

Childhood Obesity : Intervention through Physical Activity

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Introduction

Childhood obesity has been growing at an alarming rate and is the most common nutritional problem among children (WHO, 2000). Several reports already showed high and increasing rates of overweight and obesity among preschool children living in developing countries (de Onis & Blössner, 2000). The most common causes are lack of physical activity, unhealthy eating patterns, high level of inactivity or sedentary behaviour, genetic factors, or a combination of these factors.

Traditionally, it is known that early childhood period has the highest levels of physical activity. Young children are naturally physically active or usually known as "supercharged dynamos". Society usually has the perception that children at this period are habitually "active enough" and therefore, quite healthy. However, parents, healthcare providers, and educational professionals could have overestimated their level of physical activity. Besides, with the advance of technology and social media, it is worrying that the "digital childhood" begins early, and levels of sedentary behaviour, particularly, screen time or electronic media used exceeded recommended levels.

According to National Association for Sport and Physical Education (NASPE, 2006) professional groups recommend that young

children should participate in 120 minutes of moderate-to-vigorous physical activity (MVPA) daily, 60 minutes of which is structured and 60 minutes unstructured or in free play. However, it came to attention that the current trends in the levels of physical activity of children appeared to be headed in the wrong direction.



Health talk on Childhood Obesity in Dewan Suarah Bau



Pre-schoolers queuing up for health screening

The importance of Physical Activity

Physical activity is vital for a child's development and lays the foundation for a healthy and active life. It comprises all modes of movement caused by muscle activity resulting in increased energy expenditure (Must & Tybor, 2005). The health benefits of physical activity extend well beyond physical health, having a positive impact on the domains of motor skills, psychological well-being, cognitive development, social competence and emotional maturity. Lack of physical activity can increase the risk for many health issues such as obesity, cardiovascular diseases, bone health problems, and respiratory difficulties. The physical activity level of young children has received increasing attention nationally because of the rapid rise in childhood obesity.

According to Flegal et al. (2002), in the past 30 years, the percentage of obese children ages 2 to 5 years old had doubled. This can be due to two main factors: "*eating too much and moving too little*" (Sorte & Daeschel, 2006). Therefore, physical activities in early childhood settings are critically important in helping to reduce the increased health risks associated with obese and overweight children.



Pre-schoolers from Tabika KEMAS, Bau

Physical Activity at Pre-school Age

The early childhood period, indeed, is the most critical period in preventing overweight or obesity. It is a period that children pick up what, when, and how much they eat, as well as types and level of physical activities they participate in and continue in adult life.



Health screening for pre-schoolers in Bau District

Although both sides of energy balance such as energy intake and energy expenditure are important for weight management, the development of obesity is still greatly driven by children behaviour that either positively or negatively affects the energy balance, and this is also known as energy balance-related behaviour (EBRB) (Kremers et al., 2006). Therefore, the pre-school age in children is the optimal time point for intervention that will sustainably influence EBRBs, thus setting the course for a healthy lifestyle.

Research & Development

Regular participation in physical activity is important for children's health and development as well as their well-being from childhood to adolescence and adulthood. However, little is known about health characteristics and the physical activity patterns as well as their motor skills outcome in children attending pre-schools.



Implementation of physical activity intervention programme in Tadika KEMAS, Bau

An on-going research that started in January 2017 and led by Dr. Melvin Chung (UNIMAS), is studying an outcome-based intervention programme that can prevent childhood obesity and positively affect physical activity level, reduce sedentary behaviour and improve motor skills development among the rural preschoolers in Kuching district. By incorporating this intervention programme into their daily teaching module, this study will prepare these young children with an optimal foundation to continue and sustain physical activity at a later age. Theoretically, regular physical activity can then influence the future risks of being overweight and obese as well as the additional health conditions commonly associated with being overweight.

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