

**THE EFFECT OF PRENATAL YOGA ON LOW BACK PAIN  
IN THIRD-TRIMESTER PREGNANT WOMEN AT PMB ERNI KUMALA  
DEWI YOGYAKARTA**

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**ABSTRACT**

**Background:** Low back pain in the third trimester was commonly experienced by 60–80% of pregnant women in Indonesia (Mega et al., 2021) and could reduce quality of life if left untreated. Non-pharmacological treatments such as pregnancy exercise, massage, and prenatal yoga had been used, with prenatal yoga being the preferred choice due to its minimal risk and focus on musculoskeletal issues.

**Objective:** To examine the effect of prenatal yoga on low back pain in third-trimester pregnant women at PMB Erni Kumala Dewi Yogyakarta.

**Methods:** This study was a quasi-experimental design using a non-randomized control group pretest-posttest approach, involving 34 respondents selected through purposive sampling. The sample consisted of 17 respondents in the prenatal yoga intervention group and 17 in the pregnancy exercise control group. Pain was measured using the Numeric Rating Scale (NRS), physical activity was measured using the International Physical Activity Questionnaire (IPAQ), and disability level for respondent selection was measured using the Oswestry Disability Index (ODI). All instruments had been adopted from previous validity-tested tools. Data analysis included descriptive statistics (mean, standard deviation), paired t-test, independent t-test, ANOVA, and multiple linear regression.

**Results:** The prenatal yoga group showed a greater reduction in pain from 5.94 to 1.71 ( $p < 0.001$ ), compared to the pregnancy exercise group which decreased from 5.41 to 2.94 ( $p < 0.001$ ), with a significant difference of 1.75 points ( $p < 0.001$ ). Multivariate analysis identified physical activity, age, parity, BMI, and type of intervention as significant factors ( $R^2 = 0.844$ ), with prenatal yoga being the most dominant variable ( $\beta = 1.327$ ;  $p < 0.001$ ).

**Conclusion:** Prenatal yoga was more effective than pregnancy exercise in reducing low back pain in third-trimester pregnant women and was the most influential factor based on multivariate analysis.

**Keywords:** prenatal yoga, low back pain, nonpharmacological intervention

**PENGARUH PRENATAL YOGA TERHADAP NYERI PADA PUNGGUNG BAWAH (*LOW BACK PAIN*) PADA IBU HAMIL TRIMESTER III DI PMB ERNI KUMALA DEWI YOGYAKARTA**

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**ABSTRAK**

**Latar Belakang :** Nyeri punggung bawah pada trimester III umum dialami oleh 60–80% ibu hamil di Indonesia (Mega, et al. 2021) dan dapat menurunkan kualitas hidup jika tidak ditangani. Penanganan nonfarmakologis seperti senam hamil, pijat, dan prenatal yoga telah digunakan, dengan prenatal yoga menjadi pilihan utama karena minim risiko dan berfokus pada masalah muskuloskeletal.

**Tujuan:** Mengetahui pengaruh prenatal yoga terhadap nyeri punggung bawah pada ibu hamil trimester III di PMB Erni Kumala Dewi Yogyakarta.

**Metode:** Penelitian ini merupakan jenis kuasi-eksperimen dengan desain *non-randomized control group pretest-posttest*, melibatkan 34 responden yang dipilih secara *purposive*, terdiri atas 17 responden kelompok intervensi prenatal yoga dan 17 responden kelompok kontrol senam hamil. Instrumen pengukuran nyeri menggunakan *Numeric Rating Scale (NRS)*, pengukuran aktivitas fisik menggunakan *International Physical Activity Questionnaire (IPAQ)*, dan pengukuran tingkat disabilitas sebagai seleksi responden menggunakan *Oswestry Disability Index (ODI)* ketiga instrumen ini mengadopsi pada uji validitas sebelumnya. Analisis data meliputi analisis deskriptif (rata-rata, simpangan baku), uji t-berpasangan, t-tidak berpasangan, *ANOVA*, dan regresi linier berganda.

**Hasil:** Kelompok prenatal yoga menunjukkan rata-rata penurunan nyeri lebih besar dari 5,94 ke 1,71 ( $p < 0,001$ ), dibanding kelompok senam hamil dari 5,41 ke 2,94 ( $p < 0,001$ ), dengan perbedaan bermakna 1,75 poin ( $p < 0,001$ ). Analisis multivariat mengidentifikasi aktivitas fisik, usia, paritas, IMT, dan jenis intervensi sebagai faktor signifikan ( $R^2 = 0,844$ ). Prenatal yoga terbukti sebagai variabel paling dominan ( $\beta = 1,327$ ;  $p < 0,001$ ).

**Kesimpulan:** Prenatal yoga terbukti lebih efektif dalam menurunkan nyeri punggung bawah pada ibu hamil trimester III dibandingkan senam hamil, dan menjadi faktor paling berpengaruh berdasarkan hasil analisis multivariat.

**Kata Kunci:** prenatal yoga, nyeri punggung, intervensi nonfarmakologis.