**Table 3. Associations of** **pre-pregnancy BMI, gestational BMI gain, total GWG, and GWG during early pregnancy with** **subtypes of PTBa**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | Spontaneous preterm birth | |  | Premature rupture of membrane | |  | Medically indicated preterm birth | |
| Crude OR  (95% CI) | Adjusted OR  (95% CI) |  | Crude OR  (95% CI) | Adjusted OR  (95% CI) |  | Crude OR  (95% CI) | Adjusted OR  (95% CI) |
| ***Pre-pregnancy BMI(kg/m2) b*** |  |  |  |  |  |  |  |  |
| Underweight (<18.5) | 1.17(1.03-1.33) | 1.33(1.17-1.52) |  | 0.94(0.81-1.09) | 1.01(0.87-1.18) |  | 0.89(0.75-1.06) | 1.01(0.85-1.20) |
| Normal (18.5–24.9) | 1.00 (ref) | 1.00 (ref) |  | 1.00 (ref) | 1.00 (ref) |  | 1.00 (ref) | 1.00 (ref) |
| Overweight (25-27.9) | 1.55(1.29-1.86) | 1.32(1.10-1.59) |  | 1.26(1.02-1.56) | 1.08(0.87-1.34) |  | 1.79(1.46-2.20) | 1.63(1.33-2.00) |
| Obese(≥30) | 2.03(1.33-3.09) | 1.68(1.10-2.56) |  | 1.57(0.95-2.58) | 1.28(0.78-2.12) |  | 1.99(1.21-3.29) | 1.77(1.07-2.93) |
|  |  |  |  |  |  |  |  |  |
| ***Total GWG By IOM Recommendation b*** |  |  |  |  |  |  |  |  |
| Below | 1.09(0.97-1.24) | 1.13(1.00-1.28) |  | 1.13(0.98-1.30) | 1.18(1.02-1.36) |  | 0.98(0.84-1.15) | 1.01(0.86-1.18) |
| Within | 1.00 (ref) | 1.00 (ref) |  | 1.00 (ref) | 1.00 (ref) |  | 1.00 (ref) | 1.00 (ref) |
| Above | 0.38(0.34-0.42) | 0.37(0.33-0.42) |  | 0.56(0.50-0.64) | 0.56(0.50-0.64) |  | 0.45(0.39-0.52) | 0.44(0.39-0.51) |
|  |  |  |  |  |  |  |  |  |
| ***Gestational BMI gain (kg/m2) b*** |  |  |  |  |  |  |  |  |
| <5 | 1.00 (ref) | 1.00 (ref) |  | 1.00 (ref) | 1.00 (ref) |  | 1.00 (ref) | 1.00 (ref) |
| 5-10 | 0.53(0.48-0.59) | 0.53(0.48-0.59) |  | 0.63(0.56-0.71) | 0.63(0.56-0.70) |  | 0.60(0.53-0.68) | 0.61(0.54-0.69) |
| ≥10 | 0.21(0.16-0.27) | 0.21(0.16-0.27) |  | 0.38(0.30-0.48) | 0.39(0.31-0.49) |  | 0.28(0.21-0.38) | 0.28(0.21-0.38) |
| *P* for trend |  | <0.01 |  |  | <0.01 |  |  | <0.01 |
|  |  |  |  |  |  |  |  |  |
| ***Average GWG up to 20 weeks(g/week)c*** |  |  |  |  |  |  |  |  |
| <200 | 1.00 (ref) | 1.00 (ref) |  | 1.00 (ref) | 1.00 (ref) |  | 1.00 (ref) | 1.00 (ref) |
| 200-399 | 0.98(0.84-1.15) | 0.98(0.84-1.15) |  | 1.11(0.95-1.30) | 1.10(0.94-1.28) |  | 1.17(0.97-1.40) | 1.16(0.97-1.39) |
| 400-599 | 1.38(1.14-1.68) | 1.39(1.14-1.69) |  | 1.62(1.34-1.96) | 1.58(1.31-1.91) |  | 1.55(1.23-1.95) | 1.55(1.23-1.95) |
| ≥600 | 2.27(1.93-2.67) | 2.27(1.93-2.67) |  | 1.80(1.50-2.16) | 1.79(1.49-2.15) |  | 2.85(2.37-3.43) | 2.83(2.35-3.41) |
| *P* for trend |  | <0.01 |  |  | <0.01 |  |  | <0.01 |

a. Gestational BMI gain, total GWG, and GWG during early pregnancy were evaluated in separate models.

b. Adjusted for maternal education level, gravidity, parity, parity and offspring sex. Additionally, pre-pregnancy BMI, and gestational BMI gain were mutually adjusted. Total GWG also adjusted for pre-pregnancy BMI.(n = 83,096)

c. Adjusted for maternal education level, gravidity, parity, offspring sex, and pre-pregnancy BMI. (n = 68,527)