

## HEALTHCARE COSTS DURING PREGNANCY CONSIDERING WOMEN'S HEALTH: A SYSTEMATIC REVIEW

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**Background:** Pregnancy is an essential physiological condition for the maintenance of life. Most pregnant women can be classified as low-risk pregnant women. However, due to the need for pregnancy monitoring to prevent undesirable outcomes, even low-risk pregnancies increase the use of health resources and associated costs.

**Objectives:** To conduct a systematic review to summarize healthcare costs in the management of low-risk pregnancies, considering women's health during the gestational period.

**Methods:** A search was performed on January 6, 2025, in the PUBMED, Embase, CINAHL, SPORTDiscus, EconLit, National Health Service Economic Evaluation Database (NHSEED), and Health Technology Assessment (HTA) databases. Cross-sectional and cohort studies that described the healthcare costs, considering women's health during the gestational period, were included. All costs were inflated to the year 2023 and converted to International Dollar (\$) using purchasing power parity. A descriptive summary of the data was performed.

**Results:** Seven studies were included in this systematic review: five studies considered the healthcare costs of low-risk pregnancies, and two studies considered the healthcare costs of low-risk pregnancies with physiological symptoms associated with pregnancy. One study conducted in a low-income country (Rwanda) reported a mean cost of \$68 per pregnant woman. Three studies were conducted in upper-middle-income countries (two in Brazil and one in India), and the mean costs ranged from \$8 to \$856 per pregnant woman, with the lowest cost observed in the study with a time horizon of the last prenatal check-up, while the other two studies reported costs related to the gestational period. Three studies were conducted in high-income countries (Australia, Canada and United States) and the mean costs ranged from \$5 to \$1,487 per pregnant woman, with the lowest cost observed in the study that considered a time horizon of one week and the other two studies considered the gestational period. Therefore, costs varied depending on the physiological symptoms of pregnancy, the perspective of the study, the time horizon and the cost components included. Costs of medications, diagnostic tests, consultations with obstetricians, nurses and/or alternative medicine, emergency and hospitalization services, materials and equipment, infrastructure, and support and administrative services were found among the components included in the healthcare cost. The highest costs were identified in studies conducted in high-income countries that reported only costs for medical consultations, both with conventional and alternative medicine.

**Conclusion:** Healthcare costs in prenatal care for low-risk pregnancies ranged from US\$5 to US\$1,487 per pregnant woman. Future studies should be conducted to assess and describe costs more clearly, including unit costs, information on the components included in the cost category, description of mean costs per patient, and measures of variability. Future studies should also be conducted from a societal perspective.

**Implications:** Summarizing healthcare costs and identifying whether spending is being directed toward interventions recommended by the guidelines can provide important information for

policymakers, decision-makers, and professionals who care for pregnant women, including physical therapists. Thus, well-targeted resources can be essential to prevent tragic or undesirable outcomes during pregnancy, which can be responsible for even more significant costs during pregnancy.

**Keywords:** economic evaluation, pregnancy, prenatal care

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## WHAT IS THE LEVEL OF PHYSICAL ACTIVITY OF WOMEN IN DIFFERENT GESTATIONAL TRIMESTERS? A CROSS-SECTIONAL STUDY

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**Background:** Physical activity is an essential element of a healthy lifestyle and a component of optimal health. Women who exercise during pregnancy may experience a reduced risk of adverse pregnancy outcomes, such as gestational diabetes and even a shorter duration of active labor. Furthermore, physical activity is beneficial throughout all pregnancy trimesters and may help reduce potential risks to fetal growth.

**Objectives:** To analyze the level of physical activity among women in different pregnancy trimesters.

**Methods:** This is a cross-sectional study Brazilian pregnant women aged ≥18 years who were undergoing prenatal care were included. Data collection was conducted using an electronic form containing questions about sociodemographic and clinical data, along with the Global Physical Activity Questionnaire (GPAQ), which gathers information on physical activity related to work, transportation, and recreation. The instrument presents results in Metabolic Equivalents (METs) and categorizes physical activity levels as follows: weekly expenditure = 1500 METs as vigorous, 600 METs = METs < 1500 METs as moderate, and METs < 600 as low. Descriptive statistics were used to characterize participants, and the chi-square test was performed to verify the association between the gestational trimester and activity level, with a p-value < 0.05 considered significant.

**Results:** A total of 107 women participated in the study, with 28.0% (30) in the first trimester (mean age 32.7 ± 4.2 years), 35.5% (38) in the second (mean age 32.0 ± 5.3 years), and 36.5% (39) in the third trimester (mean age 30.3 ± 5.3 years). Monthly family income was classified as follows: Class A (above US\$3.826.82): 13.3% (4) in the first trimester, 10.5% (4) in the second, and 7.7% (3) in the third; Class B (US\$1.235.02–3.826.82): 56.7% (17), 44.7% (17), and 33.3% (13), respectively; Class C (US\$504.44–1.235.02): 26.7% (8), 21% (8), and 46.1% (18); Class D/E (below US\$504.44): 3.3% (1), 2.6% (1), and 12.8% (5). Regarding physical activity levels, 34.6% (37) of the pregnant women had a vigorous level of physical activity, 28% (30) moderate, and 37.4% (40) low. No significant association was found between gestational trimester and physical activity level (p = 0.24).

**Conclusion:** The level of physical activity among pregnant women was not related to the gestational trimester. However, it is