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## **Healthy Kids Programme Malaysia develops a nutrition education package for prevention of obesity amongst primary school children**

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There have been dramatic changes in the nutrition issues affecting children in Malaysia. Overt nutritional deficiencies are not common, but mild-to-moderate undernutrition occurs in significant amounts. On the other hand, there have been dramatic increases in problems related to overnutrition. Being a nation in transition, propelling fast forward to being a developed country, the double burden of malnutrition has been well documented. Recent studies by various research groups have reported high prevalences of overweight and obesity of up to 25% among primary school children. At the same time, there is persistent underweight and thinness of up to 10% among these children. Recognising the severity of these problems in the country, the National Plan of Action for Nutrition of Malaysia (NPANM) (2006-2015) has given priority to preventing overweight and obesity among school children. The Nutrition Society of Malaysia (NSM) has been carrying out various ad hoc intervention programmes to promote healthy eating among school children, including through Nutrition Month Malaysia activities.

NSM felt important to implement a more systematic education programme to be truly useful and effective in imparting nutrition knowledge to school children. Empowering school children with appropriate knowledge of healthy eating and active living has long been encouraged. It has often been recognised that primary school settings are the most ideal for school-based interventions for obesity prevention.

To this end, the Healthy Kids Programme (HKP) Malaysia was implemented to improve nutrition knowledge and promote healthy lifestyle among school children in the country. Launched in August 2010, this was a collaborative education programme between the NSM and Nestlé Malaysia, as part of the Nestlé Healthy Kids global programme. In Phase I of the programme, the main focus was to conduct a longitudinal intervention study to develop, implement and evaluate a nutrition education package appropriate for primary school children. The ultimate goal at the end of the 3-year research study is to develop interactive nutrition education modules that the Ministry of Education can implement in all primary schools to arrest the increasing prevalence of overweight and obesity among school children. At the same time, a dedicated HKP website ([www.healthykids.org.my](http://www.healthykids.org.my)) was developed to provide educational materials for school children and their parents.

The development and evaluation of a nutrition education package for primary school children was carried out from 2011 till 2013. In this prospective intervention study, primary three pupils in 12 primary schools in Klang Valley, Malaysia were randomly selected, and assigned as intervention and control schools (6 schools in each group). The nutrition education package specifically developed for the HKP comprises three educational modules and several supportive educational materials. The modules were taught to the children in the intervention schools for a period of 3 years, from standard 3 to 5. The effectiveness of the nutrition education modules was evaluated through the nutrition KAP survey (beginning and end of every year), pre and post immediate Impact survey (IIS) (every topic) as well as changes in body weight status of the children, measured at the beginning and end of each school year. At the end of the study, it was observed that there was a consistent and significant increase in the mean knowledge score of children in the intervention group over the 3 years. The improvements in attitude and practice scores were not so obvious. It was also observed that the prevalence of overweight and obesity of both groups was high at the end of the study, but the control group (44.0%) showed higher prevalence than the intervention group (32.5%).

The positive results obtained from the research component have clearly proven the effectiveness of the nutrition educational package. Therefore, in line with the programme's long-term goal of rolling out the programme to benefit more students in the country, NSM and Nestlé extended the programme into its second phase (Phase II) utilising the modules developed during Phase I.

Phase II of the Programme is a three-year programme which commenced early 2014 and expected to conclude in 2016. It involves the collaboration of Ministry of Education by rolling out the three level of modules to 77 selected primary boarding schools in Sarawak and Sabah. To enable effective implementation of the Phase II HKP programme, teachers from the selected primary boarding schools who were expected to implement the nutrition modules to their student in their respective boarding schools were trained on the

use of the modules through annual Train-the-Trainers (TOT) Workshop. The first two years (2014 and 2015) of rolling out HKP level 1 and level 2 modules were successfully conducted to over 166 teachers who will in turn disseminate the modules to over 5000 primary school children in Sarawak and Sabah. The implementation of the educational package by the trained teachers has been encouraging. Preparations are now being made to conduct the TOT for 3<sup>rd</sup> year so as to implement the level 3 of the modules for a successful conclusion of the 3-year intervention to this cohort of school children.

Discussions are now on-going with officials of the Ministry of Education to make greater use of the HKP educational package in more schools in the country. The package can be easily implemented with some training of the teacher or facilitator. The whole series of 6 modules can be conducted without causing much disruption to the regulator school work, while the benefits to the children can be long lasting.