

PREVALENCE OF DELAYED ONSET OF MUSCULOSKELETAL DYSFUNCTION IN EARLY PRIMIPAROUS WOMEN AMONG IN RURAL AREAS

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ABSTRACT

Background: Pregnancy induces major changes in the musculoskeletal system, especially in first-time mothers (early primiparous women). Hormonal, biomechanical, and lifestyle shifts often lead to joint laxity, back pain, or postural changes. In rural areas, these issues can go unrecognized due to lack of awareness, resources, or proper care.

OBJECTIVE: 1.To find the prevalence of delayed onset of musculoskeletal dysfunction in early primiparous women among in rural areas

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Methods: This observational survey-based study was conducted in Karad among 95 women fitting the inclusion criteria. A structured Google form was used to collect responses on musculoskeletal symptoms and care history. Statistical analysis was performed using data derived from these responses.

Results: 83.2% reported back pain after childbirth.

64.2% had joint or muscle pain persisting since delivery.

66.3% experienced musculoskeletal pain during pregnancy.

Only 58.9% received physiotherapy or exercise advice.

While 71.6% believed these issues impacted quality of life, just 23.2% reported daily activity limitations.

CONCLUSION: The prevalence of delayed onset musculoskeletal dysfunction was found to be significantly high among early primiparous women aged 35–45 years in rural areas of Karad. Commonly reported issues included back pain, joint pain, and decreased physical functioning post-childbirth. Early marriage and early pregnancy appeared to be key contributing factors. The study also found that a large number of women had not received physiotherapy advice during or after pregnancy. However, all participants found the awareness session helpful, indicating the importance of community-level health education and physiotherapy awareness in addressing these issues.

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INTRODUCTION

Expecting a child leads to a major physical and hormonal shifts in a woman's body, particularly in relation to the skeletal frame and bones. These adjustments are crucial to facilitate prenatal growth and to prepare for delivery. However, they may place younger first-time mothers in their twenties—those who have their first baby at a relatively young age—at risk for numerous musculoskeletal disorders including low back pain, pelvic girdle pain, joint looseness, and postural changes. These problems are commonly overlooked in countryside areas due to lack of information and healthcare facilities.

During pregnancy, the body's relaxin hormone actually works loosening joints and ligaments, which makes pelvic opening easier for delivery. However, the increase in relaxin can also create problems in the joints which can cause musculoskeletal disorders. This is especially true in young first-time mothers whose bones and muscles are still developing and adapting. Along with these hormonal changes, body weight increase along with a shift in the body's center of gravity creates unequal body posture and a significant amount of stress on the body's muscles, leading to chronic issues.

Rural women often face greater challenges after

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childbirth due to the nature of their daily lives. Many are engaged in physically demanding tasks like manual labor, standing or squatting for long periods, and lifting heavy objects. What makes their situation more difficult is the expectation to return to household chores or farm work very soon after delivery, often without enough rest or proper recovery. As a result, they are more likely to experience health issues. In fact, studies have found that rural women, especially those involved in agricultural work, report much higher levels of lower back and pelvic pain within the first six weeks after giving birth when compared to women living in urban areas.

Even though people worldwide know about maternal health, there's still little research on musculoskeletal problems after childbirth, especially in rural India. Most studies focus on cities or mixed groups and don't address the unique social and environmental challenges rural women face. Many women in these areas don't have access to postnatal physiotherapy, and cultural beliefs often make them see pain and discomfort after childbirth as normal or something they just have to accept. Because of this, these issues often go unnoticed and untreated, leading to long-lasting pain, limited movement, and a lower quality of life.

Postpartum women often experience problems like low back pain, pelvic pain, stiff joints, muscle tiredness, and sometimes pelvic organ prolapse. Low back pain affects up to 70% of women worldwide during or after pregnancy. Early pregnancy is a major risk time because the body's muscles and bones haven't adjusted well yet. Pelvic girdle pain can be especially severe, making it hard to walk, stand, or sleep, and it may last for months or even years after giving birth.

Mental health is affected too. Constant physical pain and lack of rest after childbirth can cause fatigue, low motivation, anxiety, and postpartum depression. Research shows a strong link between ongoing pelvic pain and depression, particularly when women don't have emotional or family support.

Community efforts like awareness programs, early check-ups, and adding physiotherapy to rural health services are key to solving these issues. Training health workers like ASHAs and ANMs to teach new mothers about good posture and simple exercises at home can make a big difference. Mobile physiotherapy or tele-rehabilitation, which work well in low-resource areas, can also help reach women in remote places.

A recent survey found that only 43% of rural women knew about pelvic floor exercises, but every woman surveyed wanted to learn. This shows rural women are eager to get this kind of

education when it's offered clearly and respectfully. Awareness about general postpartum muscle and joint care is also low but much needed and welcomed.

Knowing how common delayed musculoskeletal problems are in first-time rural mothers can help spot those at risk and guide health programs. By using physiotherapy, education, and culturally sensitive health promotion, we can improve lives and prevent long-term issues in a group often overlooked by research.

This study aims to find how common delayed musculoskeletal problems are in early first-time mothers living in rural areas. It stresses the urgent need for physiotherapy-based maternal rehab services to catch, treat, and prevent serious complications early on.

Methods:

This observational survey-based study was conducted in Karad among 95 women fitting the inclusion criteria. A structured Google form was used to collect responses on musculoskeletal symptoms and care history. Statistical analysis was performed using data derived from these responses.

Inclusion criteria:

Women aged 35-45 years with a history of early pregnancy [before the age of 20]

Participants residing in rural areas for at least 5 years.

Women experiencing musculoskeletal conditions such as back pain, joint pain, or functional limitations.

Willing to provide informed consent and participate in the study.

Exclusion criteria:

Women below the age 35 years and there is no history of early pregnancy.

Non-rural residents.

Pre-existing musculoskeletal conditions.

Improper medical history or reports.

ETHICAL COMMITTEE APPROVAL

The approval for this study is gained from the institutional ethics committee of Krishna Vishwa Vidyapeeth (deemed to be university), Karad. Respondents were given a detailed explanation about Questionnaire as well the study which is to be conducted and informed consent was collected from each and every participant participating in this study. there was a volunteer involvement of all the respondents in this study whose confidentiality was thoroughly maintained.

STATISTICAL ANALYSIS AND RESULT

Data were collected from 95 early primiparous women residing in rural areas using a structured

questionnaire. Responses were compiled in a master chart and analyzed using descriptive statistics.

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QUESTION	YES	NO
Did you get married before the age of 18?	98.9%	1.1%
Was your first pregnancy at or before the age of 19?	93.7%	6.3%
Do you have difficulty in daily activities (lifting, walking, standing)?	23.2%	76.8%
Do you have back pain that started after childbirth?	83.2%	16.8%
Do you currently experience joint or muscle pain since delivery?	64.2%	35.8%
Did you experience musculoskeletal pain during pregnancy?	66.3%	33.7%
Did you receive physiotherapy or physical activity advice after delivery?	58.9%	41.1%
Do you believe musculoskeletal issues affect your quality of life?	71.6%	28.4%
Are you engaged in regular physical activity or exercise?	51.6%	48.4%
Did you find this awareness session helpful?	98.9%	1.1%

RESULTS AND INTERPRETATION:

98.9% of early primiparous women reported getting married before the age of 18.

93.7% experienced their first pregnancy at or before the age of 19.

23.2% reported difficulty in performing daily activities like walking, standing, or lifting.

83.2% complained of back pain that began after childbirth.

64.2% reported persistent joint and muscle pain post-delivery.

66.3% experienced musculoskeletal pain during pregnancy.

Only 58.9% received physiotherapy or physical activity advice post-pregnancy.

71.6% believed musculoskeletal problems affected their quality of life.

51.6% were engaged in regular exercise or physical activity.

98.9% of participants found the awareness session helpful and informative.

Most common age group was 40 years (21.1%) followed by 35 years (17.9%).

DISCUSSION

This study looked at how common delayed musculoskeletal problems are among first-time mothers aged 35 to 45 living in rural Karad. Ninety-five women took part.

Results showed that 98.9% were married before 18, and 93.7% had their first pregnancy by 19, showing early motherhood is very common in these rural areas. Early childbearing might lead to long-term stress and problems with muscles and joints.

A large number, 83.2%, reported back pain after childbirth, and 64.2% had joint or muscle pain since giving birth. This points to a strong link between early pregnancy and pain after delivery. Also, 66.3% had musculoskeletal pain during pregnancy, which means problems may start early and get worse if not treated.

Even though many had pain, only 23.2% said it made daily activities hard, possibly because pain is often accepted as normal in rural life. Still, 71.6% agreed these problems affect their quality of life, showing the impact on their well-being.

Worryingly, only 58.9% got advice on physiotherapy or exercises after childbirth, showing a gap in care. While 51.6% did regular physical activity, many might not do proper therapeutic exercises. Almost all women (98.9%) found the awareness session helpful, showing they want to learn and accept help when it's offered.

These findings match other studies that say postpartum rehab services, especially

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physiotherapy, are lacking in rural healthcare. Research shows awareness and guided physiotherapy can lower the risk of long-term problems and improve mothers' quality of life. Women who return to heavy work soon after birth without guidance are more likely to develop chronic pain.

So, it's important to include physiotherapy in rural postnatal care and increase awareness through local health workers. Early screening, education, and exercise plans after birth can greatly reduce delayed musculoskeletal problems in these young mothers.

CONCLUSION:

The prevalence of delayed onset musculoskeletal dysfunction was found to be significantly high among early primiparous women aged 35–45 years in rural areas of Karad. Commonly reported issues included back pain, joint pain, and decreased physical functioning post-childbirth. Early marriage and early pregnancy appeared to be key contributing factors. The study also found that a large number of women had not received physiotherapy advice during or after pregnancy. However, all participants found the awareness session helpful, indicating the importance of community-level health education and physiotherapy awareness in addressing these issues.

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