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PRENATAL YOGA CAN REDUCES BACK PAIN AND HELPS PREGNANT WOMEN SLEEP BETTER

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ABSTRAK YOGA PRENATAL DAPAT MENGURANGI NYERI PUNGGUNG DAN MEMBANTU IBU HAMIL TIDUR LEBIH BAIK

Latar Belakang: Perubahan fisiologis yang sering di alami ibu hamil trimester III sering menyebabakan ketidak nyamanan saat hamil seperti nyeri punggung dan kualitas tidur. Oleh sebab itu prenatal yoga sangat disarankan untuk ibu hamil sebagai salah satu cara mengurangi rasa nyeri, membuat ibu hamil merasa nyaman, tidur lebih nyenyak, dan rileks.

Tujuan Penelitian: Penelitian ini bertujuan untuk mengetahui adakah hubungan prenatal yoga dengan pengurangan nyeri punggung dan kualitas tidur ibu hamil trimester III.

Metode Penelitian: Jenis penelitian ini adalah *Analitik Correlational* dengan rancangan *Cross sectional*. Populasi penelitian ini adalah ibu hamil trimester III di Desa Citeko Atas Kabupaten Bogor sejumlah 30 orang ibu hamil. Diambil secara *Total Sampling* sejumlah 30 responden dikarenakan jumlah populasi yang kurang dari 100. Instrument penelitian ini menggunakan kuesioner. Pengolahan data menggunakan *Editing, Coding, Scoring, Tabulating* dan Uji statistik *Chi Square*. Yoga dilakukan pada bulan Juni 2023 selama 4 kali pertemuan, teknik dalam menghitung skala nyeripun dalam prenatal yoga menggunakan skala nyeri Bourbanais sama dengan kategori VDS yang memiliki 5 kategori dengan menggunakan skala 0-10.

Hasil Penelitian: Berdasarakan hasil penelitian yang di uji menggunakan *Chi Square* dapat diketahui nilai signifikan (*p value*) 0,001<0,05 yang artinya adanya hubungan antara prenatal yoga dengan pengurangan nyeri punggung dan kualitas tidur pada ibu hamil trimester III.

Kesimpulan: Penelitian ini dapat diberi kesimpulan bahwa adanya hubungan yang signifikan antara prenatal yoga dengan penguran nyeri puggung dan kualitas tidur ibu hamil trimester III.

Saran: Diharapkan kepada ibu hamil trimester III dapat dilakukan penerapan prenatal yoga, dan lebih giat lagi mencari informasi dari mana saja termasuk tenaga kesehatan dan non tenaga kesehatan.

Kata Kunci: Prenatal Yoga; Skala Nyeri; Kualitas Tidur; Ibu Hamil Trimester III

ABSTRACT

Background: Physiological changes that are often experienced by third trimester pregnant women often cause discomfort during pregnancy such as back pain and sleep quality. Therefore, prenatal yoga is highly recommended for pregnant women as a way to reduce pain, make pregnant women feel comfortable, sleep better, and relax.

Objective : This study aims to determine whether there is a relationship between prenatal yoga and the reduction of back pain and the sleep quality of third trimester pregnant women.

Methods: This type of research is Correlational Analytical with Cross sectional design. The population of this study were third trimester pregnant women in Citeko Atas Village, Bogor Regency with a total of 30 pregnant women. Total sampling was taken by 30 respondents because the population was less than 100. The research instrument used a questionnaire. Data processing uses Editing, Coding, Scoring, Tabulating and Chi Square statistical test. Yoga was carried out in June 2023 for 4 meetings, the technique in calculating the pain scale in prenatal yoga using the Bourbanais pain scale was the same as the VDS category which had 5 categories using a scale of 0-10.

Result : This study can be concluded that there is a significant relationship between prenatal yoga and the reduction of back pain and sleep quality of third trimester pregnant women.

Conclusions: This study can be concluded that there is a significant relationship between prenatal yoga and the reduction of back pain and sleep quality of third trimester pregnant women.

Suggestions: It is hoped that pregnant women in the third trimester can apply prenatal yoga, and be more active in seeking information from anywhere, including health workers and non-health workers.

Keywords: Prenatal Yoga; Pain Scale; Sleep Quality; Third Trimester Pregnant Women

INTRODUCTION

According to WHO (2023) Maternal mortality is very high. About 287,000 women died during and after pregnancy and childbirth in 2020. Nearly 95% of all maternal deaths occurred in low- and middle-income countries in 2020, and most were preventable.

At the same time, between 2000 and 2020, Eastern Europe and South Asia achieved the largest reductions in maternal mortality ratios (MMRs): reductions of 70% (from an MMR of 38 to 11) and 67% (from an MMR of 408 down to 134), respectively. Despite its very high MMR in 2020, Sub-Saharan Africa also achieved a substantial 33% reduction in MMR between 2000 and 2020. Four SDG sub-regions roughly halved their MMR during this period: East Africa, Central Asia, East Asia, and North Africa and Western Europe reduced their MMR by about a third. Overall, the maternal mortality ratio (MMR) in the least developed countries decreased by just under 50%. In landlocked developing countries, MMRs decreased by 50% (from 729 to 368). In small island developing states, the MMR decreased by 19% (from 254 to 206) (WHO, 2023).

Research conducted by Mu'alimah M (2021) explains the effect of prenatal yoga on back pain in pregnant women in trimester 3, the focus of this research is on the effect of prenatal yoga on back pain in third trimester pregnant women at Puskesmas Mrican Kediri City so that the variables used are different from the research the author is doing.

Research conducted by vitria meilinda and loli alita ayani (November 2020) describes the effect of yoga exercises on improving sleep quality in primigravida mothers in trimester 3, this study focuses on the average sample sleep quality before yoga exercises of 9.20 with a standard deviation of 1.476. The average quality of sleep after yoga exercises is 5 with a standard deviation of 0.816. 4. There is an effect of yoga exercises on improving sleep quality in third trimester primigravida mothers at BPS "B" Bukittinggi City in 2020 with Z = 2.871 and p value = 0.004, so the variables used are different from the research the author is doing.

RESEARCH METHODS

The research design carried out in this study was Cross Sectional with random sampling technique. This research was conducted in Citeko Atas Village, Cisarua District, Bogor Regency on 30 June 2023 with a total sample of 30 respondents. Ho will be tested with a level of significance of 0.05. The statistical test used is Chi Square statistical analysis.

RESEARCH RESULTS
Univariate Results
Table 1
Frequency Distribution of Prenatal Yoga Respondents by Age in Upper Citeko Village in 2023

Age	Frequency (n)	Percentage (%)
17-25 year	12	40
26-35 year	14	46.7
36-45 year	4	13.3
>46 year	0	0

Based on table 1, it can be seen that out of a total of 30 respondents, most of the respondents, namely 14 respondents (46.7%) in this study were 26-35 years old, while a small proportion of 4 respondents (13.3%) were 36-45 years old.

Table 2
Frequency Distribution of Prenatal Yoga Respondents Based on Education in Citeko Atas Village in 2023

Education	Frequency (n)	Percentage (%)
Primary school	6	20.0
Junior high school	11	36.7
Senior high school	12	40.0
College	1	3.3

Based on table 2, it can be seen that a total of 30 respondents, most of the respondents, namely 12 respondents (40.0%) have a high school education. While a small proportion of 1 respondent (3.3%) with tertiary education.

Table 3
Frequency Distribution of Prenatal Yoga Respondents Based on Knowledge in Citeko Atas Village in 2023

Knowledge	Frequency (n)	Percentage (%)
Good (76%-100%)	13	43.3
Fair (56%-75%)	16	53.4
Less (<56%)	1	3.3

Based on table 3, it can be seen that a total of 30 respondents, most of which are 16 respondents (53.4%) have sufficient knowledge. While a small proportion of 1 respondent (3.3%) was less knowledgeable.

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Table 4
Frequency Distribution of Respondents Based on Knowledge of Prenatal Yoga in Citeko Atas Village in 2023

Source of Information	Frequency (n)	Percentage (%)
Health Workers	14	46.7
Non-Health Workers	16	53.3

Based on table 4, it can be seen that a total of 30 respondents, 16 respondents (53.3%) knew from non-health workers. While a small proportion of 14 respondents (46.7%) knew from health workers.

Table 5
Frequency distribution of respondents based on whether or not they have ever participated in prenatal yoga in Citeko Atas Village in 2023

Source of Information	Frequency (n)	Percentage (%)
Ever	20	67%
Never	10	33%

Based on table 5, it can be seen that a total of 30 respondents, 16 respondents (53.3%) knew from non-health workers. While a small proportion of 14 respondents (46.7%) knew from health workers.

Table 6
Frequency Distribution of Prenatal Yoga Respondents Based on Pain Scale in Citeko Atas Village 2023

Pain Scale	Frequency (n)	Percentage (%)
No pain	14	47%
Mild Pain	6	20%
Moderate Pain	10	33%
Severe Pain	0	0%
Very severe pain	0	0%

Based on table 6, it can be seen that a total of 30 respondents, most of which are no pain 14 respondents (47%), moderate pain 10 (33%), while a small proportion of mild pain 6 respondents (20%).

Table 7
Frequency Distribution of Prenatal Yoga Respondents Based on Sleep Quality in Citeko Atas Village 2023

Sleep Quality	Frequency (n)	Percentage (%)
Good Sleep Quality	21	70%
Poor Sleep Quality	9	30%

Based on table 7, it can be seen that a total of 30 respondents mostly have good sleep quality, and while some have poor sleep quality, 9 respondents (30%).

Bivariate Analysis

Table 8
Relationship between prenatal yoga and pain scale

Pain Scale	Prenatal Yoga					
	Ever (66%-100%)		Never (<66%)		Total	
	N	%	N	%	N	%
No pain	14	100	0	0	14	100
Mild Pain	6	100	0	0	6	100
Moderate Pain	0	0	10	100	10	100
Severe Pain	0	0	0	0	0	100
Very severe pain	0	0	0	0	0	100

Based on table 8, it shows that 30 respondents, almost half of the respondents did not feel pain because they had participated in the application of prenatal yoga before, namely 14 respondents (100%).

Table 9
Relationship between Prenatal Yoga and Sleep Quality

Sleep Quality	Prenatal Yoga					
	Ever (66%-100%)		Never (<66%)		Total	
	N	%	N	%	n	%
Good	20	95.3	1	4.7	21	100
Bad	0	0	9	100	9	100

Based on table 9, it shows that 30 respondents, almost half of the respondents have good sleep quality because they have participated in the application of prenatal yoga before, namely 20 respondents (95.3%).

DISCUSSION

Based on the results of this study, based on the reduction of back pain on the application of prenatal yoga, that from a total of 30 respondents, most of them, namely 14 respondents, did not feel pain because they had participated in prenatal yoga with the results of statistical tests obtained data values processed with SPSS for windows with the Chi Square test showed that the significant value of $p = 0.001 < (0.05)$, H_0 was rejected, meaning that there was a relationship between the application of prenatal yoga with a reduction in the pain scale of third trimester pregnant women in Citeko Atas village, Cisarua District, Bogor Regency.

The same research conducted by Miftakhul Mu'alimah (2021) regarding "The Effect of Prenatal Yoga on Back Pain in Third Trimester Pregnant Women" with 16 respondents. It can be seen from Miftakhul Mu'alimah that most of the respondents, namely 16 respondents after prenatal yoga, there was a reduction in back pain in third trimester pregnant women.

According to the researcher, there is a relationship between prenatal yoga and reducing back pain in third trimester pregnant women. This study uses a pain scale category based on Syaf'I 2010 which says pregnant yoga exercises are part of antenatal care at certain health care centres, such as hospitals, health centres, clinics, or other health care centres.

The categories in the Bourbanais pain scale are the same as the VDS categories, which have 5 categories using a scale of 0-10. According to AHCPR, 1992 in Potter and Perry (2010), the pain criteria on this scale are: 0 : No pain, 1-3: Mild pain, objectively the patient can communicate well, 4-6: Moderate pain, objectively the patient hisses, grins, can show the location of pain, can describe it, can follow orders well, 7-9: Severe pain, objectively the patient sometimes cannot follow commands but still responds to actions, can show the location of pain, cannot describe it, cannot be overcome by changing the position of long breath and distraction, 10: Very severe pain, the patient is no longer able to communicate, hitting.

Based on the quality of sleep on the application of prenatal yoga, that from a total of 30 respondents, almost half of the respondents had good sleep quality, namely a total of 20 respondents (95.3%) because they had participated in the application of prenatal yoga before, obtained data values processed with SPSS for windows with the Chi Square test showed that the significant value of $p = 0.001 < (0.05)$, H_0 was rejected, meaning that there was a relationship between the application of prenatal yoga and the quality of sleep of third trimester pregnant women in Citeko Atas village, Cisarua District, Bogor Regency.

Research conducted by Vitria Meilinda and Loli Alita Ayani (November 2020) explains about "The Effect of Yoga Gymnastics on Improving Sleep Quality in Trimester 3 Primigravida Mothers". It can be seen from vitria meilinda and loli alita ayani that most of the respondents, namely 10 primigravida mothers in third trimester. According to researchers, there is a relationship between prenatal yoga and improving sleep quality in third trimester pregnant women. This study uses non-parametric tests to take the average results of sleep quality.

According to Zahra et al., (2019). The category is said to be good sleep quality = PSQI value <, poor sleep quality = PSQI value> 5.

CONCLUSION

Based on the results of the discussion in the study on the relationship of prenatal yoga to the reduction of back pain and sleep quality of third trimester pregnant women, the following conclusions were obtained:
Based on the results of the study obtained from the frequency distribution of respondents in the application of prenatal yoga based on the age of the mother in Upper Citeko Village, that out of a total of 30 respondents most of them, namely 14 respondents (46.7%) in the age of 26-35 years. Based on the results of research obtained from the

frequency distribution of respondents in the application of prenatal yoga based on maternal education in Upper Citeko Village, that out of a total of 30 respondents most, namely 12 respondents (40.0%) had a high school education.Based on the results of the study obtained from the frequency distribution of respondents in the application of prenatal yoga based on the mother's source of information in Upper Citeko Village, that out of a total of 30 respondents most, namely 16 respondents (53.3%) knew from non-health workers.Based on the research results obtained from the frequency distribution in the application of prenatal yoga with a reduction in back pain in third trimester pregnant women in Upper Citeko Village, that out of a total of 30 respondents, most of them, namely 14 respondents (100%) who had participated in prenatal yoga were very influential in reducing back pain in third trimester pregnant women.Based on the results of the study obtained from the frequency distribution in the application of prenatal yoga with the quality of sleep of third trimester pregnant women in Upper Citeko Village, that out of a total of 30 respondents most, namely 20 respondents (95.3%) who had participated in prenatal yoga were very influential in the quality of sleep of third trimester pregnant women.Based on the results of analysing the relationship between prenatal yoga and back pain reduction in third trimester pregnant women in Upper Citeko Village, it shows that from a total of 30 respondents, most of these respondents who have participated in prenatal yoga are very influential on reducing back pain in third trimester pregnant women, namely 14 respondents (100%). After being tested with Chi Square, it shows that the significant value of $p = 0.001 < (0.05)$, H_0 is rejected, meaning that there is a relationship between prenatal yoga and back pain reduction in third trimester pregnant women.Based on the results of analysing the relationship between prenatal yoga and sleep quality in third trimester pregnant women in Upper Citeko Village, it shows that out of a total of 30 respondents, most of these respondents who have participated in prenatal yoga are very influential on sleep quality in third trimester pregnant women, namely a total of 20 respondents (95.3%). After being tested with Chi Square, it shows that the significant value of $p = 0.001 < (0.05)$, H_0 is rejected, meaning that there is a relationship between prenatal yoga and a reduction in sleep quality experienced in third trimester pregnant women.

SUGGESTIONS

It is hoped that pregnant women in the third trimester can apply prenatal yoga, and be more active in seeking information from anywhere, including health workers and non-health workers.

REFERENCES

Anggito, A., & Setiawan, J. (2018). *Metodologi Penelitian Kualitatif: Vol. 14 x 20 cm* (E. Lestari, Ed.; 1st ed.). CV jejak.

Ariyanti, T. (2020, February 14). *Prenatal Gentle Yoga*. Rsmardirahayu. https://www.rsmardirahayu.com/prenatal-gentle-yoga/

Beki, dkk (2022). *Pendidikan Ilmu Kebidanan.* Get Press

Debi, Hilma, dkk (2022). *Ilmu Dasar Keperawatan I.* Sukoharjo : Penerbit Pradina Pustaka.

Dinas Kesehatan Kabupaten Bogor. (2020). *Profil Kesehatan Kabupaten Bogor 2019*. Dinas Kesehatan Jawa Barat. https://diskes.jabarprov.go.id/assets/unduhan/1.%20Profil%20Kesehatan%20Kabupaten%20Bogor%202019.pdf

Dyah Ayu Wulandari, Euis Ahadiyah, Fitria Hikmatul Ulya (2020). PRENATAL YOGA UNTUK MENGURANGI NYERI PUNGGUNG PADA IBU HAMIL TRIMESTER III. Jurnal SMART Kebidanan, 2020, 7 (1), 9-13SJKB 2020DOI:http://dx.doi.org/10.34310/sjkb.v7i1.349pISSN: 2301-6213,eISSN:2503-0388http://stikesyahoedsmg.ac.id/ojs/index.php/sjkb

Erni, Afni, dkk (2023). *Konsep Keperawatan Dasar*. Kota Jambi : PT. Sonpedia Publishing Indonesia.

Gustina, & Nurbaiti. (2021). *Mengatasi Ketidaknyamanan Ibu Hamil Trimester III Dengan Prenatal Care YogaG* (Ramadhani Fitriani, Ed.; 1st ed.). Pascal Books.

Kemenkes. (2022). Perubahan Fisik dan Psikis Pada Ibu Hamil. *Kementrian Kesehatan*. https://yankes.kemkes.go.id/view_artikel/280/perubahan-fisik-dan-psikis-pada-ibu-hamil#:~:text=Pada%20trimester%20ketiga%20ini%20terjadi,dan%20nafasnya%20menjadi%20lebih%20lega.

Lestari, R. (2022, May 30). *Hipertensi dan Pendarahan Jadi Penyebab Kematian Ibu*. Dinkes Jawa Barat. https://diskes.jabarprov.go.id/

Lestari, Y. D., Rosa Amalinda, D., Putri, C. W., Studi, P., Kebidanan, D., Kesehatan, F., & Jadid, U. N. (2022). *HAMIL SEHAT DAN BUGAR DENGAN PRENATAL GENTLE YOGA*

KOMBINASI DENGAN METODE RELAKSASI HYPNOBIRTHING. 4, 39–46.

Mustayah. (2022). *bahan ajar psikologi untuk keperatawan.*

Nanda, P., Widyawati, M., & Kumorowulan, S. (2022). *Mengurangi Nyeri Punggung Bawah dan Edema Kaki Ibu Hamil Trimester III dengan Hypnoprenatal Yoga pada kelas Ibu Hamil Online: Vol. Vii* (1st ed.). Pustaka Rumah C1nta.

Novitasari, E., Wardana, K., Natalia, M., & Nurahmawati, D. (2023). *Fisiologi kehamilan, persalinan, nifas, dan bayi baru lahir* (N. Sulung, Ed.; I). PT GLOBAL EKSEKUTIF TEKNOLOGI.

Nursalam. (2018). Manajemen keperawatan: Aplikasi dalam Praktik Keperawatan Profesional. In A. Suslia (Ed.), *Book* (Edisi 4). Salemba Medika.

Putu Pande, dkk (2021). *Pelayanan Kebidanan Komplementer*. Indonesia : Syiah Kuala University Press

Rasjidi Imam (2014). *Panduan Kehamilan Muslimah.* Jakarta Selatan : Noura Books

Roflin, E., Liberty, I., & Pariyana. (2021). *POPULASI, SAMPEL, VARIABEL dalam penelitian kedokteran* (M. Nasrudin, Ed.; 1st ed.). PT. Nasya Expanding Manangement.

Siska, Nisrinam dkk (2023). *Terapi Komplementer Untuk Mengatasi Keluhan Selama Kehamilan*. Bandung : Kaizen Media Publishing

Supardi Nurjannah, Zulisa, E., Aryani, R., Irwanti, G., & Handayani, L. (2022). *Terapi Komplementer Pada Kebidanan* (Oktavianis, Ed.; 1st ed.). PT GLOBAL EKSEKUTIF TEKNOLOGI Anggota IKAPI No. 033/SBA/2022.

Yuni, Yusni, dkk (2021). *Hamil Sehat di Masa Pandemi.*

Wardani, N. (2022). *KEBIJAKAN KESEHATAN MASYARAKAT* (M. Sari, Ed.; 1st ed.). PT GLOBAL EKSEKUTIF TEKNOLOGI.

WHO. (2023, February 22). *Kematian ibu*. Https://Www.Who.Int/News-Room/Fact-Sheets/Detail/Maternal-Mortality.

Wimar, Dewi (2022). *Kombinasi Pemberian Aromaterapi Lavender (Lavandula Angustifolia) dan Terapi Musik Langgam Jawa Sebagai Upaya Meningkatkan Kualitas dan Kuantitas Tidur Lansia Insomnia Berbasis Roy's Adaptation Theory*

Wira Prima, Nurul Melyana, & Kumorowukan Suryati. (2022). *Mengurani Nyeri Punggung Bawah dan Edema Kaki Ibu Hamil Trimester III: Vol. V* (I). Pustaja Rumah C1nta

Arkha, Miftahul (2019). *Effleurage Massege Aromatherapy Lavender Sebagai Terapi Kualitas Tidur Malam Ibu Hamil.* Surabaya : CV. Jakad Publishing.

Azzura, F., Fajri, L., & Wahyu, W. (2023). *Siklus Menstruasi Pada Kualitas Tidur* (W. Wahyu, Ed.; 1st ed., Vol. 58). CV Adanu Abimata.

Purwoto, A., Tribakti, I., Robby, M., Khoiriyah, S., & Tahir, R. (2023). *MANAJEMEN NYERI* (I. Melisa, Ed.; 1st ed.). Global Eksekutif Teknologi.

Suananda, Yhossie. 2018. *Prenatal-Postnatal Yoga.* Jakarta: Kompas Media Nusantara

https://jurnal.undhirabali.ac.id/index.php/kesehatan/article/download/272/250di akses pada tanggal 21 februari 2019.

Notoatmodjo, Soekidjo. 2017. *Metidologi Penelitian Kesehatan.* Jakarta: Rineka. Cipta.