

## Birth Weight, Weight Gain and Feeding Pattern as Predictors for the Onset of Obesity in School Children

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**Abstract :** Obesity is a global health issue. Early identification is essential to plan interventions and intervene than to reduce the worsening of obesity and its consequences on the health issues of the individual. Childhood obesity is multifactorial, with both modifiable and unmodifiable risk factors. A genetically susceptible individual (unmodifiable), when placed in an obesogenic environment (modifiable), is likely to become obese in onset and progression. The present study was conducted to identify the age of onset of childhood obesity and the influence of modifiable risk factors for childhood obesity among school children living in a suburban area of Sri Lanka. The study population was aged 11-12 years of Piliyandala Educational Zone. Data were collected from 11-12-year-old school children attending government schools in the Piliyandala Educational Zone. They were using a validated, pre-tested self-administered questionnaire. A stratified random sampling method was performed to select schools and to select a representative sample to include all 3 types of government schools of students due to the prevailing pandemic situation, information from the last school medical inspection on data from 2020 used for this purpose. For each obese child identified, 2 non-obese children were selected as controls. A single representative from the area was selected by using a systematic random sampling method with a sampling interval of 3. Data was collected using a validated, pre-tested self-administered questionnaire and the Child Health Development Record of the child. An introduction, which included explanations and instructions for filling the questionnaire, was carried out as a group activity prior to distributing the questionnaire among the sample. The results of the present study aligned with the hypothesis that the age of onset of childhood obesity and prediction must be within the first two years of child life. A total of 130 children (66 males: 64 females) participated in the study. The age of onset of obesity was seen to be within the first two years of life. The risk of obesity at 11-12 years of age was Obesity risk was identified at 3-times higher among females who underwent rapid weight gain within their infancy period. Consuming milk prior to breakfast emerged as a risk factor that increases the risk of obesity by three times. The current study found that the drink before breakfast tends to increase the obesity risk by 3-folds, especially among obese females. Proper monitoring must be carried out to identify the rapid weight gain, especially within the first 2 years of life. Consumption of mug milk before breakfast tends to increase the obesity risk by 3 times. Identification of the confounding factors, proper awareness of the mothers/guardians and effective proper interventions need to be carried out to reduce the obesity risk among school children in the future.

**Keywords :** childhood obesity, school children, age of onset, weight gain, feeding pattern, activity level

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