

ABSTRACT

Attention Deficit Hyperactivity Disorder (ADHD), is a neurobehavioural disorder that affects 5 per cent of children globally. It impacts health, behaviour development and subsequently affects the educational achievement of the children. Research has also expressed concern over neurodevelopmental disorder among these children with ADHD symptoms and related nutritional deficiency and abnormal behaviour function. Hence, the present study was conducted to identify the factors contributing to ADHD symptoms among children and evaluate the impact of intervention on KAP for caregivers and food and nutrient intake of children with ADHD symptoms. Influential factors for children with ADHD symptoms were identified through a baseline survey and nutritional assessment of 137 children (4 – 12 years) to assess the impact of intervention strategies to improve the nutritional status and behaviour function in children with ADHD symptoms. Hence, the selected children with ADHD symptoms in special school were given the formulated micronutrient-rich snacks using the potentially rich source of nutrients such as protein, iron, zinc, omega-3 fatty acids, magnesium, calcium, vitamin B₆ and B₁₂ along with nutrition and health education through their caregivers using the developed AI integrated website for the period of five months. The present intervention study revealed that the children in Experimental Group I and II in the age group (4-6 and 7-9 years) who received snacks replacement along with health and nutrition education improved overall nutritional status and behaviour function statistically than Control Group I and II in the 4-6 and 7-9 years age group. Hence, the effective intervention programs on KAP showed a significant increase in caregivers knowledge, attitude and practice. Dietary modification caused an increase in micronutrient intake. Thus it can be concluded that for children with ADHD symptoms, a holistic approach combining digital health intervention and dietary modification may be effective in improving KAP and nutritional intake, thereby improving the behaviour function and enhancing cognitive development to promote the neurotransmitter level.