Alshehri F, 2026, Pharmacological and Non-Pharmacological Approaches to Maternal Health: Insights from Clinical Trials on Physical Activity in Pregnancy. International Journal of Integrated Care 26(S2):496 DOI: doi.org/10.5334/ijic.ICIC26496

POSTER ABSTRACT

Pharmacological and Non-Pharmacological Approaches to Maternal Health: Insights from Clinical Trials on Physical Activity in Pregnancy

International Conference on Integrated Care (ICIC26), Birmingham, 13-15 April 2026

Fahad Alshehri[1]

1: College of Pharmacy, Umm Al-Qura University, Makkah, Saudi Arabia

Background: Physical activity during pregnancy is associated with significant benefits for maternal and fetal health, including improved metabolic, cardiovascular, and reproductive outcomes. Despite accumulating evidence, its integration into routine prenatal care remains inconsistent.
Moreover, some interventions combine non-pharmacological (exercise, lifestyle modification) with pharmacological strategies to optimize outcomes, underscoring the importance of integrated approaches to maternal health. This study aimed to characterize completed Phase 4 clinical trials that evaluated physical activity as a primary intervention during pregnancy and to identify how pharmacological and non-pharmacological strategies are combined in maternal care.

Methods A registry-based cross-sectional analysis was conducted using ClinicalTrials.gov. On March 20, 2025, a structured search was performed using the terms pregnancy and exercise, applying filters for completed, interventional, Phase 4 trials. Trials were included if they investigated physical activity interventions in pregnant populations. Extracted data included study design, sample size, intervention characteristics (behavioral and pharmacological), and primary outcomes, which were analyzed descriptively. Results Of 531,504 screened records, 1,667 trials involved pregnancy and exercise, and five completed Phase 4 trials met eligibility criteria.

Three focused on women with polycystic ovary syndrome, evaluating outcomes such as ovulation, pregnancy rates, insulin sensitivity, and cardiovascular health. Two trials investigated gestational weight gain and maternal-fetal outcomes, including gestational diabetes, anemia, and birth weight. Interventions ranged from structured exercise programs to combined behavioral and pharmacological strategies, such as exercise plus clomiphene citrate or oral contraceptives.

These integrative designs highlight the potential synergy between pharmacological and non-pharmacological approaches in maternal care. Conclusion The number of completed Phase 4 trials addressing physical activity during pregnancy is limited and disproportionately focused on reproductive and metabolic outcomes in women with polycystic ovary syndrome. Evidence suggests that combining pharmacological and lifestyle interventions may enhance maternal health outcomes, yet broader aspects such as mental health, postpartum recovery, and infant

development remain underexplored. Future clinical research should expand beyond narrow reproductive endpoints, incorporating holistic and integrated care models that address maternal, fetal, and long-term family health.

Keywords: Pregnancy; Physical activity; Maternal health; Pharmacology; Clinical trials; Lifestyle interventions; Integrated care.