

Exercise vs dietary interventions in combating childhood obesity

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■ **ABSTRACT** : This study demonstrated the beneficial effect of a multidisciplinary dietary-behavioral-physical intervention on childhood obesity among totally selected 618 school children. Children were classified as group-I who received both education programme and fitness exercise (n=228- Long-term behavioral intervention) and group-II who were exposed only to education programme (n=390 Short-term behavioral intervention). It was found that 28.3 per cent were overweight and 7.9 per cent were obese as per International obesity task force (IOTF) standards at the beginning of study. The initial mean Body mass index (BMI) was 21.6 ± 3.9 in group-I and 21.9 ± 3.4 in group-II. The BMI reduced to 21.4 ± 3.8 in group-I and 21.8 ± 3.5 in group-II after six months at the first phase. After one year, the mean BMI of group-I reduced significantly to 20.8 ± 3.5 ($P = 0.0001$) due to long-term interventions, whereas the mean BMI of group-II increased after one year. There was significant reduction in Waist hip ratio from initial to final among group-I alone. There was no significant change in the pulse rate among both groups at the end of the study. After one year, among group-I children, 6.6 per cent with high blood pressure and 4.4 per cent who had low BP shifted to normal BP showing a significant change whereas there was no significant change in group-II. Peak expiratory flow rate improved significantly only in group-I. There was significant influence of fitness exercise intervention on the fitness level test scores among group-I after one year but there was no significant changes in group-II. Thus, the study revealed that only long-term combined multidisciplinary interventions can have positive influence in combating childhood obesity than short-term interventions.

■ **KEY WORDS** : Exercise vs dietary, Combating, Obesity

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