

## Association between Maternal Factors and Fetal Outcome in the Sainthamaruthu MOH Division

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**Abstract:** Reducing child mortality and improving the maternal health are the 4th and 5th millennium development goals (MDG) which are very closely associated. Fetal outcome especially birth weight is the single most important factor that indicates the survival chance and health condition of a baby. It also says the health and socioeconomic condition of a community. Reducing the low birth weight (LBW) is the vital factor to achieve the 4th MDG through improving the maternal factors. In this study, associations among the maternal factors such as maternal age, parity, initial weight of mothers, mothers' BMI, gestational duration and LBW were studied for the Sainthamaruthu medical office of health (MOH) division. Further relationship between prevalence of LBW, delivery period and sex of neonate were discussed. There were 491 singleton live births in this MOH division in year 2009 and all these were included for this study. Significantly higher average birth weight 3005.9 g compare to national average was observed with an unusual less LBW prevalence of 9.98 % ( $p < 0.05$ ). No association was found between LBW and sex of the neonate ( $p = 0.821$ ). Even though the association between mothers age and LBW was marginal ( $p = 0.160$ ), 13.3% LBW was observed for the age group 15 to 24 years. The birth weight increased with parity where as the prevalence of LBW decreased. A significant association was found between initial mothers' weight and prevalence of LBW ( $p = 0.019$ ). A very marginal association was found between body mass index (BMI) and LBW ( $p = 0.307$ ). Prevalence of LBW for preterm delivery was 16.05% where as it was only 8.78% for normal term delivery. In overall this MOH division's contribution to the 4th and 5th MDG is commendable.

**Keywords:** Low Birth Weight, Maternal Age, Gestational duration, BMI, Parity