

Literature Review: The Effect of Kinesio Taping on Back Pain in Pregnant Women in Their Third Trimester

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ABSTRACT

Background & Objective: Back pain in pregnant women is one of the most common discomforts experienced by pregnant women. This back pain is typically felt by pregnant women during the third trimester of pregnancy, around 28–40 weeks of gestation. One approach to reducing back pain involves the use of kinesiotaping. Kinesiotaping is a new method of applying tape used to prevent and rehabilitate injuries. The objective of this study is to review literature, articles, and research documents on the management of back pain in pregnant women using kinesiotaping. **Method:** The method used is a literature review, involving the collection of data from the Google Scholar database from 2022 to 2025. The selected literature data were full-text journals in Indonesian. **Result:** Kinesio taping is a non-pharmacological method used to alleviate back pain in pregnant women. This therapy works by stabilizing joints, improving muscle function and position, and reducing pain receptor stimulation, thereby helping to reduce pain and strengthen abdominal muscles. **Conclusion:** Based on the literature review, kinesiotaping has been proven to be an effective non-pharmacological method for alleviating back pain in pregnant women, particularly in the third trimester. This therapy improves joint stability, enhances muscle function, and reduces pain receptor stimulation, thereby providing comfort and improving the quality of life for pregnant women.

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Introduction

Pregnancy is a physiological process accompanied by various anatomical and hormonal changes. One of the most common complaints experienced by pregnant women, particularly during the second and third trimesters, is lower back pain (low

back pain). It is estimated that approximately 50–70% of pregnant women experience back pain that can interfere with daily activities, sleep quality, and overall quality of life. (Candra Resmi, D., & Aris Tyarini, 2020)

Back pain during pregnancy is generally caused by weight gain, changes in body posture due to shifts in the center of gravity, and the softening of ligaments through the hormone relaxin. This condition causes the spine and surrounding muscles to work harder, leading to muscle tension and pain. (Amalia, A. R., Erika, E., & Dewi, 2020)

Back pain in pregnant women in the third trimester that is not addressed promptly can lead to chronic back pain, increasing the likelihood of postpartum back pain and chronic back pain, which are more difficult to treat or cure. Back pain negatively impacts the daily life of pregnant women by disrupting activities such as standing after sitting, moving from bed, sitting for too long, standing for too long, putting on and taking off clothes, and lifting and moving objects around them. (Abdurahman Berbudi, B. L. & S., 2021). The risk of low back pain during pregnancy, if left untreated, can lead to a decrease in the quality of life of pregnant women. (Imaniar, M. S., & Sundari, 2020) Pregnant women with low back pain experience difficulty in performing daily activities. (Candra Resmi, D., & Aris Tyarini, 2020)

Management of back pain in pregnant women requires a non-pharmacological approach due to the limitations on medication use during pregnancy. One method that is increasingly popular and considered safe is kinesiotopeing. This technique involves the use of special elastic tape applied to the skin to provide support to muscles, improve blood and lymphatic circulation, and help reduce pain.

Several studies indicate that kinesiotopeing can be an effective alternative in reducing musculoskeletal pain, including back pain in pregnant women, without causing significant side effects. Kinesiotopeing is the latest method of taping used for injury prevention and rehabilitation. (Ariwijaya, 2020) Kinesiotopeing is water-resistant and can be used for up to 24 hours depending on skin condition, as it is made from 100% cotton, elastic fibers, and is latex-free. Physical therapists use kinesiotopeing for rehabilitation and to mimic physiological processes. It is used in sports medicine and orthopedics. (Mardiyarningsih E, 2011)

Another study noted that the intensity of low back pain in pregnant women in the third trimester who received kinesiotopeing therapy experienced a reduction in pain levels. This finding is supported by research (Bl, A. B., & Sari, 2022) showing that tapping has an effect on reducing the severity of low back pain.

Objective

The purpose of this study is to review literature, articles, and research documents on the treatment of back pain in pregnant women using kinesiotopeing.

Method

The method used in this study was a literature review, which aimed to examine and analyze various scientific references related to the use of kinesiotopeing in

reducing back pain in pregnant women. The literature review was conducted by searching and collecting scientific articles from the Google Scholar database with a publication range from 2022 to 2025. This timeframe was chosen to ensure that the sources used are up-to-date and relevant to the latest developments in science and clinical practice in the field of maternal health and physical therapy.

The inclusion criteria used in selecting the literature included articles available in full-text journal format, written in Indonesian, and directly addressing the topic of kinesiotaping and back pain in pregnant women. The articles obtained were then thoroughly reviewed to identify the objectives, methods, results, and conclusions of each study. Through this method, it is hoped that a comprehensive synthesis of information regarding the effectiveness of kinesiotaping as a non-pharmacological therapy alternative in reducing back pain during pregnancy can be obtained.

Results

TABEL 1. Analysis of Literature Review Result

| | Author | Title | Method | Purpose | Result |
|---|-----------------------------|--|--|---|---|
| 1 | (Sulastri et al., 2022) | Management of Back Pain in Third Trimester Pregnant Women Using Kinesio Taping Based on Midwifery Professional Standards | Case study or Case Study Research (CSR) | Determining the effectiveness of kinesio taping in relieving back pain in pregnant women in their third trimester | There is an effect of kinesio taping in reducing back pain with the use of Kinesio Taping for 4 days, with a reduction in pain scale of 2 and 4 points for each respondent. |
| 2 | (Rahmi et al., 2024) | The Effectiveness of Kinesiotaping in Relieving Back Pain in Third Trimester Pregnant Women at PMB Bd. Nurlis, S.Tr.Keb | Quasy experiment | Determining the effectiveness of kinesiotaping in reducing back pain in pregnant women in their third trimester | There is effectiveness of kinesiotaping in reducing back pain in pregnant women in the third trimester. |
| 3 | (Rohman & Machmud ah, 2023) | Application of kinesiotaping for low back pain in third trimester pregnancy | Descriptive with a case study approach to nursing care | Determining the effect of kinesiotaping on low back pain in pregnant women in their third trimester. | There is a reduction in the level of pain felt before and after therapy, with a reduction of 2 pain levels in both respondents. |
| 4 | (Nuraidah et al., 2025) | The Effectiveness of Kinesio Taping and Pelvic Rocking | Quasi experimental | Evaluating the effectiveness of kinesio taping and pelvic rocking exercises in | There is an effect of kinesio taping on reducing back pain in pregnant women. |

| Author | Title | Method | Purpose | Result |
|------------------------|---|---|--|--|
| | Exercises in Reducing Back Pain in Third-Trimester Pregnant Women at Kenali Besar Health Center, Jambi City | | reducing back pain in pregnant women in the third trimester | |
| 5 (Putri et al., 2024) | The Effect of Kinesio Taping on Reducing Lower Back Pain in Third-Trimester Pregnant Women at PMB Midwife EVi Mulyorejo, Malang | Quasi-experimental with a one-group pretest-posttest design | Determining the effect of kinesiotaping on reducing lower back pain in pregnant women in the third trimester | Kinesio taping is effective in reducing lower back pain in pregnant women in the third trimester and can be considered an alternative in managing lower back pain in pregnant women. |

Discussion

The third trimester of pregnancy is characterized by the growth and increase in weight of the uterus. During the third trimester, the center of gravity shifts forward, so pregnant women must constantly adjust their balance when standing. If this adjustment is not proper, it can cause strain and fatigue in the body, particularly in the abdominal and hip areas, leading to back pain (Rohman & Machmudah, 2023). Back pain is caused by several factors, including mechanical stretching during pregnancy, weakened pelvic ligaments, compression of blood vessels, and nerve compression (Putri et al., 2019). Lower back pain in pregnant women can also be caused by hormonal, circulatory, and psychosocial factors, which limit the activities of pregnant women (Putri et al., 2024). Hormonal changes in pregnant women also cause changes in the supporting and connecting soft tissues. This reduces muscle elasticity, making muscles stiffer and more prone to tension (Rahmi et al., 2024).

Lower back pain in pregnant women during the third trimester, if not addressed promptly, can lead to chronic lower back pain, increase the likelihood of postpartum lower back pain, and result in chronic lower back pain that is more difficult to treat or cure (Rahmi et al., 2024). Back pain in pregnant women can also have negative effects that interfere with daily physical activities (Sulastris et al., 2022). If back pain spreads to the pelvic and lumbar regions, it can make activities difficult, requiring the use of assistive devices, and may also result in an inability to participate in sexual intercourse (Rohman & Machmudah, 2023).

Efforts to reduce back pain can be pharmacological or non-pharmacological (Rahmi et al., 2024). Non-pharmacological treatments may cause side effects such as digestive issues, kidney problems, swelling, and high blood pressure. To reduce these

risks, non-pharmacological or traditional therapies can be an alternative option for managing back pain without worrying about side effects (Sulastri et al., 2022).

One non-pharmacological approach to alleviating back pain in pregnant women is the use of kinesio taping. Kinesio taping is a new method of applying tape used to prevent and rehabilitate injuries. Kinesio taping is waterproof and can be used for 24 hours depending on skin condition, as it is made from 100% cotton, elastic fibers, and is latex-free (Rahmi et al., 2024).

Kinesio taping is a beneficial modality for reducing back pain by applying taping to the back area, which can strengthen the abdominal muscles. Kinesio taping serves as an alternative method for restoring and regulating various physiological processes. The mechanism of action of Kinesio taping therapy is to prevent muscle and joint damage, improve muscle function and position, enhance joint stability, and alleviate pain by reducing receptor stimulation, thereby relieving back pain (Rohman & Machmudah, 2023).

The function of kinesio taping on joints can improve joint stability, thereby reducing muscle spasms and pain (Sulastri et al., 2022). The mechanism of action of kinesio taping also involves lifting the skin, thereby freeing the subcutaneous area from pressure, reducing swelling and inflammation, improving circulation to increase oxygen-rich blood flow, and promoting regeneration of the treated area. reduced adhesion, and alleviated pain by relieving pressure on pain receptors (reducing nociceptor irritation). There is an increase in collagen flexibility, which mechanically allows for more unrestricted movement. Pain reduction occurs because taping is designed to support lower back muscles, improve postural alignment, and reduce spinal load during activities. The applied taping exerts pressure or stretch on the skin, stimulating the mechanoreceptors in the cutaneous layer (Rahmi et al., 2024).

Applying taping to the lower back muscles helps reduce pain, supports, and enhances muscle relaxation during maximum effort. This aids in muscle tissue healing, reduces muscle fatigue, and helps relax contracted muscles (Rohman & Machmudah, 2023). The pain-reducing mechanism can be explained through the stimulated mechanoreceptors, which increase the flexibility of soft tissue in the area, thereby reducing pain. The impulses from these mechanoreceptors inhibit pain receptors (nociceptors) from transmitting pain signals to the brain. This mechanism is known as the gate control theory (Putri et al., 2024).

The easiest and most effective method for pregnant women in the third trimester is to apply kinesio taping to the back during sleep or activities for 24 hours. In both sleeping and active positions, kinesio taping can reduce pressure on the inferior vena cava (the large vein that returns blood from the lower body to the heart) located in front of the spine. This position also ensures healthy blood circulation (Rahmi et al., 2024).

Research conducted by Nuraidah et al. (2025) states that kinesio taping intervention is more effective in reducing pain compared to pelvic rocking exercises. Therefore, this can be applied by medical professionals such as midwives and physical

therapists to address back pain complaints as a safe and comfortable non-pharmacological alternative treatment to improve the quality of life for pregnant women.

Conclusion

Based on five journal articles studied, it was found that kinesiio tapping can reduce back pain by tapping on the back area, which can strengthen the abdominal muscles. This shows that regular kinesiio tapping is effective and efficient in reducing musculoskeletal pain, including back pain in pregnant women, without causing significant side effects.

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