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Exercise Interventions for Reducing Low Back Pain During Pregnancy: A Scoping Review of Randomized Controlled Trials

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Abstract

Background: Low Back Pain (LBP) can have a negative impact on physical and psychological conditions, so that treatment of these symptoms requires attention. There is a lot of literature stating the positive effects of exercise activity, but evidence related to the type and duration of activity is not clear.

Objective: This study aims to find out the type and duration of exercise that can reduce LBP during pregnancy.

Methods: Scoping review using the framework from Arksey & O'Malley consisting of: identifying research questions; identifying relevant studies; study selection; charting the data; and collating, summarizing and reporting the results. Searching for articles using databases from Sciencedirect, Pubmed, Springer link, Scopus, Clinicalkey, Oxford Academic .The inclusion criteria: full text in English, published in 2020 until 2025, experimental RCT research design, nursing scope. Article appraisal using CONSORT from the Joana Briggs Institute (JBI) independently by each author.

Results: Five randomized controlled trial articles were included according to the criteria. Physical activities that can be done to reduce LBP symptom include pilates (2 times a week for 60 minutes); aerobic exercise (3 times a week for 60 minutes); lumbar stabilization exercise (2 times a week for 50 minutes) and pelvic floor muscle (3 times a week for 60 minutes). All of the above activities have a positive effect on reducing pain felt by pregnant women at various gestational ages.

Conclusion: In conclusion, LBP during pregnancy can be reduced by physical activity exercises such as Pilates, aerobics, lumbar stabilization exercises or pelvic muscle floor exercises with an average duration of 2 times a week for 60 minutes.

Keywords: Exercise; Low Back Pain; Physical Activity; Pregnancy

INTRODUCTION

Pregnancy is a challenging phase for women, not only emotionally but also physically. A woman's body undergoes physical and anatomical changes throughout pregnancy, starting from the first trimester to reaching its peak in the

final trimester (1). Although some of these changes can return to normal a few weeks after delivery, they still cause discomfort. Changes during pregnancy can affect the musculoskeletal system causing pain, ligament tension, decreased range of motion, and increased muscle tension (2).

The prevalence of low back pain (LBP) in pregnancy is 40.5%. The prevalence of LBP is directly proportional to the increasing gestational age, 28.3% occurs in the first trimester, 47.8% in the second and third trimesters (3). The sensation of LBP pain in pregnancy is felt in the lower back (40.6%), symphysis (23.3%) and coccyx (20.5%) (4). LBP occurs due to weight gain reaching 11 to 12 kg during pregnancy. Hormonal and biomechanical changes in the mother's body also increase the mother's susceptibility to LBP. In addition, the enlargement of the uterus and the shift in the body's center of gravity contribute to the occurrence of lumbar lordosis. Pressure from the enlarged uterus causes compression of the vena cava, resulting in fluid retention and venous congestion. This condition causes hypoxia of the lumbar spine and ultimately compression of the soft tissue in the area (2).

Some conditions in pregnant women, such as a forward head position, can cause neck pain, tingling, numbness, and pain between the shoulder blades and carpal tunnel syndrome. When the pregnant woman's pelvis tilts forward (forward tilting of the pelvis), they can experience pain in the pelvis, waist, and legs. Rib pain can occur when the back is in a hyperextended position. In addition, lumbar lordosis often causes lower back pain (LBP) in most pregnant women (2). Some risk factors that has strong correlation to LBP are previous pregnancy, obesity and using soft mattress (5).

LBP has a negative impact on physical and psychological problems. Physical impacts can reduce the ability of pregnant women to perform daily activities, such as self-care, unable to walk more than 100 yards, lift objects as usual, sit for more than 10 minutes, or even engage in sexual activity (1). Pregnancy with LBP has the potential for cesarean delivery compared to pregnant women without LBP complaints with a value of 28.9% (4). LBP during pregnancy affects the quality of life of pregnant women, including sleep quality and sexual activity, and limits their activities and productivity. In fact, it can cause physical disability in pregnant women (6). From a psychological perspective, both posterior pelvic pain and lumbar pain have the potential to cause symptoms of depression in pregnant women with LBP. Symptoms of depression that appear can be felt during pregnancy and even up to 6 months postnatally (7).

Risk factors for lower back pain in pregnant women are due to a history of previous lower back pain, lack of physical activity, fatigue, low hemoglobin levels, and poor socioeconomic conditions (8). In addition, gestational age, sleep patterns, mobility, lifting techniques, and sexual activity can also cause pregnant women to experience LBP (1).

LBP therapy in pregnant women can be done using support belts, kinesio taping, acupuncture, transcutaneous electrical nerve stimulation (TENS) and neuroemotional techniques, which statistically have a significant effect in reducing LBP complaints. In addition, exercise programs can reduce the level of disability and improve the quality of life of pregnant women with LBP (9, 10, 11). Exercise at home is a treatment that is widely chosen by most women (12). Pregnancy exercise is an alternative to reduce back pain in pregnant women. Pregnancy exercise trains and maintains the strength of the abdominal wall muscles, pelvic floor muscles, and supporting tissues needed during childbirth (13).

There is a lot of scientific evidence that states the effectiveness of exercise as a treatment for low back pain compared to no treatment or placebo. Direct exercise programs are more effective than educational sessions alone. Exercise programs can significantly improve pain outcomes with a minimally important difference of 4.1 and improve limitations due to LBP (15). There are many types of activities to prevent and reduce pain and disability complaints in LBP sufferers. Several studies have shown no significant difference between types of activities. All have a positive effect on reducing symptoms. In addition to the types of activities that are beneficial for LBP, an effective exercise program also considers the number of sessions, the time required for each session and the overall duration (16).

Exercise programs to prevent LBP during pregnancy should be implemented based on bio-psycho-social understanding to optimize physical and psychological aspects. The type of exercise should be adjusted to the needs and abilities of the individual. Not only the type of exercise, but also related to the dosage and how to do the exercise (17). A review of the effectiveness of physical activity is needed to determine the type of exercise, dosage, intensity, and desired response to prevent or treat LBP while considering the safety of the mother and fetus. This review is important to find out the

type, duration, and frequency of exercise that can reduce LBP complaints in pregnant women.

METHODS

This scoping review uses the method and framework from Arksey, H., & O'Malley, L (18), which consists of several stages including:

- 1) Identifying research questions
Based on the literature review of several previous literatures, the research question in this scoping review is what is the right exercise to prevent low back pain in pregnant women? The researcher determined that detailed information regarding the type of exercise, exercise intensity and technical implementation of exercise in pregnant women is needed.
- 2) Identifying relevant studies
The search was conducted in the databases: sciencedirect, pubmed, , springer link, scopus, clinicalkey and oxford academic . These databases are large databases that contain many articles about health. The search was conducted with the keywords: exercise; "physical activity"; "low back pain"; "back pain"; "lumbar pain"; "lumbar spine pain"; "chronic low back pain"; pregnancy; pregnant; gestation. Literature search with spesific keyword in each database can be seen in table 1.
- 3) Study selection
Article screening through titles and abstracts, reducing duplicate articles, The relevant study was selected by inclusion criteria: full text in English, published in the last 5 years (2020-2025), experimental RCT research design, nursing scope. There were a total of 5 articles selected. The selection

was based on criteria, reading the abstract and assessing the quality of the article using the CONSORT checklist from the Joanna Briggs Institute (JBI). This tool is suitable for assessing the quality of articles with RCT design. The assessment was carried out independently by each, if there were differences then they were discussed. We determine that articles with a value more than 75% (This is the minimum limit for articles that have good quality) can be included in this study. The JBIs Critical appraisal for each articles can be seen in table 2. The process of article selection results can be seen in figure 1.

- 4) Charting the data
Data from 5 selected articles were extracted and presented in a table of research characteristics and relevant results as in table 1. Important information from the research results containing information related to the type of activity, duration of activity and frequency were taken and matched with each other.
- 5) Collating, summarizing and reporting the results.
The extraction results from each article were analyzed and summarized based on the characteristics of the activity, the same results were reduced while the different results were analyzed based on the average information (information on the duration and frequency of the activity). The results of the analysis were concluded with recommendations for activities and the duration and frequency of the suggested activities.

Table 1. Literature Search Keyword

Database	Keywords	Results
Sciencedirect	exercise AND low back pain in pregnant woman	63
Pubmed	exercise AND low back pain in pregnant woman	7
Springer link	exercise AND low back pain in pregnant woman	143
Scopus	exercise AND low AND back AND pain AND in AND pregnant AND woman	21
Clinicalkey	exercise OR physical activity AND low back pain AND pregnancy OR pregnant woman	7
Oxford Academic	exercise AND low AND back AND pain AND in AND pregnant AND woman	19

Table 2. The JBI Critical Appraisal Tool for RCTs

The JBI Critical Tool for RCTs	Article 1 (19)	Article 2 (20)	Article 3 (21)	Article 4 (22)	Article 5 (23)
Was true randomization used for	Yes	Yes	Yes	Yes	Yes

assignment of participants to treatment groups?					
Was allocation to treatment groups concealed?	Yes	Yes	Yes	Yes	Yes
Were treatment groups similar at the baseline?	Yes	Yes	Yes	Yes	Yes
Were participants blind to treatment assignment?	NA	Yes	Yes	Yes	Unclear
Were those delivering treatment blind to treatment assignment?	NA	Yes	Yes	NA	Yes
Were outcomes assessors blind to treatment assignment?	NA	Yes	Yes	NA	NA
Were treatment groups treated identically other than the intervention of interest?	Yes	Yes	Yes	Yes	Yes
Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analyzed?	Yes	Yes	Yes	Yes	Yes
Were participants analyzed in the groups to which they were randomized?	Yes	Yes	Yes	Yes	Yes
Were outcomes measured in the same way for treatment groups?	Yes	Yes	Yes	Yes	Yes
Were outcomes measured in a reliable way?	Yes	Yes	Yes	Yes	Yes
Was appropriate statistical analysis used?	Yes	Yes	Yes	Yes	Yes
Was the trial design appropriate, and any deviations from the standard RCT design (individual randomization, parallel groups) accounted for in the conduct and analysis of the trial?	Yes	Yes	Yes	Yes	Yes
Total YES	10	13	13	11	11
Percentage	77%	100%	100%	84%	84%

RESULTS

A total of 5 studies met the inclusion criteria and were extracted. The main objective of all articles analyzed was to determine the effect of each exercise on certain complaints, one of which was low back pain. Of the five articles analyzed, the study samples varied in terms of gestational age. One article with samples of pregnant women aged 18-40 years, 3 articles with samples of mothers with gestational ages of 19-29 weeks, 22-24 weeks, 14-18 weeks respectively. Exercises applied to pregnant women include pilates (2 times a week for 60 minutes); aerobic exercise (3 times a week for 60 minutes); lumbar stabilization exercise (2 times a week for 50 minutes) and pelvic floor muscle (3 times a week for 60 minutes). The outcomes of the five studies showed that all types of exercises

applied at all levels of gestational age had a positive impact on reducing pain. In addition, all studies have other positive outcomes such as improving mood, social life, postural stability, decreased sleep problems and enhancing quality of life.

Based on the review results, there are no exercises that can be performed to reduce low back pain (LBP) in the first trimester. Pilates exercises on lumbopelvic stabilization are only performed in the second trimester, while Pilates-based therapeutic exercises, core stability exercises, lumbar stabilization exercises (LSE) and stretching exercises (SE), and aerobics with resistance are performed in the second and third trimesters.

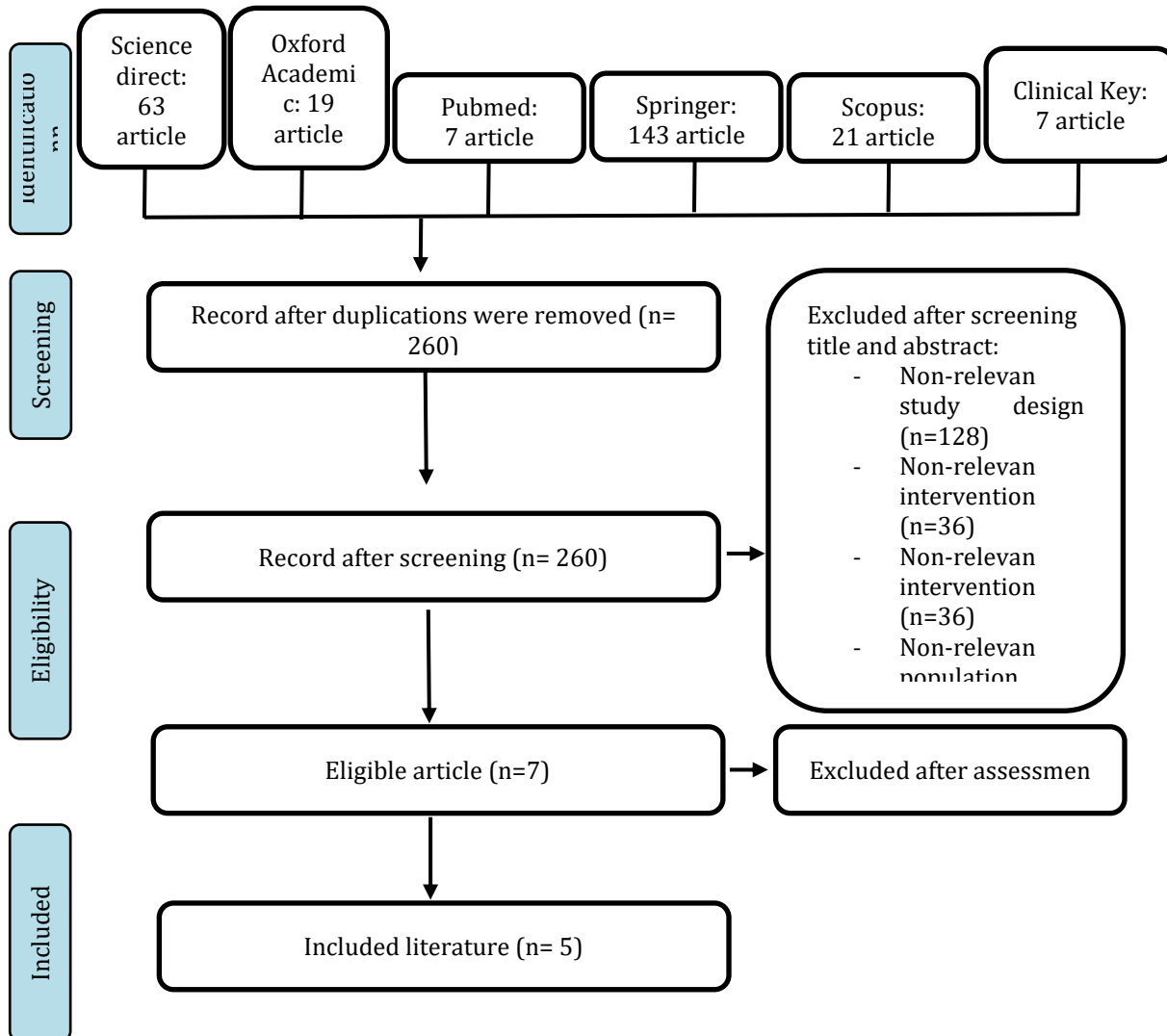


Figure 1. PRISMA Flowchart

Table 3. Characteristic of included studies

Author	Primary Objective	Data Collection Methods	Sample	Intervention	Outcome
Article 1 (Yildirim et al., 2023)	- To determine the effect of a Pilates-based therapeutic exercise on disability in patients with pregnancy-related lumbopelvic pain (LPP) - To evaluate the effects of Pilates-based exercise on pain, mood (depression and anxiety), and sleep quality in patients with pregnancy-related LPP	Single-blinded randomized controlled trial conducted between January 2018 and June 2018 - 34 pregnant women in the second trimester with lumbopelvic pain were randomly assigned to a control group and a Pilates group	- in the second trimester (week 14-24) Pregnant women aged 18-40 years old (mean age 29.7 ± 6.2 years) - No significant differences in age, BMI, or parity between the control and Pilates groups	The intervention was a Pilates-based therapeutic exercise program that was carried out twice a week for 60 minutes per session for 12 weeks. The program was supervised by an experienced Pilates instructor and was based on traditional Pilates principles. The exercises were performed at a low-moderate intensity to ensure pregnancy safety, and a Pilates ball was used as exercise equipment.	Pilates-based therapeutic exercise program improved disability, pain, and mood in pregnant women with pregnancy-related low back and pelvic pain. - The Pilates exercise program was well-tolerated by pregnant women, with only one minor muscle injury that healed spontaneously. - There was no significant difference between the Pilates and control groups in terms of sleep quality.
Article 2 (Aparicio et al., 2023)	- To explore the influence of a concurrent (aerobic + resistance) exercise training program from 17th gestational week until birth on: - Low back pain - Sciatic pain - Pain-related disability at late pregnancy (34th gestational week)	- Randomized controlled trial with pregnant women. Outcomes measured were low back pain, sciatic pain, and pain disability using the VAS and ODI questionnaire - Assessments were conducted at 16 and 34 weeks of gestation	- Pregnant women from the 17th gestational week (g.w.) 159 pregnant women, with 93 included in the per-protocol analysis (44 in the control group and 49 in the exercise group) -	The intervention was a concurrent exercise training program that the exercise program consisted of 3 sessions per week, each 60 minutes long, and included a combination of aerobic and resistance exercises of moderate-to-vigorous intensity. The exercise sessions included a warm-up, 40 minutes of concurrent aerobic and resistance training, and a	The concurrent exercise training program improved low back and sciatic pain, as well as limitations due to pain, compared to the control group. The exercise group had a lower increase in low back and sciatic pain compared to the control group.

Article 3 (Carvalho et al., 2020)	- To compare the effects of lumbar stabilization exercises (LSE) and stretching exercises (SE) on: Pain in pregnant women with low back pain, disability in pregnant women with low back pain, postural balance in pregnant women with low back pain, trunk muscle activity in pregnant women with low back pain	Sample size calculation based on a previous study, with 11 participants needed per group and an anticipated 10% dropout rate - Randomization of participants into LSE and SE groups.	- Pregnant women between 19-29 weeks of gestation - Under prenatal clinical follow-up - Having nonspecific mechanical low back pain started in pregnancy - Not participating in specific low back pain treatment in the last 3 months - Able to perform functional activities and not presenting limitations in relation to cognition and attention	cool-down. Lumbar stabilization exercise (LSE) protocol, performed actively by the participants under the supervision of a trained physiotherapist, twice a week for 6 weeks, with each session lasting 50 minutes. Stretching exercise (SE) protocol, performed passively by the participants with a trained physiotherapist manually performing the exercises, twice a week for 6 weeks, with each session lasting 50 minutes.	- Both lumbar stabilization exercises (LSE) and stretching exercises (SE) were effective in reducing pain and improving postural stability and trunk muscle activation in pregnant women with low back pain. - There were no significant differences between the two interventions in terms of their effects on the measured outcomes.
Article 4 (Sonmezer et al., 2021)	To determine the effects of clinical Pilates exercises on lumbopelvic stabilization, pain, disability and quality of life in pregnant women with low back pain.	Double-blind, randomized controlled trial with 1:1 allocation to Pilates exercise group or control group. Outcome measures included lumbopelvic stabilization, pain, disability, and quality of life	- Pregnant women in weeks 22-24 of pregnancy - Maternal age between 20-35 years - Parity of 3 - No pre-pregnancy lumbar pain - Excluded women with multiple pregnancies, cardiovascular diseases, medical complications, cognitive disorders, contraindications for physical exercise, and those already participating in other exercise or physical therapy programs.	The intervention in this study was a Pilates exercise program performed twice a week for 8 weeks, with a focus on proper breathing techniques and monitoring for adverse events.	Pilates exercises improved lumbopelvic stabilization, reduced pain and disability, and improved physical mobility and sleep problems in pregnant women with low back pain.
Article 5 (Mamipour et al., 2021)	The objective of this study was to assess the effects of core stabilization exercises on low back pain, disability, and quality of life in pregnant women with low back pain.	- Parallel-group randomized controlled trial	- 35 Pregnant women between 14 and 18 weeks of pregnancy -	The intervention was core stabilization exercises	The addition of core stabilization exercises

al., 2023)	effect of adding core stability exercises to usual care for pregnant women with lumbar and pelvic girdle pain.	trial with repeated-measures design and blinded assessments - Randomly allocated to exercise group (core stabilization exercises) or control group (usual prenatal care)	First pregnancy - Diagnosed with lumbar and pelvic girdle (LPG) pain	focusing on the pelvic floor muscles (PFMs) and deep abdominal muscles . The intervention was provided for 10 weeks, with 3 sessions per week - 1 supervised group session and 2 home sessions. Each group session lasted 60 minutes and included a 10-minute warm-up, 40 minutes of core stability exercises, and 10 minutes of cool-down.	focusing on the pelvic floor muscles and deep abdominal muscles was more effective than usual care alone in reducing pain, improving disability, and enhancing quality of life in pregnant women with lumbar and pelvic girdle pain.
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DISCUSSION

Low back pain (LBP) is one of the common complaints experienced by women during pregnancy, especially in the second and third trimesters. This complaint generally arises due to physiological and biomechanical changes that occur along with weight gain, changes in body posture, and softening of ligaments due to hormonal influences. Physical exercise has been proven to be an effective non-pharmacological intervention in reducing low back pain in pregnant women. Various studies analyzed showed that physical exercise not only reduces pain intensity but also improves physical function, postural stability, and quality of life of pregnant women. In terms of sample selection, each of the five studies showed a strong approach in supporting the validity of findings on the management of low back pain (LBP) in pregnant women. These studies involved participants with an appropriate gestational age range, from the second trimester to the beginning of the third trimester, which is the period when the prevalence of LBP increases significantly. From the results of the review, maternal age and gestational age vary. For example, a study of pregnant women aged 18–40 years with a balanced distribution of basic characteristics between groups (19), while there was also a study involving 159 participants with good control of sociodemographic factors (20). With the variability of respondents, this shows that exercise can be applied to all pregnant women in the 2nd to 3rd trimester.

Some of the above studies applied strict inclusion and exclusion criteria to ensure that the intervention results were purely from the effects of exercise, without bias from other medical conditions or exercise programs being undertaken (21,22). Other studies specifically targeted primigravida pregnant women with complaints of lumbar and pelvic girdle pain, which strengthens the relevance of the results for the population with their first pregnancy (23). The strength of the sample design in these five studies supports the effectiveness of physical exercise interventions as a recommendable approach in the management of LBP, both preventively and curatively, while still considering the physical condition of pregnant women (19,20,21,22,23). Most studies recommend exercise 2–3 times per week for 50–60 minutes per session (24). This duration is in line with the American College of Obstetricians

and Gynecologists (ACOG) recommendation of a total of 150 minutes of moderate-intensity physical activity per week. Exercise should be adjusted to the fitness level of the pregnant woman and should be done gradually. For women who have not been active before, it is recommended to start with a shorter duration and lower frequency (25) then increase gradually (26). This recommendation is important to maintain a balance between physical benefits and maternal and fetal safety (9).

The various physical exercise intervention programs used in this study demonstrate a systematic and structured approach to reducing LBP complaints in pregnant women. Each program is designed by considering the principles of safety, effectiveness, and adaptation to physiological changes that occur during pregnancy. Physical exercise interventions for LBP in pregnant women reported in the study showed diversity in duration, intensity, implementation approach, and focus of the muscles trained. Although the approach and duration were different, all programs showed consistency in terms of safety and effectiveness. The choice of exercise type should be adjusted to the individual condition of the pregnant woman, therapeutic goals, and the availability of facilities and professional assistance. Physical exercises such as Pilates, aerobic exercise, lumbar stabilization, and pelvic floor muscle training have been shown to be safe and provide significant benefits when adjusted to the needs and physiological conditions in each trimester of pregnancy. In addition to these activities in the first trimester, the use of Kinesio Taping can help improve circulation and mobility and has the potential to reduce pain (9). Entering the second trimester, stretching exercises are recommended because they have been shown to reduce lower back pain (27). Exercise with a stability ball three times a week for 25–30 minutes is also effective in reducing LBP pain (28,29).

In the third trimester, yoga exercises combined with classical music therapy have been shown to reduce the intensity of back pain. Meanwhile, exercise using a physiotherapy ball (physioball) done three times a week for 60 minutes helps reduce back pain and increase the strength of the lower back muscles (30). During pregnancy, although physical exercise has many benefits, there are still a number of risks that need to be

watched out for because they can harm both the mother and the fetus. Physical exercise should be stopped immediately if symptoms such as vaginal bleeding, dizziness, chest pain, premature labor, or shortness of breath appear (31). In addition, physical activity can also cause minor injuries such as bruises or abrasions to the mother (32). Uterine contractions can indeed occur during physical exercise, but the incidence is relatively small and generally does not cause serious impacts (33). Therefore, it is important to always adapt the type and intensity of exercise to each individual's pregnancy condition and consult a health professional before starting an exercise program.

Therapeutic Pilates exercises were performed for 12 weeks, twice a week for 60 minutes per session. The exercises followed the basic principles of Pilates such as centering, control, precision, concentration, breath, and flow, and were performed at low to moderate intensity to maintain the safety of pregnant women. The use of Pilates balls and movement modifications were adapted to the conditions of pregnancy (19). This approach not only strengthens the core muscles but also increases body and breathing awareness, making it a holistic and adaptive intervention to the needs of pregnant women. Therapeutic Pilates significantly reduced the level of disability and pain in pregnant women with lumbopelvic pain. In addition to the physical benefits, Pilates also has a positive impact on psychological aspects, namely reducing symptoms of depression and anxiety. However, this exercise did not show a significant effect on participants' sleep quality. Overall, Pilates is considered a safe and effective intervention to improve the physical and emotional well-being of pregnant women (22). Physical exercise such as Pilates is recommended in the first trimester (34). Pilates can be done with a general frequency of 3–4 times per week, or specifically 2–3 times per week, with a duration of 30–60 minutes in general, and 30–45 minutes for beginners (35). This exercise has been shown to provide various benefits, including improving sleep quality, reducing pain, reducing depression levels, and increasing mobility. In addition, Pilates is considered safe for pregnant women if done with the right modifications, starting at a low intensity and increasing gradually according to individual abilities. In addition Pelvic Floor Muscle Training is recommended to be done from the beginning of pregnancy to increase

pelvic muscle strength with a duration of 3 times a week for 60 minutes (36).

A combined aerobic and resistance training program was performed three times per week for 60 minutes per session, at moderate to vigorous intensity. The intervention consisted of three phases: an educational and movement introduction phase, a primary physical training phase, and a pelvic mobilization phase. Each session included a warm-up, a 40-minute core workout, and a cool-down. This stepwise approach not only maintains physical capacity during pregnancy but also prepares the body for labor by improving overall fitness and muscle strength. The training showed significant reductions in low back pain and sciatic pain, as well as pain-related disability, especially in the last trimester of pregnancy. In addition, the group that participated in the program also showed lower gestational weight gain compared to the control group. This intervention demonstrated comprehensive physical benefits with a combined exercise approach (20). Aerobic activity is considered safe and beneficial for maternal health and fetal development, as long as there are no medical conditions that are contraindicated (31). Pregnant women are advised to do aerobic exercise at least three times a week, with each session lasting around 30-60 minutes (37). The intensity is moderate, namely a maximum heart rate of less than 60-80% of the estimated age, usually not exceeding a heart rate of 140 beats per minute (26). The types of aerobic exercise recommended are walking, stationary cycling, and swimming (38).

Two types of exercises were compared in this intervention: Lumbar Stabilization Exercise (LSE) performed actively for 50 minutes, twice a week for 6 weeks under the supervision of a physiotherapist, and Stretching Exercise performed passively by a physiotherapist. Stabilization exercises focus on strengthening core muscles and postural control, while stretching aims to improve flexibility and reduce muscle tension. Both have positive effects on pain and postural function, with an approach that can be adjusted based on the patient's condition and preferences. The results of these two types of exercises did not find significant differences in outcomes between the two types of exercises. These findings suggest that both LSE and SE can be valid and safe therapeutic options for LBP in pregnant women (21). Lumbar stabilization has also been shown to

provide significant benefits during the second trimester of pregnancy. Both types of exercises are not only effective in helping to manage pain, especially in the lower back area, but also contribute to improving the physical and mental health of pregnant women (21). Both types of exercise have the potential to increase the body's readiness to face the labor process (39). Pilates is done twice a week, the duration ranges from 60 minutes. Another study said the duration of Pilates ranges from 50 to 80 minutes or 70–80 minutes once a week for eight weeks (39).

CONCLUSION

Exercise has become therapeutic exercise to reduce LBP in all stage pregnancy. Type and frekuensi of the exercise include pilates (2 times a week for 60 minutes); aerobic exercise (3 times a week for 60 minutes); lumbar stabilization exercise (2 times a week for 50 minutes) and pelvic floor muscle (3 times a week for 60 minutes). Based on the data time everage of the exercise is twice a week for 60 minutes per session. However, the exercise interventions in this scoping review remain quite varied. An analysis focusing in a more specific ty of exercise is needed.

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CONFLICT OF INTEREST

The atuhors declare that there is no conflict of interest related to this study.

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