

Original Article

Gestational weight gain and adverse pregnancy outcomes among pregnant women attending primary health centres in Puducherry: Results from the JANMAM pregnancy cohort

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Background and objectives: Inappropriate gestational weight gain is a significant risk factor for adverse pregnancy outcomes. Women in low- and middle-income countries, often receive insufficient attention on weight management during antenatal care. We estimated the proportions of inadequate and excessive gestational weight gain (GWG) and identified the associated factors. We also examined the relationship between GWG and adverse pregnancy outcomes.

Methods: A prospective cohort study was conducted among 465 pregnant women recruited from six primary health centres in Puducherry, India. Participants were enrolled at less than 14 weeks of gestation and were subsequently monitored at delivery and two months postpartum. Multivariable linear regression identified factors associated with GWG, while multivariable log-binomial regression assessed the association between GWG and adverse pregnancy outcomes.

Results: Total 408 women were included in the final analysis; of these, 48.5% [95% confidence interval (CI): 43.6–53.5; n=198] had inadequate GWG and 19.1% (95% CI: 15.4–23.3; n=78) had excessive GWG. Women from joint families, nulliparous women, and those in higher socioeconomic classes gained significantly more weight (1.08 kg, 1.89 kg, and 1.57 kg, respectively; $P<0.05$). Compared to underweight women, overweight/obese women gained 2.4 kg less GWG ($P<0.001$). The proportions of caesarean deliveries, gestational diabetes mellitus, and Neonatal Intensive Care Unit admissions were higher in women with inadequate GWG (34.7%, 18.7%, and 10.4%, respectively, $P>0.05$) and excessive GWG (45.3%, 14.5%, and 16%, respectively, $P>0.05$) compared to those with adequate GWG.

Interpretation and conclusions: In our cohort, nearly half of the pregnant women experienced inadequate GWG, and only one-third achieved adequate GWG. The study identified family type, socioeconomic status, parity, and pre-pregnancy BMI as significant predictors of GWG.

Keywords Cohort study; Gestational weight gain; Low birth weight; Neonatal outcomes; Pregnancy; Small for gestational age