YOGA ON BACK PAIN REDUCTION IN TRIMESTER III PREGNANT WOMEN

Latar Belakang: Nyeri punggung dapat berkisar dari ketidaknyamanan ringan hingga nyeri yang hebat. Prevalensi nyeri punggung bawah pada ibu hamil sekitar 70-86%. Untuk mengurangi nyeri punggung bawah selama kehamilan, pengobatan non-farmakologis dapat dilakukan dengan yoga prenatal.

Tujuan: Untuk mengetahui pengaruh yoga prenatal dalam mengurangi nyeri punggung pada trimester ketiga ibu hamil di PMB Rina Irmawati, Desa Taman Fajar, Purbolinggo, Kabupaten Lampung Timur tahun 2022.

Metode: Penelitian kuantitatif ini menggunakan desain kuasi-eksperimental dengan desain kelompok kontrol non-ekuivalen. Populasi dalam penelitian ini adalah seluruh ibu hamil trimester ketiga di PMB Rina Irmawati, Desa Taman Fajar, Purbolinggo, Kabupaten Lampung Timur dari Juni hingga Juli 2022, dengan total 46 orang. Sampel dalam penelitian ini berjumlah 30 orang, terdiri dari 15 orang dalam kelompok intervensi dan 15 orang dalam kelompok kontrol, dipilih dengan metode purposive sampling. Analisis data dalam penelitian ini kemudian menggunakan uji Mann-Whitney.

Hasil: Rata-rata nyeri punggung pada ibu hamil sebelum melakukan yoga prenatal adalah 4,8 (nyeri sedang), sedangkan setelah melakukan yoga prenatal, menjadi 0,6 (nyeri ringan). Sementara itu, pada kelompok kontrol selama pretest, rata-rata nyeri punggung pada ibu hamil trimester ketiga adalah 4,6 (nyeri sedang), sedangkan pada posttest, menjadi 0,9 (nyeri ringan). Selain itu, uji Mann-Whitney dengan nilai p 0,001.

Kesimpulan: Terdapat pengaruh yoga prenatal dalam mengurangi nyeri punggung pada ibu hamil trimester ketiga di PMB Rina Irmawati, Desa Taman Fajar, Purbolinggo, Kabupaten Lampung Timur tahun 2022. Sarannya adalah ibu hamil dapat rutin mengikuti kelas yoga prenatal untuk mengobati dan mencegah nyeri punggung.

Kata kunci: Yoga Prenatal, Nyeri Punggung, Ibu Hamil Trimester Ketiga

ABSTRACT

Background: Back pain can range from mild discomfort to painful pain. The prevalence of low back pain in pregnant women is around 70-86%. To reduce low back pain during pregnancy, non-pharmacological treatment can be done with prenatal yoga.

Purpose: To determine the effect of prenatal yoga on reducing back pain in the third trimester of pregnant women at PMB Rina Irmawati, Taman Fajar Village, Purbolinggo, East Lampung Regency in 2022.

Method: This quantitative research used a quasi-experimental design with a non-equivalent control group design. The population in this study was all third-trimester pregnant women at PMB Rina Irmawati, Taman Fajar Village, Purbolinggo, East Lampung Regency from June to July 2022, with a total of 46 people. The sample in this study amounted to 30 people, comprising 15 people in the intervention group and 15 in the control group, selected by purposive sampling. Data analysis in this study then employed the Mann-Whitney test.

Results: Mean back pain in pregnant women before doing prenatal yoga was 4.8 (moderate pain), while after doing prenatal yoga, it was 0.6 (mild pain). Meanwhile, in the control group during the pretest, the mean back pain in third trimester pregnant women was 4.6 (moderate pain), while at the posttest, it was 0.9 (mild pain). In addition, the Mann-Whitney test with a p-value of 0.001.

Conclucion: An effect of prenatal yoga on reducing back pain in the third trimester of pregnant women at PMB Rina Irmawati, Taman Fajar Village, Purbolinggo, East Lampung Regency in 2022. The suggestion is that pregnant women can routinely attend prenatal yoga classes to treat and prevent back pain.

Keywords : Prenatal Yoga, Back Pain, Third Trimester Pregnant Women

INTRODUCTION

Back pain during pregnancy is a significant health problem that affects most of the women in the world. Low back pain is likely caused by physiological changes during pregnancy, including maternal weight gain, spinal lordosis, decreased abdominal muscle strength, weight changes, and relaxation-mediated joint weakness. This increases shear across the lower back and hip joints, thereby increasing the risk of low back pain during pregnancy (Holden et al, 2019).

Back pain is a symptom and not a disease. Back pain can range from mild discomfort to painful pain. As the uterus enlarges, the center of gravity in pregnant women will move forward. This displacement will cause the mother to adjust her standing position. These body changes can lead to a lumbar curvature (lordosis) and a compensatory spinal thoracic curvature (kyphosis). This kind of mechanism will occur in the fourth and ninth month of pregnancy, and will last until 12 weeks after giving birth (Geta, 2020).

High prevalence rates of back pain during pregnancy have been reported in Europe, America, Australia, China, including mountainous areas of Taiwan and rural areas of Africa as well as among upper-class women in Nigeria. Among women who experience back pain during pregnancy, about 16% have reported the location of back pain during the first 12 weeks of pregnancy, 67% at week 24, and 93% at week 36 (Kristiansson, 2015). Based on research conducted on 869 pregnant women in the United States, England, Norway and Sweden, the prevalence of low back pain in pregnant women is around 70-86% (Gutke, 2017).

The results of Ramachandra's research (2017) in India stated that the prevalence of low back pain in third trimester pregnant women, which was 33.7%, occurred in 261 pregnant women. The prevalence of back pain in Indonesia is 18%. The prevalence of low back pain (LBP) increases with age and is most common in the middle and early four decades of life.

The management of back pain during pregnancy varies, such as pharmacological and non-pharmacological management (Sinclair, 2014). Handling back pain using pharmacological therapy can be done by giving analgesia drugs that are injected via intravenous infusion, inhalation of breath or by blockade of nerves that transmit pain (Suwondo et al, 2017). While non-pharmacological treatment to reduce low back pain during pregnancy can be done with pregnancy exercise, endorphin massage, prenatal yoga, and others (Mediarti et al, 2014).

Prenatal yoga is a modification of basic prenatal yoga which is adjusted to the movements of pregnant women. Yoga is a body, mind and mental exercise that really helps pregnant women in flexing their joints and calming their minds, especially in the third trimester of pregnancy. Movements in prenatal yoga are made at a slower tempo and adjust to the space capacity of pregnant women (Wagiyo and Putrono, 2016)

Supported by research by Mu'alimah (2021) which showed that before giving pregnancy exercise, the mean value was 4.69. Meanwhile, after being given pregnancy exercise, the mean value was 2.50. Based on the results of the Wilcoxon test, it was found that p value 0.000 < 0.05, H0 was rejected and H1 was accepted, meaning that there was a significant difference in back pain before and after pregnancy exercise was given to pregnant women in the third trimester. In addition, according to research by Holden et al (2019) and Kim et al (2014) stated that prenatal yoga is useful for reducing low back pain in pregnant women.

Based on the results of a presurvey of 12 third trimester pregnant women who performed ANC at PMB Rina Irmawati, it was found that 9 pregnant women complained of back pain. After conducting interviews with the pain observation sheet media using the NRS scale, 6 (66.7%) pregnant women said that back pain was in the mild category and 3 (33.3%) pregnant women said the back pain was in the moderate category.

RESEARCH METHODS

In this research, the writer uses quantitative research,with a quasi experimental research design with a pretest posttest control group design. The population in this study was taken from all third trimester pregnant women at PMB Rina Irmawati, Taman Fajar Purbolinggo Village, East Lampung Regency in June-July 2022 with a total of 46 people and the sample in this study was 30 people who were divided into two groups, namely 15 experimental groups. and 15 people in the control group, the sampling technique used purposive sampling. Analysis of univariate and bivariate data using Mann Whitney statistical test.

RESEARCH RESULTS

Characteristics of Respondents

Based on the table 1, it is known that in the intervention group there were 12 (80%) respondents with no risk age, 9 (60%) respondents with a gestational age of 28-32 weeks, 8 (53.3%) respondents with multigravida parity, and 9 (60 %) respondents with excess BMI. While in the control

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

group, there were 12 (80%) respondents with no risk age, 9 (60%) respondents with a gestational age of 28-32 years, 10 (66.7%) respondents with multigravida parity, and all 15 respondents (100%). with excess BMI.

Table 1
Characteristics of Respondents

Characteristics of Respondents	Intervention		Control	
	n	%	n	%
Age				
Not at risk (20-35 years old)	12	80.0	12	80.0
At risk (<20 or >35 years)	3	20.0	3	20.0
Gestational Age				
28-32 weeks	9	60.0	9	60.0
33-36 weeks	6	40.0	6	40.0
parity				
Primigravida	7	46.7	5	33.3
Multigravida	8	53.3	10	66.7
BMI				
Normal	6	40.0	0	0
Excess	9	60.0	15	100

Table 2
The effect of respondent characteristics on reducing back pain in third trimester pregnant women at PMB Rina Irmawati Taman Fajar Purbolinggo Village, East Lampung Regency in 2022

Variable	n	Week of Pain							
		I		II		III		IV	
		mean	P value	mean	P value	mean	P value	mean	P value
Intervention									
Age									
No Risk	12	4.83	0.810	3.42	0.342	1.42	0.342	0.58	0.734
at risk	13	4.67		4.00		2.00		0.67	
Gestational Age									
28-32 weeks	9	4.89	0.693	3.44	0.662	1.56	0.950	0.56	0.794
33-36 weeks	6	4.67		3.67		1.50		0.67	
parity									
Primigravida	7	4.71	0.772	3.43	0.694	1.43	0.760	0.57	0.847
Multigravida	8	4.88		3.63		1.63		0.63	
BMI									
Normal	9	5.33	0.108	3.50	0.852	1.50	0.852	0.67	0.513
Excess	6	4.44		3.56		1.56		0.56	
Control									
Age									
No Risk	12	4.58	0.817	3.83	0.318	2.33	0.875	1.42	0.494
at risk	3	4.67		4.83		2.33		1.00	
Gestational Age									
28-32 weeks	9	4.56	0.659	3.89	0.754	2.22	0.562	1.22	0.455
33-36 weeks	6	4.67		4.00		2.50		1.50	
parity									
Primigravida	5	4.20	0.238	3.80	0.648	2.20	0.421	1.00	0.328
Multigravida	10	4.80		4.00		2.40		1.50	
BMI									
Normal	0	0	-	0	-	0	-	0	-
Excess	15	4.60		3.93		2.33		1.33	

Based on the table above, it is known that in the intervention group there was no effect of age, gestational age, parity and BMI on reducing back pain in third trimester pregnant women at PMB Rina Irmawati, Taman Fajar Purbolinggo Village, East Lampung Regency in 2022 with p value > 0.05. Likewise in the control group there was no effect of age, gestational age, parity and BMI on the reduction of back pain in third trimester pregnant women at PMB Rina Irmawati Taman Fajar Purbolinggo Village, East Lampung Regency in 2022 with p value > 0.05.

Table 3
Differences in average back pain in third trimester pregnant women Intervention Group and Control Group at PMB Rina Irmawati Taman Fajar Purbolinggo Village, East Lampung Regency year 2022

Group	Average back pain				P value
	first week	second week	3rd week	4th week	
Intervention	4.80	3.53	1.53	0.60	0.021
Control	4.60	3.93	2.33	1.33	

Based on the table above, it is known that the average back pain of pregnant women in the intervention group at week 1 was 4.80, week 2 was 3.53, week 3 was 1.53, and week 4 was 0, 60. While in the control group, the average back pain was 4.60 at week 1, week 2 was 3.93, week 3 was 2.33, and week 4 was 1.33. Based on these data, it can be seen that both respondents in the intervention and control groups experienced a decrease in pain every week. However, the reduction in pain in the intervention group was more significant than in the control group. After the one way ANOVA test was carried out, the p value was 0.021 < 0.

Table 4
Average back pain in third trimester pregnant women before and after doing prenatal yoga in the experimental group at PMB Rina Irmawati, Taman Fajar Village, Purbolinggo East Lampung Regency in 2022

Back pain	N	Mean	Standard Deviation	Min-Max
Pretest	15	4.80	1.014	3-6
Posttest	15	0.60	0.737	0-2

Based on the table above, it is known that the average back pain before doing prenatal yoga is 4.80 with a standard deviation of 1.014, a minimum score of 3 and a maximum of 6. Meanwhile, after doing prenatal yoga the average is 0.60 with a standard deviation of 0.737, a minimum score of 0 and a maximum of 2. Based on the data above, it was found that there was a decrease in back pain in pregnant women after 4 weeks of prenatal yoga.

Table 5
Average back pain in third trimester pregnant women before and after without prenatal yoga intervention in the control group at PMB Rina Irmawati, Taman Fajar Village, Purbolinggo East Lampung Regency in 2022

Back pain	N	mean	Standard Deviation	Min-Max
Pretest	15	4.60	0.828	3-6
Posttest	15	1.33	0.900	0-3

Based on the table above, it is known that the average back pain during the pretest was 4.60 with a standard deviation of 0.828, a minimum score of 3 and a maximum of 6. Meanwhile, during the posttest, the average was 0.90 with a standard deviation of 0.9737, a minimum score of 0 and a maximum score of 0. 3. Based on the table, it is found that there is a decrease in back pain in pregnant women when re-measurement is carried out at week 4.

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

Table 6
The effect of prenatal yoga on reducing back pain in third trimester pregnant women at PMB Rina Irmawati Taman Fajar Purbolinggo Village, East Lampung Regency in 2022

Group	N	Average Difference	P value
Intervention	15	4.20	0.001
Control	15	3.27	

Based on the table above, it is known that the average difference in back pain in the intervention group was 4.2 and in the control group was 3.27. This shows that there are differences in the decrease in back pain felt by pregnant women in the intervention and control groups, where the decrease in back pain of pregnant women in the intervention group is more significant than that of pregnant women in the control group. The results of the Mann Whitney test obtained p value of 0.001 <0.05, meaning that there is an effect of prenatal yoga on reducing back pain in third trimester pregnant women at PMB Rina Irmawati, Taman Fajar Village, Purbolinggo, East Lampung Regency in 2022.

DISCUSSION

Characteristics of Respondents

The results of this study indicate that in the intervention group there were 12 (80%) respondents with no risk age, 9 (60%) respondents with a gestational age of 28-32 weeks, 8 (53.3%) respondents with multigravida parity, and 9 (60 %) respondents with excess BMI. Meanwhile, in the control group, there were 12 (80%) respondents with no risk age, 9 (60%) respondents with a gestational age of 28-32 years, 10 (66.7%) respondents with multigravida parity, and all respondents with excess BMI.

After the difference test was conducted, it was found that in the intervention group there was no effect of age, gestational age, parity and BMI on the reduction of back pain in third trimester pregnant women at PMB Rina Irmawati, Taman Fajar Purbolinggo Village, East Lampung Regency in 2022 with p value > 0.05. Likewise in the control group there was no effect of age, gestational age, parity and BMI on the reduction of back pain in third trimester pregnant women at PMB Rina Irmawati Taman Fajar Purbolinggo Village, East Lampung Regency in 2022 with p value > 0.05.

In general, low back pain will begin to be experienced in women aged between 20 to 35 years which will reach its peak at the age of more than 40 years (Sukeksi et al, 2018). The study agrees with (Mardiana, 2021) that the age and education of the respondents obtained can be seen from most of them being between the ages of 20-35 years.

Back pain in pregnant women entering the third trimester in doing too much and excessive physical activity, which usually pregnant women take care of the household more and have to work, makes the mother feel tired and lack adequate rest (Fithriyah et al, 2020).

Multigravida and grandemultigravida mothers will experience back pain and are more at risk compared to primigravidas because their muscles are weaker causing the failure of the muscles to support the uterus or the uterus is getting bigger. In the absence of support or support, the uterus looks slack and the back lengthens in its arch. Weakness in the muscles in the abdomen is generally experienced by grandemultigravida (Fithriyah et al, 2020).

In addition, the risk factor for body mass index in the overweight category is significant for complaints of low back pain. Someone who is overweight is 5 times more likely to experience complaints of low back pain, compared to people who have normal weight (Purnamasari, 2015).

According to researchers, height is related to weight during pregnancy, the body will support the mother's weight during pregnancy. Persistent back pain can occur in women with low back and pelvic pain, low back pain in early pregnancy, back extensor muscle weakness, older individuals, and people who have job dissatisfaction.

Throughout pregnancy, women experience physiological changes caused by anatomical and functional needs. Hygienic changes affect the musculoskeletal system and usually cause pain, including low back pain. So it can be concluded that there is no effect of the characteristics of pregnant women such as maternal age, gestational age, parity and BMI on back pain in pregnant women. Because physiologically pregnant women in the third trimester will feel discomfort due to the increasing size of the fetus in the womb so that it can cause back pain.

Average back pain in third trimester pregnant women before and after doing prenatal yoga in the experimental group at PMB Rina Irmawati Taman Fajar Purbolinggo Village, East Lampung Regency in 2022

The results of this study indicate that the average back pain before doing prenatal yoga is 4.80 with a standard deviation of 1.014, a minimum

score of 3 and a maximum of 6. Meanwhile, after doing prenatal yoga, the average is 0.60 with a standard deviation of 0.737, a minimum score of 0. and a maximum of 2.

Low back pain (LBP) is pain in the superior region by an imaginary transverse line through the tip of the spinous process of the last thoracic vertebra, inferiorly by an imaginary transverse line through the end of the spinous process of the first sacral vertebra and laterally by a vertical line drawn from the lateral border of the lumbar spine (Rinta 2013).

Back pain in pregnancy is an uncomfortable condition due to the enlargement of the uterus and increased body weight causing the muscles to work harder so that it can cause stress to the muscles and joints (Tyastuti, 2016).

One of the efforts that can be done to overcome back pain in pregnant women is to do prenatal yoga. Prenatal yoga is a combination of pregnancy exercise movements with antenatal yoga movements consisting of breathing movements (pranayama), positions (mudras), meditation and relaxation that can help smooth pregnancy and childbirth (Rusmita, 2015). According to Rafika (2018), prenatal yoga (yoga during pregnancy) is one type of modification of hatha yoga that is adapted to the condition of pregnant women. The purpose of prenatal yoga is to prepare pregnant women physically, mentally and spiritually for the birth process.

One of the benefits of prenatal yoga for pregnant women is to help overcome back pain and prepare physically by strengthening and maintaining the elasticity of the abdominal wall muscles, ligaments, and pelvic floor muscles related to the delivery process (Suananda, 2018).

This study is in line with research conducted by Mu'alimah (2021) which showed pregnant women before doing prenatal yoga, the mean value (average back pain scale) was 4.69 and after being given prenatal yoga, the mean value (average back pain scale) was obtained. is 2.50.

According to researchers, back pain is caused by the weight gain of pregnant women which results in instability of the joints. Back pain in pregnant women can interfere with discomfort in pregnant women and even have an impact on the activities of pregnant women. Therefore, it is necessary to treat back pain in pregnant women, one of which is by doing prenatal yoga. After doing prenatal yoga, it is known that there is a decrease in the average back pain in pregnant women because prenatal yoga in pregnancy can maintain the elasticity and strength of the pelvic ligaments, hips and leg muscles so as to reduce pain that arises in the mother's back.

Back pain in pregnant women is not determined by the characteristics of pregnant women. This is indicated by the results of the test of the effect of characteristics on the reduction of back pain in pregnant women with the result that there is no difference in the reduction of back pain in pregnant women based on the characteristics of pregnant women. So it must be done an effort that can reduce back pain in pregnant women so that pregnant women feel comfortable during their pregnancy.

Average back pain in third trimester pregnant women before and after without prenatal yoga intervention in the control group at PMB Rina Irmawati Taman Fajar Purbolinggo Village, East Lampung Regency in 2022

The results of this study indicate that the average back pain during the pretest was 4.60 with a standard deviation of 0.828, a minimum score of 3 and a maximum of 6. Meanwhile, at the posttest, the average score was 0.90 with a standard deviation of 0.9737, a minimum score of 0 and a maximum score of 0. 3.

Back pain can occur due to pressure on the back muscles or a shift in the spine, causing pressure on the joints. As the uterus enlarges, the center of gravity in pregnant women will move towards the front, this displacement will cause the mother to adjust her standing position. These changes in the body can trigger an overtime curve (lordosis) and a compensatory thoracic spinal curve (kyphosis). This kind of mechanism will occur in the fourth and ninth month of pregnancy, and will last up to 12 weeks after giving birth (Rezeki, 2019).

Back pain in pregnant women can cause difficulty walking. This back pain can be musculoskeletal in nature or can be associated with pelvic disorders such as infection. Other complications of back pain are worsening mobility that can hinder activities such as driving a vehicle, caring for children and affecting the mother's work, insomnia which causes fatigue and irritability (Wagiyo and Putrono, 2016).

This study is in line with the results of research conducted by Tono (2022) which showed that the average back pain in pregnant women before being given an intervention without yoga exercise was 6.85 and after intervention without yoga exercise was 4.1.

According to researchers, back pain in pregnant women can be caused by activities during pregnancy which is also a factor in the occurrence

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

of back pain during pregnancy, many household tasks such as ironing or preparing food that can be done in a sitting position, not standing but done by standing for a long time, including if a pregnant woman has to lift a heavy object, there will be tension in the pelvic muscles, all rotating movements while lifting are dangerous movements and should not be done.

During pregnancy, a woman's uterus will experience weight gain and enlargement due to hypertrophy or an increase in cell size and the mechanical effect of interior pressure on the uterine wall as the fetus develops in the womb. As the gradual weight gain during pregnancy and the increasing size of the uterus causes a woman's posture and gait to change markedly. If a pregnant woman does not pay full attention to her posture, she will walk backwards due to an increase in lordosis. This arch will then stretch the back muscles and cause pain.

Back pain in pregnant women who did not do prenatal yoga found that they still experienced a decrease in pain intensity because the mother was diligent in exercising such as walking in the morning or by doing home activities that could neutralize the pain felt. However, back pain in pregnant women must be overcome so as not to cause discomfort to pregnant women.

The effect of prenatal yoga on reducing back pain in third trimester pregnant women at PMB Rina Irmawati Taman Fajar Purbolinggo Village, East Lampung Regency in 2022

The results of this study showed that the average difference in back pain in the intervention group was 4.2 and in the control group was 3.27. The results of the Mann Whitney test obtained p value of 0.001 <0.05, meaning that there is an effect of prenatal yoga on reducing back pain in third trimester pregnant women at PMB Rina Irmawati, Taman Fajar Village, Purbolinggo, East Lampung Regency in 2022.

Back pain can cause difficulty walking and can be musculoskeletal in nature or can be associated with pelvic disorders such as infection. Another complication of back pain is decreased mobility which can hinder activities such as driving a vehicle, caring for children and affecting the mother's work, insomnia which causes fatigue and irritability. Handling in midwifery care, namely providing individual education can reduce symptoms by empowering mothers to understand their condition, providing back care, it is recommended to maintain a comfortable level of activity for them. Efforts to treat back pain are pharmacological and non-pharmacological, pharmacological therapy can be given with non-steroidal anti-inflammatory agents, analgesics, muscle relaxants (Wagiyo & Putrono, 2016).

One way to deal with back pain in the third trimester of pregnancy is to do prenatal yoga. Prenatal yoga is a light exercise that pregnant women can take. As a form of relaxation before giving birth and reducing anxiety, yoga can also help pregnant women reduce back pain, because pregnant women are often found complaining of back pain even since the end of the second trimester. This is due to changes in body shape experienced by pregnant women (Mu'alimah, 2021).

Prenatal yoga is a body exercise relaxation movement that can be applied to pregnant women in the third trimester of pregnancy, gentle and relaxing yoga movements can make pregnant women flex their joints and calm the mind, especially in the third trimester, yoga can be done by mothers at home or by attending classes yoga for pregnant women, in every yoga movement there are benefits for the mother and fetus such as to strengthen the body during pregnancy, prevent back pain, practice breathing, and improve sleep due to anxiety facing childbirth. Pregnancy yoga exercise has five ways, namely physical yoga practice, breathing (pranayama), positions (mudra), meditation and deep relaxation that can be used to get benefits during pregnancy (Mu'alimah, 2021).

Prenatal yoga is an activity that includes breathing exercises, stretching and strengthening and relaxation poses. A pregnant woman may experience an imbalance that can result in back pain and stiff neck. Gentle stretching with a slight emphasis on muscle balance and flexibility will help relieve discomfort and help relax muscles during pregnancy (Sinclair, 2014).

These exercises will flex and strengthen the bone system, muscles and joints become more flexible so they are not easily injured. Yoga exercise can also prevent osteoporosis of the spine, therefore the left and right parts of the bone structure have rows of sympathetic and parasympathetic nerve nodes that work autonomously, so that when practicing yoga, the nerve nodes will be massaged intensely which makes them healthier (Safarina, 2018).

Yoga is a practical approach to balancing body, mind and spirit. The benefits of yoga include the formation of strong postures, the development of flexible and strong muscles, and the purification of the central nervous system located in the spine. Yoga exercises performed during the third trimester of pregnancy can relieve some of the complaints

experienced by pregnant women during the third trimester, including low back pain. Yoga exercise carried out in the third trimester of pregnancy can reduce the complaints felt by pregnant women during the third trimester, one of which is low back pain (Mediarti, 2014).

Pregnant women who do physical exercise using yoga exercises can increase endorphins. Pregnancy gymnastics and yoga include relaxation, long breathing exercises, and meditation. Physical exercise can increase endorphins and pregnant women will relax, calm down, and can inhibit painful stimuli that arise during pregnancy and childbirth. In addition, the hormone enkephalin with physical exercise during pregnancy will increase naturally. This hormone works with endorphins as pain transmission inhibitors (Hidayati, 2019).

The decrease in the level of low back pain in pregnant women occurs due to the movements performed during prenatal yoga. The movement of focusing attention (centering) and regulating breathing patterns (pranayama), the mother can focus her mind and breathe calmly and comfortably thereby increasing the flow of oxygen throughout the mother and fetus. In addition, after doing prenatal yoga, there is a decrease in cortisol hormone levels. This causes the mother to become more relaxed and calm so that the response to pain decreases (Cahyani et al, 2020).

The results of this study are in line with research conducted by Rejeki and Fitriani (2019) which showed that the average level of back pain before prenatal yoga treatment was 2.2333 and the average back pain after prenatal yoga treatment was 0.7333 and the average difference between pain before and after treatment was 1.5 and the p-value was 0.000. From the results of the analysis of the Wilcoxon-signed stratified test with the SPSS program, the Asym value was obtained. Sig of 0.000 (p value <0.05) means that there is an effect of prenatal yoga on reducing back pain in pregnant women with TM III.

In addition, this research is supported by research by Fauziah et al (2020) which says that the average effect of the back pain scale on pregnant women by doing prenatal yoga is 0.367 with a standard deviation of 0.615. The statistical test results using the pair dependent T test get a significantly smaller value of 0.003. from 0.05, so it can be concluded that there is an effect of prenatal yoga on reducing back pain in third trimester pregnant women at the Krakatau Clinic, Bandar Lampung, Lampung Province in 2019. In line with Maternity research (2022) says that exercise can reduce back pain due to ligaments and basic muscles the pelvis can be trained and become more elastic, thus providing a relaxing effect for the mother, and increasing muscle elasticity the better,This can reduce back pain in pregnancy.

According to the researcher's assumptions, the reduction in pain intensity in the intervention group was more significant than the reduction in pain in the control group. Complaints of back pain experienced by pregnant women certainly cannot be left alone. One way to improve health during pregnancy is to do light exercise such as prenatal yoga.

Prenatal yoga practiced regularly can help stretch and build muscles, as well as strengthen bones and stretch joints. Yoga posture stimulates the release of endorphins that create a sense of comfort in the body. Prenatal yoga is very suitable for pregnant women because the activities are not only physical in nature, by doing yoga can achieve complete healthy conditions which include physical, mental, social and spiritual health.

CONCLUSION

1. The average back pain in third trimester pregnant women before doing prenatal yoga in the experimental group at PMB Rina Irmawati, Taman Fajar Purbolinggo Village, East Lampung Regency in 2022 was 4.8 and after doing prenatal yoga was 0.6. This means that there is a decrease in back pain for pregnant women after prenatal yoga.
2. The average back pain in third trimester pregnant women during the pretest in the control group at PMB Rina Irmawati, Taman Fajar Purbolinggo Village, East Lampung Regency in 2022 was 4.6 and at the posttest it was 0.9. This means that there is a decrease in back pain of pregnant women at the time of posttest.
3. There is an effect of prenatal yoga on reducing back pain in third trimester pregnant women at PMB Rina Irmawati, Taman Fajar Purbolinggo Village, East Lampung Regency in 2022 with a p value of 0.001.

SUGGESTION

Pregnant mother

It is expected that pregnant women can routinely attend classes for pregnant women that provide prenatal yoga as an effort to treat and prevent back pain during pregnancy.

PMB Rina Irmawati

PMB can collaborate with village midwives to hold classes for pregnant women with prenatal yoga

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

activities regularly as an effort to prevent and treat back pain in pregnant women. In addition, midwives can also invite resource persons to fill in the material in the class for pregnant women, so that pregnant women get new knowledge about the period of pregnancy and problems in dealing with childbirth.

Malahayati University Bandar Lampung

The university can provide prenatal yoga training for midwives and midwifery students. In addition, the university can also be a resource person for the training.

REFERENCES

Afritayeni. (2017). Hubungan Umur, Paritas dan Pendamping Persalinan dengan Intensitas Nyeri Persalinan Kala I. *Journal Endurance*, 2(June), 178–185.

Cahyani, P.D.P., dkk. (2020). Intensitas Nyeri Punggung Bawah Ibu Hamil Trimester III Yang Melakukan Prenatal Yoga. Jurnal Sehat Mandiri, Volume 15 No 2 Desember 2020

Dyah Ayu Wulandari. (2020). Prenatal Yoga Untuk Mengurangi Nyeri Punggung Pada Ibu Hamil Trimester III. *Jurnal SMART Kebidanan*, 2020, 7 (1), 9-13

Emília, M., Costa, C., Cavalcanti, L., Alves, C., Terceiro, De, L., Deyvid, P., Lacerde, N., Marcelo, A., Gustavo, C., Tania, C. (2017). Low Back Pain During Pregnancy. *Brazilian Journal of Anesthesiology* Volume 67, Issue 3, May–June 2017, Pages 266-270

Fatimah. (2017). *Buku Ajar Asuhan Kebidanan Kehamilan*. Jakarta: Fakultas Kedokteran dan Kesehatan Universitas.

Fauziah, N.A., (2020). Pengaruh Prenatal Yoga Terhadap Pengurangan Nyeri Punggung Pada Ibu Hamil Trimester III. Jurnal Maternitas UAP Vol. 1 No. 2

Fithriyah, Rizki Dyah Haninggar, & R. S. D. (2020). Pengaruh Prenatal Massage Terhadap Penurunan Nyeri Punggung Pada Ibu Hamil Trimester III (Di Desa Ceweng, Kecamatan Diwek, Kabupaten Jombang). Jurnal Kebidanan, 10(2), 36–43.

Fitriani, Lina. (2018). Efektivitas Senam Hamil Dan Yoga Hamil Terhadap Penurunan Nyeri Punggung Pada Ibu Hamil Trimester III Di Puskesmas Pekkabata. J-Kesmas Jurnal Kesehatan Masyarakat Vol. 4, No. 2, Nopember 2018

Geta, Martinus Gonsianus. (2020). Pengaruh Senam Hamil Terhadap Penurunan Tingkat Nyeri Punggung Bawah Pada Ibu Hamil. *Jurnal Wawasan Kesehatan*, Volume: 5, Nomor 2, Desember 2020 (ISSN: 2548-4702)

Gutke A, Boissonnault J, Brook G, Stuge B. The Severity and Impact of Pelvic Girdle Pain and Low-Back Pain in Pregnancy: A Multinational Study. J Womens Health (Larchmt). 2018 Apr;27(4):510-517. doi: 10.1089/jwh.2017.6342. Epub 2017 Aug 23. PMID: 28832267.

Hadyan, M. F. (2015). Faktor-Faktor yang Mempengaruhi Low Back Pain pada Pengemudi Transportasi Publik. Majority, 4 (7).

Hidayati, Ulfah. (2019). Systematic Review: Senam Hamil Untuk Masa Kehamilan Dan Persiapan Persalinan. Placentum Jurnal Ilmiah Kesehatan dan Aplikasinya, Vol. 7(2) 2019

Holden, S. C., Manor, B., Zhou, J., Zera, C., Davis, R. B., & Yeh, G. Y. (2019). Prenatal Yoga for Back Pain, Balance, and Maternal Wellness: A Randomized, Controlled Pilot Study. *Global advances in health and medicine*, *8*,

Judha, Mohamad. (2017). *Teori Pengukuran Nyeri dan Nyeri Persalinan*. Yogyakarta : Nuha Medika

Kim SS, Min WK, Kim JH, Lee BH. The Effects of VR-based Wii Fit Yoga on Physical Function in Middle-aged Female LBP Patients. J Phys Ther Sci. 2014 Apr;26(4):549-52. doi: 10.1589/jpts.26.549. Epub 2014 Apr 23. PMID: 24764631; PMCID: PMC3996419.

Kristiansson, P. (2015). *Epidemology of Back Pain in Pregnancy*. Phisical Medicine and Rehabilitation.

Mardiana, H. R. (2021). Perbedaan Penurunan Skala Nyeri Punggung Pada Ibu Hamil Trimester III Dengan Senam Hamil Dan Tanpa Senam Hamil Di Desa Seduri Kecamatan Mojosari Mojokerto. Jurnal Kesehatan Hesti Wira Sakti, 9(1). https://doi.org/10.47794/jkhws

Maternity, D., Maria, L., & Hatta, M. (2022). Program Pengabdian Masyarakat untuk Ibu Hamil Nyeri Punggung Dengan Senam Hamil di PMB Lia Maria. *JURNAL KREATIVITAS PENGABDIAN KEPADA MASYARAKAT (PKM)*, *5*(6), 1910-1917.

Mediarti, D., Sulaiman, S., Rosnani, R., & Jawiah, J. (2014). Pengaruh Yoga Antenatal Terhadap Pengurangan Keluhan Ibu Hamil Trimester III. Jurnal Kedokteran & Kesehatan:

Publikasi Ilmiah Fakultas Kedokteran Universitas Sriwijaya, 1(1), 47-53.

Miftakhul Mu'alimah. (2021). Pengaruh Prenatal Yoga Terhadap Nyeri Punggung Pada Ibu Hamil Trimester III. Jurnal Kebidanan Vol.10 No. 1 April 2021

Nanda An Nisa Nur Islami dkk. (2018). Gambaran Faktor Risiko Pasien Nyeri Punggung Bawah di RSUD Kota Bandung Periode Januari-Desember 2018. Kedokteran Volume 6, No. 1, Tahun 2020

Pramita, Pangkahila, dan Sugijanto. (2015). Core Stability Exercise Lebih Baik Meningkatkan Aktivitas Fungsional Dari Pada William's Flexion Excercise Pada Pasien Nyeri Punggung Bawah Miogenik. *Sport and Fitness Journal* Volume 3, No.1 : 35-49, Januari 2015

Purnamasari, K. D. (2019). Nyeri Punggung Bawah Pada Ibu Hamil Trimester II Dan III. Journal of Midwifery and Public Health, 1(1), 9. https://doi.org/10.25157/jmph.v1i1 .2000

Rafika. (2018). Efektivitas Prenatal Yoga Terhadap Pengurangan Keluhan Fisik pada Ibu Hamil Trimester III. Jurnal Kesehatan, Volume 9, Nomor 1, April 2018.

Rahmawati, Nurul Aini. (2021). Prenatal Yoga Efektif Mengurangi Nyeri Punggung Bawah pada Ibu Hamil. Jurnal Physiotherapy Health Science Volume 3, Nomor 1 – Juni 2021

Ramachandra, P., Maiya, A.G., Kumar, P., Kamath., A. (2015). Prevalence of Musculoskeletal Dysfunctions among Indian Pregnant Women. Hindawi Publishing Corporation Journal of Pregnancy.

Rejeki, S.T., (2019). Pengaruh Yoga Prenatalterhadap Nyeri Punggung Pada Ibu Hamil Trimester II Dan III Di Lia Azzahra Mom & Baby Spa Tegal. Indonesia Jurnal Kebidanan Vol. 3 No.2 (2019) 67-72

Rinta. 2013. Pengaruh back exercise Terhadap Pengurangan Nyeri Punggung Bawah Pada Petugas Instalasi Rekam Medik RSUP H. AdamMalik Medan. Thesis. Universitas sumatera Utara. Sumatera Utara.

Rosemary dkk. (2016). Psychometric Testing of the Defense and Veterans Pain Rating Scale (DVPRS): A New Pain Scale for Military Population. Pain Medicine 2016; 17: 1505–1519 doi: 10.1093/pm/pnw105

Rusmita, E. (2015). Pengaruh Senam Hamil Yoga Terhadap Kesiapan Ibu Hamil Menghadapi Persalinan di RSIA Limijati Bandung. Jurnal Ilmu Keperawatan, 3(2), pp. 38-46

Safarina. (2018). Pengaruh Senam Yoga Terhadap Skala Nyeri Low Back Pain (Lbp) Pada Dewasa Menengah Di Wilayah Kerja Puskesmas Cimahi Tengah. Prosiding Pertemuan Ilmiah Nasional Penelitian & Pengabdian Masyarakat (PINLITAMAS 1) Dies Natalis ke-16 STIKES Jenderal Achmad Yani Cimahi PINLITAMAS 1 Vol 1, No.1 Oktober 2018

Salam, B. (2016). Hubungan Paritas dengan Kejadian Nyeri Punggung Bawah di Polikliki Saraf RSUDZA. Skripsi. Universitas Syiah Kuala Darussalam. Aceh

Sari, Alfie. (2016). Hubungan Senam Yoga dengan Kesiapan Fisik dan Psikologis Ibu Hamil dalam Menghadapi Persalinan di Kelas Antepartum Gentle Yoga Yogyakarta. Jurnal Terpadu Ilmu Kesehatan, 5 (2), pp. 110-237

Sinclair, Marlene et al. (2014). How do Women manage Pregnancy-Related Low Back Pain Descriptive Finding from An Online survey.Evidence Based Midwefery, 12 (3), pp. 76-82.

Suananda, Yhossie. (2018). *Prenatal dan Postnatal Yoga*. Jakarta : Kompas

Sukeksi, N. T., Kostania, G., & Suryani, E. (2018). Pengaruh Teknik Akupressure Terhadap Nyeri Punggung Pada Ibu Hamil Di Wilayah Puskesmas Jogonalan I Klaten. Jurnal Kebidanan Dan Kesehatan Tradisional, 3(1), 1–7. https://doi.org/10.37341/jkkt.v3i1. 61

Suwondo, S.B, Meliala.L dan Sudadi. (2017). *Buku Ajar Nyeri*. Yogyakarta: Perkumpulan Nyeri Indonesia

Tyastuti, Siti dan Wahyuningsih, Heni Puji. (2016). *Asuhan Kebidanan Kehamilan*. Jakarta: Kemenkes RI

Ulfah, M. (2014). Hubungan Diastasis Recti Abdominis dengan Nyeri Punggung Bawah pada Ibu Hamil. Jurnal Bidan Prada, 5 (2), pp. 23-30

Wagiyo & Putrono. (2016). *Asuhan Keperawatan Antenatal, Intranatal & bayi baru lahir fisiologis dan patologis*. Yogyakata : CV.Andi.

Wahyuni. (2012). Manfaat Kinesiotapp.ing Untuk Mengurangi Nyeri Punggung Bawah Pada Kehamilan Trimester Ke-3. Jurnal Kesehatan, volume 5 (2), pp. 119-129