

The Description of Back Pain in Third-Trimester Pregnant Women at East Denpasar I Community Health Center

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Abstract

Back pain is one of the common discomforts experienced by third-trimester pregnant women due to physiological and biomechanical changes during pregnancy. This condition may affect daily activities, sleep quality, and maternal comfort. This study aimed to describe the level of back pain among third-trimester pregnant women at Puskesmas I Denpasar Timur in 2026. This study employed a descriptive research design with a cross-sectional approach. The study was conducted from April 10 to April 30, 2026. The sample consisted of 40 thirdtrimester pregnant women selected using a non-probability sampling technique with a quota sampling method. Data were collected using questionnaires and the Numeric Rating Scale (NRS) for pain assessment. The collected data were processed through editing, coding, data entry, and data cleaning, then analyzed descriptively using frequency distribution and percentage with Statistical Product and Service Solutions (SPSS) version 27. The results showed that most respondents were aged 20–35 years, accounting for 31 respondents (77.5%), had parity of 2–4 births with 26 respondents (65.0%), were unemployed with 21 respondents (52.5%), and had a moderate level of physical activity with 29 respondents (72.5%). The most common level of back pain experienced by third-trimester pregnant women was mild pain, reported by 17 respondents (42.5%). It can be concluded that most third-trimester pregnant women at Puskesmas I Denpasar Timur experienced mild back pain. The findings of this study are expected to serve as a source of information and evaluation material for improving midwifery care services, particularly in the management of back pain among third-trimester pregnant women.

Keywords

Back Pain, Third-Trimester Pregnancy, Pain Intensity, Pregnant Women



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INTRODUCTION

Pregnancy is a physiological process that causes various anatomical and physiological changes in a woman's body, including hormonal, musculoskeletal, and postural changes. These changes are necessary to support fetal growth and development but may also cause discomfort, one of which is back pain. This complaint tends to increase as pregnancy progresses and is commonly experienced during the third trimester, when uterine

enlargement and weight gain increase the load on the spine and back muscles. Changes in the hormone relaxin, which causes ligaments and joints to become more flexible, may also reduce spinal stability and make pregnant women more susceptible to back pain (Handayani, 2022).

Back pain during pregnancy is not only associated with physical discomfort but may also affect daily activities, sleep quality, and overall quality of life. Persistent pain can interfere with rest, increase fatigue, and contribute to psychological distress during pregnancy. Therefore, back pain requires attention in midwifery care, particularly during the third trimester. Assessing pain intensity and the characteristics of pregnant women is necessary to obtain an overview of their condition and provide a basis for appropriate education and counseling. Management may include education on proper posture, activity modification, pregnancy exercises, relaxation techniques, warm compresses, and other non-pharmacological interventions (Darmapatni et al., 2022; Andini et al., 2023).

Back pain during pregnancy may be associated with several maternal characteristics, including age, parity, occupation, and physical activity. Maternal age may be related to physical condition and the body's ability to adapt to pregnancy-related changes. Parity also warrants attention because previous pregnancies may be associated with changes in the abdominal muscles and pelvic ligaments. Meanwhile, excessive physical activity, poor posture, and prolonged standing or sitting may increase the load on the back. Conversely, appropriate physical activity and pregnancy exercises may help maintain physical fitness and improve maternal comfort. These characteristics are important to examine when describing the distribution of back pain among third-trimester pregnant women, without assuming that each characteristic directly causes the pain.

Based on a study involving 40 third-trimester pregnant women at East Denpasar I Community Health Center, most respondents were aged 20–35 years, accounting for 31 women (77.5%). Regarding parity, 26 respondents (65.0%) had a parity of two to four births. Most respondents were unemployed, totaling 21 women (52.5%), while 29 respondents (72.5%) had a moderate level of physical activity. Pain assessment showed that 17 respondents (42.5%) experienced mild back pain, 15 (37.5%) experienced moderate pain, six (15.0%) reported no pain, and two (5.0%) experienced severe pain. These findings indicate that back pain remains a complaint that requires attention in maternal healthcare services within the working area of East Denpasar I Community Health Center.

Based on these considerations, this study aimed to describe the level of back pain among third-trimester pregnant women at East Denpasar I Community Health Center and identify respondent characteristics based on age, parity, occupation, and physical activity. The findings are expected to provide information on the distribution of back pain intensity among third-trimester pregnant women and serve as a consideration for healthcare professionals, particularly midwives, in improving education and maternal care focused on promoting comfort during pregnancy.

METHOD

This study employed a descriptive research design using a survey method and a cross-sectional approach to describe the level of back pain among third-trimester pregnant women. The study was conducted at East Denpasar I Community Health Center from April 10 to April 30, 2026. The population consisted of third-trimester pregnant women experiencing back pain in the health center's working area. A total of 40 respondents were selected using non-probability sampling with a quota sampling technique. The inclusion criteria were third-trimester pregnant women who were willing to participate, while the exclusion criteria were pregnant women with pregnancy complications and grand multiparous women.

Primary data were collected directly from respondents using a researcher-developed questionnaire to obtain information on maternal age, gestational age, parity, occupation, and physical activity, as well as the Numeric Rating Scale (NRS), adopted from Potter, Perry, Stockert, and Hall (2017), to measure back pain intensity on a scale of 0–10. Data collection was conducted offline, with respondents completing the questionnaires independently or receiving assistance from the researcher and trained enumerators when necessary. The study received ethical approval from the Health Research Ethics Committee of Poltekkes Kemenkes Denpasar under approval number DP.04.02/F.XXIV.26/407/2026, issued on April 9, 2026. Before data collection, the research objectives, benefits, procedures, and participants' rights were explained, and written informed consent was obtained. Research permits were also secured from the relevant authorities, followed by coordination with the community health center. The collected data were processed through editing, coding, data entry, and cleaning to ensure completeness and accuracy. Data analysis was performed descriptively using Statistical Product and Service Solutions (SPSS) version 27. The results were presented as frequency distributions and percentages to describe respondent characteristics and the level of back pain among third-trimester pregnant women. Research ethics were maintained through informed consent, anonymity, and confidentiality. Respondents' names were not included in the data collection sheets or research reports, and the collected information was kept confidential. Only relevant aggregated data were presented in the research findings.

RESULT AND DISCUSSION

Results

The study involved 40 third-trimester pregnant women who attended antenatal care at East Denpasar I Community Health Center and met the established inclusion and exclusion criteria. Respondent characteristics included age, parity, employment status, physical activity, and back pain intensity. The distribution of these characteristics is presented in Table 1.

Table 1. Distribution of Respondent Characteristics (n = 40)

Characteristics	Category	Frequency (f)	Percentage (%)
Age	35 years	8	20.0
Parity	1 previous birth	14	35.0
	2–4 previous births	26	65.0

Employment status	Employed	19	47.5
	Not employed	21	52.5
Physical activity	Light	10	25.0
	Moderate	29	72.5
	Heavy	1	2.5
Back pain intensity	No pain	6	15.0
	Mild pain	17	42.5
	Moderate pain	15	37.5
	Severe pain	2	5.0
Total		40	100.0

Source: Primary research data.

Table 1 shows that most respondents were aged 20–35 years (77.5%), had a parity of 2–4 previous births (65.0%), were not employed (52.5%), and engaged in moderate physical activity (72.5%). Regarding back pain intensity, mild pain was the most frequently reported category (42.5%), followed by moderate pain (37.5%), no pain (15.0%), and severe pain (5.0%).

Discussion

Age of Third-Trimester Pregnant Women Experiencing Back Pain

The findings showed that most respondents experiencing back pain were aged 20–35 years, accounting for 31 respondents (77.5%). Eight respondents (20.0%) were older than 35 years, while one respondent (2.5%) was younger than 20 years. These findings indicate that back pain was most frequently observed among respondents aged 20–35 years. However, because this study used a descriptive design and did not compare risks across age groups, the findings cannot establish that a particular age group increases or decreases the risk of back pain. Antari (2021) explained that the age range of 20–35 years is generally considered a relatively favorable reproductive period for pregnancy compared with younger or older ages. Nevertheless, being within this age range does not mean that pregnant women are free from discomfort during pregnancy. Back pain may occur as part of the physiological and biomechanical changes experienced during pregnancy, particularly in the third trimester. Uterine enlargement and weight gain shift the body's center of gravity forward, requiring pregnant women to adjust their posture to maintain balance. These adjustments may increase the load on the muscles and joints of the lower back (Cahyani et al., 2024).

In addition to postural changes, hormonal changes during pregnancy may affect joint and ligament stability. Antari (2021) associated increased relaxin levels with greater flexibility of supporting tissues in preparation for childbirth. Together with the increasing physical load, these changes may contribute to back discomfort. Therefore, maternal age should be understood as one of the respondents' characteristics rather than the sole explanation for back pain. These findings are consistent with Cahyani et al. (2024), who explained that pregnant women within the healthy reproductive age range may still experience back pain due to postural changes, uterine enlargement, and increased

mechanical loading in the lumbar region. Antari (2021) also emphasized that back pain during pregnancy is influenced not only by maternal age but also by the physiological changes occurring throughout pregnancy. This consistency supports the view that being within the healthy reproductive age range does not guarantee freedom from back pain.

In practical terms, these findings highlight the importance of providing education about discomfort during the third trimester to all pregnant women, regardless of age. Midwives can provide information on proper posture, balancing activities with rest, and undertaking physical exercises appropriate to the pregnancy. Such education may help women understand how to maintain physical comfort during pregnancy. However, the effectiveness of these interventions was not measured in this study and therefore cannot be established from the present findings.

Parity of Third-Trimester Pregnant Women Experiencing Back Pain

Regarding parity, 26 respondents (65.0%) had a parity of 2–4 previous births, while 14 respondents (35.0%) had a parity of one previous birth. These findings indicate that most respondents had experienced more than one childbirth. Nevertheless, this distribution describes only the characteristics of the study sample and does not demonstrate that a particular parity group is directly associated with back pain intensity. Theoretically, a history of pregnancy and childbirth may be relevant when examining musculoskeletal complaints during pregnancy. Antari (2021) explained that pregnancy may involve stretching of the abdominal muscles and supporting tissues. During subsequent pregnancies, the mother's musculoskeletal condition, postural changes, and increasing body weight may affect physical comfort. However, individual responses vary depending on physical condition, daily activities, and the body's ability to adapt to pregnancy-related changes.

Arummega et al. (2022) reported that parity was one of the factors associated with back pain among third-trimester pregnant women. Their findings provide a basis for considering previous pregnancy history when assessing complaints during pregnancy. The present study is consistent with that research in showing that many respondents had a parity of 2–4 previous births. However, this similarity in respondent characteristics is insufficient to establish that the present study demonstrates an association between parity and back pain, because no association analysis was conducted and back pain intensity was not compared across parity groups.

In addition to physical changes, daily activities and family responsibilities may be relevant considerations for women who already have children. Household tasks, childcare, and limited opportunities for rest may contribute to physical demands. Antari (2021) discussed physical activity and maternal physical condition as factors that may contribute to back pain. However, the present study did not specifically measure childcare duration, household workload, or rest quality according to parity. These factors should therefore be regarded as considerations for interpretation rather than direct explanations of the findings. These findings highlight the importance of individual assessment of pregnant women, including pregnancy history, daily activities, and reported discomfort. Midwives can

provide education on activity management, posture, rest, and physical exercise appropriate to the mother's condition. Thus, parity may be considered as part of the clinical information collected, but it should not be used alone to predict back pain intensity.

Employment Status of Third-Trimester Pregnant Women Experiencing Back Pain

The results showed that 21 respondents (52.5%) were not employed, while 19 respondents (47.5%) were employed. The difference between the two groups was relatively small, although the number of respondents who were not employed was slightly higher. These findings show that back pain was observed among respondents with different employment statuses. However, because the data do not separate pain intensity by employment status, this study cannot determine whether employed or unemployed women experienced more severe pain.

Formal employment status does not necessarily reflect a person's overall physical workload. Women who do not work outside the home may perform domestic activities such as cooking, washing, cleaning, and caring for family members. Meanwhile, employed women may face physical demands associated with their occupations, including prolonged standing or sitting. Handayani (2022) explained that daily activities and posture should be considered when examining back pain in pregnant women. During the third trimester, uterine enlargement and changes in the body's center of gravity may affect how women stand, walk, and perform daily activities. When activities are performed in uncomfortable positions or without adequate rest, the load on the back muscles may increase. However, these conditions do not affect every woman to the same extent. The type of work, duration of activity, posture, and opportunities for rest are important factors to examine when explaining the role of daily activities.

Handayani (2022) emphasized that back pain should be examined not only in relation to formal employment but also in relation to daily activities. Natalia and Handayani (2022) discussed the effects of back pain on pregnant women's comfort, mobility, and quality of life. These references support the importance of considering activities and the impact of symptoms rather than relying solely on employment status.

The present findings provide limited support for the view that employment status alone is insufficient to explain back pain among pregnant women. Although most respondents were not employed, back pain intensity was assessed among respondents in the study. However, these findings do not establish that domestic work caused their symptoms. To investigate this explanation, future research should record the type of work, working hours, household activities, posture during activities, and rest periods. The practical implication is that education about back pain should be provided to pregnant women who are both employed and not employed. Such education may include maintaining comfortable posture, avoiding lifting loads beyond one's capacity, scheduling rest breaks, and consulting healthcare professionals when symptoms interfere with daily activities. This approach is more appropriate than assuming that either employment group necessarily has a higher risk based on descriptive data alone.

Physical Activity of Third-Trimester Pregnant Women Experiencing Back Pain

Regarding physical activity, most respondents were classified as having moderate physical activity, accounting for 29 respondents (72.5%). Ten respondents (25.0%) had light physical activity, and one respondent (2.5%) had heavy physical activity. This distribution indicates that moderate physical activity was the most common category among the respondents. However, the physical activity category alone does not explain the level of pain experienced by each respondent. Physical activity during pregnancy may include household chores, occupational tasks, walking, and other daily movements. Its effects on physical comfort may vary according to the type of activity, intensity, duration, posture, and the mother's physical condition. Antari (2021) explained that repetitive activities, prolonged standing, bending, and lifting may increase the load on the musculoskeletal system. During the third trimester, postural changes and increasing body weight may also affect the workload of the lower-back muscles.

The finding that 72.5% of respondents were classified as having moderate physical activity should be interpreted cautiously. It does not mean that moderate physical activity caused back pain, because the study did not test the association between activity categories and pain intensity. To determine whether a pattern exists between these variables, a cross-tabulation of physical activity and pain intensity, followed by an appropriate statistical analysis, would be required. Furthermore, moderate physical activity does not necessarily indicate excessive or unsafe activity; its appropriateness depends on the nature of the activity and the condition of each pregnant woman. Antari (2021) discussed physical activity as one factor that may contribute to back pain during pregnancy. The present findings are consistent with the importance of considering physical activity because most respondents were classified in the moderate category, while mild and moderate pain were the most frequently reported pain categories. However, because individual-level data linking physical activity and pain intensity were not presented, this similarity indicates the relevance of the issue rather than demonstrating a direct association between moderate activity and a particular level of pain.

Physical activity should also be considered in terms of balancing movement and rest. Pregnant women can discuss appropriate activities with healthcare professionals based on their individual pregnancy conditions. Education may cover comfortable posture, rest periods, and physical exercises suitable for pregnancy. This study did not evaluate the effectiveness of stretching, prenatal exercise, or prenatal yoga; therefore, their effectiveness cannot be presented as a finding of this research. Overall, the findings show that physical activity is a relevant characteristic to describe among third-trimester pregnant women. Future studies should measure the type, frequency, duration, and intensity of activities in greater detail and examine their association with pain intensity. Such an approach would provide a stronger basis for developing recommendations related to pregnant women's activity patterns.

Description of Back Pain Intensity among Third-Trimester Pregnant Women

The results showed that mild back pain was the most frequently reported category, affecting 17 respondents (42.5%). Fifteen respondents (37.5%) experienced moderate pain, six (15.0%) reported no pain, and two (5.0%) experienced severe pain. Descriptively, these findings show that mild and moderate pain accounted for the largest proportions of back pain intensity among the 40 respondents. Back pain is a complaint that may occur during pregnancy, particularly when physical changes become more pronounced in the third trimester. Uterine enlargement, increased body weight, a forward shift in the center of gravity, and postural adjustments may increase the load on the muscles and joints of the lower back. Antari (2021) and Cahyani et al. (2024) explained that physiological and biomechanical changes during pregnancy contribute to such complaints. This provides a theoretical basis for understanding why back pain may occur among respondents with varied characteristics.

The predominance of mild pain indicates that this category had the highest frequency in the study sample. However, this finding is insufficient to conclude that all respondents adapted well or that their pain did not interfere with daily activities. The study measured pain intensity but did not report specific measurements of activity limitations, sleep quality, or quality of life for each pain category. Conversely, the presence of 15 respondents with moderate pain and two with severe pain indicates that higher levels of pain were also reported and warrant attention in antenatal care.

Cahyani et al. (2024) reported that back pain among third-trimester pregnant women was associated with postural changes and increased mechanical loading. Antari (2021) also described back pain as a common musculoskeletal complaint during the third trimester. The present findings are consistent with these accounts in that back pain was reported among third-trimester respondents. However, because the study did not include comparison groups from other pregnancy trimesters, it cannot demonstrate that back pain occurs more frequently in the third trimester than in earlier trimesters. Pain intensity in this study was measured using the Numeric Rating Scale (NRS). This instrument was used to obtain respondents' subjective assessments of pain intensity. Since pain perception may differ between individuals, the results should be interpreted with consideration of previous pain experiences, physical conditions, and the circumstances at the time of measurement. Data collection involving assistance from researchers or enumerators may also produce differences in understanding if explanations are not standardized. These limitations should be considered when interpreting the distribution of pain intensity.

Natalia and Handayani (2022) discussed how back pain may affect pregnant women's comfort, mobility, and sleep quality. Therefore, pain should be assessed not only in terms of intensity but also in relation to its impact on daily activities. In clinical practice, midwives can ask about the location and intensity of pain, changes in symptoms, and any interference with daily activities. Severe or worsening pain, or pain accompanied by other symptoms, should be evaluated by a healthcare professional according to appropriate clinical procedures. Overall, the findings indicate that mild pain was the most common category,

followed by moderate pain. These results describe the distribution of back pain intensity among respondents at East Denpasar I Community Health Center. Consistent with previous research, they highlight the importance of addressing musculoskeletal complaints during pregnancy. Nevertheless, the descriptive design cannot identify the causes of pain or establish the effectiveness of any intervention. Future research could examine associations between maternal characteristics and pain intensity and assess the effects of pain on daily activities to develop a more comprehensive understanding.

CONCLUSION

Based on the findings of the study on back pain among third-trimester pregnant women at East Denpasar I Community Health Center in 2026, involving 40 respondents, it can be concluded that most respondents were aged 20–35 years (31 respondents; 77.5%), had a parity of 2–4 previous births (26 respondents; 65.0%), were not employed (21 respondents; 52.5%), and engaged in moderate physical activity (29 respondents; 72.5%). Regarding back pain intensity, the largest group experienced mild pain, comprising 17 respondents (42.5%). Third-trimester pregnant women are encouraged to improve their knowledge of back pain and apply measures to alleviate discomfort, such as maintaining proper posture, engaging in physical activity according to their abilities, performing stretching exercises, participating in prenatal exercise or prenatal yoga, practicing relaxation techniques, and getting adequate rest. Healthcare professionals, particularly midwives, are expected to enhance education and counseling on the prevention and management of back pain through antenatal care services. East Denpasar I Community Health Center is encouraged to strengthen health promotion through educational sessions, maternal classes, and regular prenatal exercise activities. Future researchers are advised to involve larger samples and broader study areas and to use analytical research designs to investigate factors associated with back pain among third-trimester pregnant women in greater depth.

REFERENCES

- Andini, N. P. E., Sari, N. L. P. A., & Putri, K. A. D. (2023). Peran bidan dalam penatalaksanaan nyeri punggung pada ibu hamil trimester III melalui intervensi nonfarmakologis. *Jurnal Kebidanan Indonesia*, 14(2), 85–92.
- Andreyani, L., & Bhakti, W. K. (2023). Validitas Skala Ukur Nyeri Visual Analog and Numerik Ranting Scales (Vanrs) Terhadap Penilaian Nyeri. , (2), 730736.
- Apriyenti, F. Hairuddin, H., Palilingan, R. A., Nugroho, H., Sarumi, R., & Aji, R. (2019). *Metodologi Penelitian Kesehatan dan Statistika*.
- Ardiyanti, K. E. (2023). Pengaruh latihan gym ball terhadap intensitas nyeri punggung bawah pada ibu hamil trimester III di Klinik Bumi Sehat (Skripsi). Poltekkes Kemenkes Denpasar.
- Armayanti, F. S., & Wirata, I. N. (2023). Perbedaan Intensitas Nyeri Punggung pada Ibu Hamil Trimester III Sebelum dan Sesudah Dilakukan Teknik Akupresur pada Titik BL 23 Dan BL 25. , (2), 979-984.
- Arummega, M. N., Rahmawati, A., & Meiranny, A. (2022). Faktor-Faktor yang

- Mempengaruhi Nyeri Punggung Ibu Hamil Trimester III: Literatur Review. , (1), 14-30.
- Aryati, F. S., & Wirata, I. N. (2024). Perbedaan intensitas nyeri punggung pada ibu hamil trimester III sebelum dan sesudah dilakukan teknik akupresur pada titik BL23 dan BL25. *Jurnal Penelitian Inovatif*.
- Bobak, I. M. Wulandini, P., Febrianita, Y., Sari, R. I., Setiawati, N., Sinuraya, E., ... & Sastrini, Y. E. (2023). *Konsep Dasar Dan Asuhan Keperawatan Maternitas*. .
- Cahyani, P. D. P., Sriasih, N. G. K., & Darmapatni, M. W. G. (2024). Intensitas nyeri punggung bawah ibu hamil trimester III yang melakukan prenatal yoga. *Jurnal Sehat Mandiri*, 15(2).
- Darmapatni, M. W. G., Somoyani, N. K., Suindri, N. N., & Sriasih, N. G. K. (2023). Perbedaan keluhan sesak napas pada ibu hamil trimester II dan III sebelum dan sesudah melakukan prenatal yoga formulasi creating space di Puskesmas dan praktik mandiri bidan Kota Denpasar. *Jurnal Ilmiah Kebidanan*, 11(1).
- Darmapatni, S., Widhi Gunapria Darmapatni, N. M., & Putra, I. G. N. A. (2022). Intensitas nyeri punggung bawah pada ibu hamil trimester III yang melakukan prenatal yoga. *Repository Poltekkes Kemenkes Denpasar*. 50
- Elkhapi, N., Minata, F., Yulizar, Y., & Anggraini, A. (2023). Hubungan usia kehamilan, paritas, aktivitas dengan terjadinya nyeri punggung bawah pada ibu hamil trimester II dan III di Puskesmas Kemu Kabupaten Oku Selatan tahun 2023. , (5), 6411-6425.
- Fitriani, D., & Lestari, P. (2021). Pengaruh latihan pelvic rocking terhadap nyeri punggung bawah pada ibu hamil trimester III. , 10(2), 85-92.
- Girsang, R. Y. (2022). Efektivitas prenatal yoga terhadap nyeri punggung pada ibu hamil trimester III. , 1(2), 65-72.
- Handayani, K. T. (2022). Asuhan keperawatan nyeri akut pada ibu hamil trimester III di wilayah kerja Puskesmas Seririt I tahun 2022. *Repository Poltekkes Kemenkes Denpasar*.
- Hutasuhut, R. O., Lintong, F., & Rumampuk, J. F. (2021). Hubungan lama duduk terhadap keluhan nyeri punggung bawah. , (2).
- Indrayani, K. N., Gunapria, M. W., & Ariyani, N. W. (2024). Perbedaan skala nyeri punggung bawah sebelum dan sesudah dilakukan teknik rebozo pada ibu hamil trimester III. *Jurnal Berita Kesehatan*.
- Jamal, A., Dasuki, D., & Melany, H. (2024). Perbandingan validitas skala ukur nyeri VAS dan NRS terhadap penilaian nyeri di IGD RSUD Raden Mattaher Jambi. *Riset Informasi Kesehatan*, 7(2), 114-121.
- Jevanesia, N. F., & Roslianti, E. (2024). The implementation of prenatal exercise to reduce back pain in third trimester pregnant women. , 5(2), 45-52.
- Kemenkes RI. (2019). Kementerian Kesehatan. In *Health Statistics*.
<https://www.kemkes.go.id/download/s/resources/download/pusdatin/profilkesehatan-indonesia/profil-kesehatan-indonesia-2018.pdf>
- Kementerian Kesehatan Republik Indonesia. (2022). *Panduan pelayanan kebidanan*

- berkelanjutan. Jakarta: Kementerian Kesehatan RI.
- Kementerian Kesehatan Republik Indonesia. (2023). Profil kesehatan Indonesia tahun 2023. Kementerian Kesehatan RI.
- Kementerian Kesehatan Republik Indonesia. 2019. . Jakarta: Kemenkes RI. <https://www.kemkes.go.id>
- Maharani, D. F. (2025). (Doctoral Dissertation, Politeknik Kesehatan Tasikmalaya).
- Manuaba, I. B. G. (1998). Ilmu kebidanan, penyakit kandungan & keluarga berencana untuk pendidikan bidan. EGC. 51
- Maryani, D. Dasuki, D., & Melany, H. (2018). Perbandingan validitas skala ukur nyeri VAS dan NRS terhadap penilaian nyeri di IGD RSUD Raden Mattaher Jambi. , (2), 114-121.
- McCaffery, M., & Beebe, A. (1989). Pain: Clinical Manual for Nursing Practice. St. Louis: Mosby.
- Muawanah, S. (2023). Efektivitas Massage Therapy Dan Senam Hamil Untuk Mengurangi Nyeri Punggung Bawah Pada Ibu Hamil. , (2), 118-128.
- Natalia, L., & Handayani, I. (2022). Ketidaknyamanan kehamilan trimester III: sebuah laporan kasus asuhan kehamilan. , (2), 302-307.
- Nur, S., Nurfazriah, I., & Fitriani, A. (2015, December). Pengaruh Senam Hamil Terhadap Kualitas Tidur Ibu Hamil Trimester III. In (Vol. 1, pp. 15311535).
- Nursalam. (2020). Hubungan lama duduk dengan kejadian nyeri punggung bawah. , (01 Oktober), 1718-1722.
- Pramesti, C. D. Maharani, K., & Qomariyah, Q. (2023). Ibu Hamil Dalam Mengurangi Keluhan Nyeri Punggung. , (1), 11-13.
- Purnamasari, K. D., & Widyawati, M. N. (2019). Gambaran nyeri punggung bawah pada ibu hamil trimester III. , (1), 352-361.
- Puspitasari, D., & Saripah, A. (2020). Efektifitas Senam Hamil Terhadap Pengurangan Nyeri Punggung Pada Ibu Hamil Trimester III Di Bpm Bd Lilis SuryatI, S.ST Cisarua Bogor. Zona Kebidanan, 10(3), 59–67.
- Putri, N. M. D., Lestari, P. E., & Aryani, P. (2022). Gambaran nyeri punggung bawah pada ibu hamil trimester III di Kota Denpasar. Jurnal Riset Kebidanan Bali, 6(1), 25–32.
- Rachmawati, F., Wulandini, P., Febrianita, Y., Sari, R. I., Setiawati, N., Sinuraya, E., ... & Sastrini, Y. E. (2023). Konsep Dasar Dan Asuhan Keperawatan Maternitas. .
- Rahmadayanti, A. M., Karneli, & Wulandari, R. (2022). Pengaruh pemberian akupresur terhadap nyeri punggung bawah pada ibu hamil trimester III. , 7(2), 133–140.
- Repository Malahayati. (2024). Prevalensi nyeri punggung pada ibu hamil di UPT Puskesmas Kebun Tebu Kabupaten Lampung Barat. Repository Universitas Malahayati.
- Retnaningtyas, E. (2017). Pengaruh Pengetahuan Tentang Kelas Ibu Hamil Terhadap Perilaku Perawatan Kehamilan Pada Ibu Hamil Di Wilayah Kerja 52 Puskesmas Nganjuk. , (1), 42-49.
- Rosita, S. D., Purbanova, R., & Siswanto, D. (2022). Pengaruh Prenatal Yoga Terhadap Nyeri

- Punggung Pada Ibu Hamil Trimester III. *Jurnal Pendidikan Tambusai*, 6(2), 11939–11945. <https://akbid-dharmahusada.kediri.ac.id/index.php/jpt>. *Jurnal Pendidikan Tambusai*, 6(2), 11939–11945.
- Rukmasari, E. A., Agustin, G., Elfani, K. C., & Rahmawati, N. R. (2023). Nonpharmacological interventions to reduce back pain in pregnant women: A literature review. , 5(1), 112–120.
- Rustikayanti, R. N., Kartika, I., & Herawati, Y. (2016). Perubahan psikologis pada ibu hamil trimester III. , (1), 45-49.
- Safitri, R., Mohammadi, A., Hemmati, M., Hasheminezhad, R., Kani, S., Shohaimi, S., & Mohammadi, M. (2023). The global prevalence of low back pain in pregnancy: a comprehensive systematic review and meta-analysis. , (1), 830.
- Simanjuntak, M. K. (2022). Efektivitas teknik relaksasi terhadap penurunan nyeri punggung pada ibu hamil trimester III. , 10(1), 25–32.
- Sriasih, N. G. K., Darmapatni, M. W. G., & Suindri, N. N. (2023). Ketidaknyamanan kehamilan trimester III ditinjau dari perubahan fisiologis dan psikologis ibu hamil. *Jurnal Ilmiah Kebidanan*.
- Sulastri, M., Nurakilah, H., Marlina, L., & Nurfikah, I. (2022). Penatalaksanaan Nyeri Punggung Pada Ibu Hamil Trimester III Dengan Metode Kinesio Tapping Berdasarkan Standar Profesi Bidan. , (2), 145-161.
- Varney, H., Kriebs, J. M., & Gegor, C. L. (2018). *Varney's midwifery* (5th ed.). Burlington, MA: Jones & Bartlett Learning.
- Wahyuni, A. D., Maimunah, S., & Amalia, S. (2022). Pengaruh dukungan suami terhadap tingkat kecemasan ibu hamil trimester III dalam menghadapi persalinan. , (1), 112-130.
- Weni Yunita Anggraini. (2023). Efektivitas Senam Hamil Terhadap Nyeri Punggung Pada Ibu Hamil Trimester III. *Jurnal Penelitian Perawat Profesional*, 5(2), 495–498.
- World Health Organization. (2022). WHO recommendations on antenatal care for a positive pregnancy experience. World Health Organization.
- Yuliana, A., Hikmah, N., Ifalahma, D., Putri, A. A., & Zamrina, N. S. (2025). Development of prenatal exercise as a therapeutic intervention for pregnancy-related low back pain. , 2(4), 16–22.