

## **OP 06 A study on influence of pre-pregnant BMI & gestational weight gain on pregnancy outcomes among mothers admitted for delivery in Teaching hospital Jaffna**

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**INTRODUCTION:** Pre-pregnancy BMI & Gestational weight gain (GWG) are the major determinants of pregnancy outcome. Women who are with low BMI, high BMI or have low GWG or excess GWG have been shown to be at increased risk for adverse pregnancy outcomes.

**OBJECTIVES:** To describe the influence of pre-pregnant BMI and GWG on pregnancy outcomes among pregnant mothers.

**METHODS:** Institutional based Descriptive cross sectional study among pregnant mothers admitted for delivery in THJ. 264 mothers were selected by Systematic sampling & data was collected by Interviewer administered questionnaire & analysed by using SPSS

**RESULTS:** Among them; the age range was 17-44 years with a mean of 27.98. Normal BMI mothers were 58.3%, low BMI mothers were 22%, obese and overweight were 15.2% and 4.5% respectively. Among them 51.9% gained less and 19.3% gained more weight, than the level recommended by the institute of medicine (IOM).

Low BMI was common in teenage group and high BMI common in Older mothers. ( $p=0.03$ ) Low BMI was common in mothers who studied up to or below O/L and high BMI was common in mothers who studied higher than O/L ( $p=0.002$ ). No significant association of BMI with either religion ( $p=0.13$ ) or family income ( $p=0.98$ )

High BMI was significantly associated with incidence of PIH ( $p=0.002$ ), GDM ( $p=0.006$ ), UTI ( $p=0.049$ ), not significantly associated with incidence of anemia (0.715), PROM (0.578), PPH (0.198). BMI significantly influences in mode of delivery ( $p=0.005$ ), length of hospital stay ( $p=0.012$ ), induction of labour ( $p=0.033$ ), small ( $p=0.037$ )/ large ( $p=0.009$ ) for gestational age.

GWG was influenced by parity ( $p=0.022$ ), maternal education ( $p=0.001$ ), and monthly family income ( $p=0.025$ ). High GWG was common in nulliparous & low GWG was common in multigravida. GWG was not significantly influenced by maternal age ( $p=0.354$ ), and religion of mother ( $p=0.591$ ).

Development of GDM was significantly associated with excess GWG ( $p=0.033$ ), but PIH ( $p=0.243$ ), UTI ( $p=0.919$ ) or Anemia ( $p=0.447$ ) were not. Length of hospital stay, & incidence of caesarean section ( $p=0.049$ ) were on increase with GWG. Neonatal birth weight ( $p=0.031$ ) & large for gestational age ( $p=0.004$ ) also was significantly influenced by GWG.

**CONCLUSION:** Pre-pregnant BMI influences the development of GDM, PIH, UTI, risk of caesarian section, pre-term delivery, labour induction, long hospital stay, small / large for gestational age of newborn and not influenced the development of, anemia, PROM and PPH. There is no influence of religion or family income in pre-pregnancy BMI Parity, family income and educational status influences the GWG but age and religion do not influence the GWG. GWG significantly influences the development of GDM, long hospital stay, mode of delivery, birth weight of newborn and large for gestational age. No association of GWG was found with development of PIH, UTI, anemia, prematurity, PROM, PPH and NICU admissions.