

## Review Article

# Cross-Cultural Perspectives on Exercise Knowledge and Practice during Pregnancy: A Mini-Review

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**Abstract: Background:** This mini-review synthesizes current research on exercise knowledge and practices among pregnant women, with a focus on low- and middle-income countries (LMICs). **Key Findings:** Recent studies indicate a generally positive attitude towards exercise during pregnancy across various cultural contexts. Walking and housework emerge as the most common forms of physical activity among pregnant women in these settings. **Influencing Factors:** The review explores factors influencing exercise knowledge and practice, including education level, parity, socio-economic status, and cultural beliefs. It also examines the sources of information pregnant women rely on for exercise guidance. **Identified Needs:** Despite growing awareness, there remains a need for more specific, culturally appropriate guidance on safe and beneficial exercises during pregnancy. **Recommendations:** The review concludes with recommendations for healthcare providers and policymakers, emphasizing the importance of incorporating exercise counseling into routine antenatal care and tailoring interventions to local contexts. **Conclusion and Future Directions:** This comprehensive overview highlights the potential for improving maternal and fetal health outcomes through appropriate physical activity during pregnancy, while also identifying areas for future research.

**Keywords:** Pregnancy, Exercise, Physical Activity, Antenatal Care, Low- and Middle-Income Countries, Health Knowledge, Cultural Factors, Health Behavior.

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## INTRODUCTION

Exercise during pregnancy has been recognized as an important factor in maintaining maternal health and promoting positive fetal outcomes. This mini-review aims to synthesize current knowledge on exercise practices and awareness among pregnant women, with a particular focus on low- and middle-income countries (LMICs).

### Knowledge and Attitudes towards Exercise during Pregnancy

Recent studies have shown a generally positive attitude towards exercise among pregnant women in various settings. In Lusaka, Zambia, Chanda *et al.*, (2023) and Phiri *et al.*, (2024a) found that 78% of 250 surveyed women demonstrated sufficient understanding of the benefits of exercise during pregnancy. Similarly, Kambole *et al.*, (2022) and Nkhata *et al.*, (2016) reported that 69% of 300 pregnant women surveyed at the University Teaching Hospital in Lusaka engaged in some form of exercise. This trend is not limited to Zambia; a

study in Ethiopia by Gebregziabher *et al.*, (2020) revealed that 79.5% of pregnant women had good knowledge about physical exercise during pregnancy. In Brazil, a systematic review by Nascimento *et al.*, (2015) found that most pregnant women recognized the importance of physical activity during pregnancy. These findings suggest a growing awareness of the benefits of exercise during pregnancy across different cultural contexts.

### Common Exercise Practices

The types of exercises practiced by pregnant women often reflect cultural norms and available resources (Table 1). Walking emerged as the most common form of exercise in multiple studies (Chanda *et al.*, 2023; Nkhata, Kapenda, and Chela, 2023; Kambole *et al.*, 2022; Gebregziabher *et al.*, 2020). Housework was also frequently reported as a form of physical activity (Phiri *et al.*, 2024b; Chanda *et al.*, 2023; Nascimento *et al.*, 2015). In more developed settings, swimming and prenatal yoga classes were popular choices (Prather *et al.*, 2012). A study in Nigeria by Mbada *et al.*, (2014)

found that walking (67.2%) and sitting-to-standing exercises (58.6%) were the most commonly practiced exercises. These findings highlight the importance of

considering local context and resources when promoting exercise during pregnancy.

**Table 1: Common exercise practices among pregnant women.**

Type of Exercise	Description	References
Walking	The most common form of exercise across multiple studies.	Chanda <i>et al.</i> , (2023); Nkhata, Kapenda, and Chela, (2023); Kambole <i>et al.</i> , (2022); Gebregziabher <i>et al.</i> , (2020)
Housework	Frequently reported as a significant form of physical activity.	Phiri <i>et al.</i> , (2024b); Chanda <i>et al.</i> , (2023); Nascimento <i>et al.</i> , (2015)
Swimming	Popular choice in more developed settings as a form of low-impact exercise.	Prather <i>et al.</i> , (2012)
Prenatal Yoga	Gaining popularity in developed countries for relaxation and flexibility.	Prather <i>et al.</i> , (2012)
Sitting-to-Standing Exercises	Notably practiced in Nigeria, emphasizing functional movements.	Mbada <i>et al.</i> , (2014)

**Factors Influencing Exercise Knowledge and Practice**

Several factors have been identified as influencing exercise knowledge and practice among pregnant women (Table 2). Chanda *et al.*, (2023) found that women with primary school education were more likely to possess knowledge about and engage in physical exercise. The same study also noted that women with a parity of 5-6 showed higher engagement in physical exercise. Socioeconomic status also plays a role; a study

in Brazil by Silva *et al.*, (2017) reported that women of higher socioeconomic status were more likely to engage in leisure-time physical activity during pregnancy. Cultural beliefs can significantly influence exercise practices, as demonstrated by Sujindra *et al.*, (2015) in their study in India. Additionally, Nascimento *et al.*, (2015) emphasized the importance of healthcare provider recommendations in influencing exercise behaviors.

**Table 2: Factors influencing exercise knowledge and practice among pregnant women**

Factor	Influencing Findings	References
Education Level	Higher knowledge and engagement in exercise among women with primary school education.	Chanda <i>et al.</i> , (2023)
Parity	Women with parity of 5-6 showed higher engagement in physical exercise.	Chanda <i>et al.</i> , (2023)
Socioeconomic Status	Higher socioeconomic status correlates with increased leisure-time physical activity.	Silva <i>et al.</i> , (2017)
Cultural Beliefs	Cultural beliefs significantly affect exercise practices among pregnant women.	Sujindra <i>et al.</i> , (2015)
Healthcare Provider Recommendations	Strong influence on exercise behaviors through advice and encouragement.	Nascimento <i>et al.</i> , (2015)

**Sources of Information**

Pregnant women obtain information about exercise from various sources (Table 3). Medical personnel were identified as the primary source of information in several studies (Chanda *et al.*, 2023; Gebregziabher *et al.*, 2020). However, informal sources such as television, friends, and family also play a

significant role (Kambole *et al.*, 2022). In some settings, particularly in more developed countries, the internet and social media are emerging as important sources of information (Prather *et al.*, 2012). This diversity of information sources highlights the need for consistent and accurate messaging across different platforms.

**Table 3: The sources of information about exercise for pregnant women**

Source of Information	Description	References
Medical Personnel	Identified as the primary source of information on exercise during pregnancy.	Phiri <i>et al.</i> , (2024) Chanda <i>et al.</i> , (2023); Gebregziabher <i>et al.</i> , (2020)
Informal Sources	Includes television, friends, and family, which significantly influence knowledge and practices.	Kambole <i>et al.</i> , (2022) Phiri <i>et al.</i> , (2024)
Internet and Social Media	Emerging as important sources of information, especially in developed countries.	Prather <i>et al.</i> , (2012) Phiri <i>et al.</i> , (2024)

**Recommendations for Practice**

Based on the findings, several recommendations can be made for improving exercise

knowledge and practice during pregnancy. Firstly, exercise counselling should be incorporated into routine antenatal care (Chanda *et al.*, 2023; Nascimento *et al.*,

2015). Healthcare providers should provide specific information about safe and beneficial types and amounts of exercise during pregnancy (Kambole *et al.*, 2022). It's crucial to tailor exercise recommendations to the local context, considering available resources and cultural beliefs (Sujindra *et al.*, 2015). Developing targeted educational interventions for less educated women could help address knowledge gaps (Chanda *et al.*, 2023; Silva *et al.*, 2017). Finally, training healthcare providers to effectively counsel pregnant women on exercise could significantly improve outcomes (Mbada *et al.*, 2014).

## CONCLUSION

This review highlights the generally positive attitudes towards exercise during pregnancy across various settings, particularly in LMICs. However, it also underscores the need for more specific, culturally appropriate guidance on safe and beneficial exercises during pregnancy. By addressing these needs, healthcare providers can play a crucial role in promoting maternal and fetal health through appropriate physical activity during pregnancy. Future research should focus on developing and evaluating culturally tailored interventions to promote safe and effective exercise practices among pregnant women in diverse settings.

### Author's Contribution

All authors contributed to the completion of this work. Loveness A. Nkhata drafted the initial article, while Donatien Twizelimana and Olaitan Johnson focused on its conceptualization and planning. The final manuscript was reviewed and approved by all authors.

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**Conflict of Interest:** The authors declare no conflicts of interest.

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