

# Awareness of Tadika's (Kindergarten) Children towards Healthy Lifestyle in Kuala Terengganu, Malaysia

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## ABSTRACT

Health is a common need for every human being. Six point six (6.6) million children under the age of five died in 2012. These child deaths are due to conditions that could be prevented or treated with access to simple and cheap interventions. Leading causes of death in under-five children are pneumonia, preterm birth complications, birth asphyxia, diarrhoea and malaria. School is the primary place of awareness and actually education enlighten people to practice safe-lifestyle. Therefore, World Health Organisation (WHO) launched in 1995 a Global School Health Initiative to incorporate health education in schools for children. Therefore, the current study was conducted with objective is to identify children's awareness towards healthy lifestyle in the aspects of eating behavior, personal hygiene and physical activities. The specific objectives are: to evaluate the awareness level of children towards healthy lifestyle; to identify the attitude level of children in practicing healthy lifestyle; to document and correlate the level of awareness and attitude of children in practicing healthy lifestyle. Current study is a cross sectional study and conducted among children of a kindergarten named Tadika Nurul Iman As-Siddiq, Malaysia. Present study population was 60 children. All the students are Malay in race and religion is Islam. Sixty-eight percent of kids are familiar with the types of food to stay healthy. They also agreed (78%) that knowledge of healthy food is important. Proper authority should take initiative to conduct prospective research. Therefore necessary measures and interventions can be initiative in very early to have healthier Malaysian national.

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## INTRODUCTION

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1948). This definition has not been amended since its birth in 1948. Again it is believed that health is a universal need for every human being of this earth irrespective of nationality, religion, race, and colour (Grewal and Kaur, 2007).

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"Six point six (6.6) million children under the age of five died in 2012. More than half of these early child deaths are due to conditions that could be prevented or treated with access to simple, affordable interventions. Leading causes of death in under-five children are pneumonia, preterm birth complications, birth asphyxia, diarrhoea and malaria. About 45% of all child deaths are linked to malnutrition. Children in sub-Saharan Africa are about over 16 times more likely to die before the age of five than children in developed regions" (WHO, 2013). Childhood obesity is a steeply increasing global public health problem (Hanley *et al.*, 2000; Goran 2001; Chinn and Rona, 2001; Bergmann *et al.*, 2003; Windle and Windle, 2001; Jeffery *et al.*, 2004; National Audit Office, 2001; Bundred *et al.*, 2001; WHO, 1998; Wadden *et al.*, 2002; James *et al.*, 2001; Caballero, 2007).

Overweight of children and adolescents not only loses their quality of life but also increases possibility of many other diseases like cardiovascular disease, hyperlipidaemia, hypertension, abnormal glucose tolerance test, and psychological ill health (Tsiros *et al.*, 2009; Pinhas-Hamiel *et al.*, 2006; Schwimmer *et al.*, 2003; Dietz *et al.*, 1988; Reilly *et al.*, 2003). Thus obesity actually ensures a number morbidity. Moreover, it is reported that there is positive link between childhood food intake preferences exists up to even two decade. There is also reported that children nutrition status has influence on adulthood health (Perez-Rodrigo and Aranceta, 2001; Westenhoefer, 2001; Viikari *et al.*, 2002). Children like soft mud thus their can easily 'modifiable', therefore eating behaviour can altered the dietary habit to decrease cardiovascular risk (Mikkilä *et al.*, 2004; Persaud *et al.*, 2013). Tuberculosis (TB) is considered among the top 10 killer disease (Swaminathan and Rekha, 2010). Unfortunately 'TB in children' is currently neglected issue among health priorities, regardless of the 'fact that TB is an important cause of childhood morbidity and mortality worldwide' (Nelson and Wells, 2004). "WHO estimates in 2012 revealed that 530 000 new cases and 74 000 children die from TB each year and children account for around half a million new cases annually" (WHO, 2013). Therefore TB still is remaining as deadliest diseases and causes significant amount of morbidity and mortality even in paediatric population (Kabra *et al.*, 2004).

"Diarrhea kills 2,195 children every day. The figure is more than AIDS, malaria, and measles combined" (Liu *et al.*, 2010). In last few decades human being has able to understand quite clearly the pathogenesis of diarrhoeal disease. Henceforth management of diarrhoeal is much better and easily accessible with the development of oral rehydration saline. Even after such development 'diarrhoeal illnesses remain one of the most important causes of global childhood mortality and morbidity' (Thapar and Sanderson, 2004). In 2012 internationally 6.6 million children died before getting 5 years old (UN IGME, 2013). At least 30% diarrhoeal disease can be prevented by just washing hands (Ejemot *et al.*, 2008). 'Household-level interventions to improve drinking water quality', sanitation facilities, and washing hands with can reduce diarrhoeal disease which includes enteric infection as high as 42-47% and save millions of life (Curtis and Cairncross, 2003; Curtis, 1997; Black *et al.*, 1981; Luby *et al.*, 2006; Fewtrell *et al.*, 2005).

Good health is a worldwide common need and considered as blessing for human being irrespective of nationality, ethnic group, race, religion, culture, etc. Dental surgeons from India reported that without improvement of oral-health overall health cannot be improved for any national (Grewal and Kaur, 2007). They revealed that Indian children at least 16% were not at all cognizant of their oral health (Grewal and Kaur, 2007). A good number of oral and maxillofacial surgeons from Jordan concluded that even parents were not much conscious as like developed countries for taking initiatives for practicing and conservation of good oral health of their kids (Al-Omiri *et al.*, 2006). School is the primary place of awareness and actually education enlighten

people to practice safe-lifestyle. There are multiple research reported that the higher level of education and better financial status has much positive correlation with oral and dental health care (Chen, 1986; Hamilton and Coulby, 1991; Kawamura *et al.*, 1997; Kawamura *et al.*, 2002; Al-Wahadni *et al.*, 2004; Barrieshi-Nusair *et al.*, 2006). Therefore, WHO launched in 1995 a Global School Health Initiative to incorporate health education in schools for children (GSHI, 1995). Unfortunately, there is a report from Pakistan that even school teachers from public school of Karachi have deplorable knowledge of oral and dental health (Dawani *et al.*, 2013). Dental caries is quite prevalent in children's of Nepal and India. The prevalent levels of this mountainous country are quite higher than the recommended level by WHO and Federation of Dentistry International (FDI) (Dixit *et al.*, 2013; Mahejabeen *et al.*, 2006). Oral health of children is similarly also a neglected in Tanzania (Åström and Mashoto, 2012) and Malaysia it "below satisfactory level" (Lian *et al.*, 2010). Oral and dental also similar a neglected issue in rural China and at least half of the Chinese population never received any oral and dental health education programme. A group of researcher from WHO suggested that 'systemic community-oriented oral health promotion programmes' were advised to improve oral health particularly in rural China (Zhu *et al.*, 2003).

Although children are naturally much more physically active than adults but in present day situation is much different. Kids of today are often very busy with computer related games or other deskbound works. Therefore, present-day children are consuming 'approximately 600 kcal per day' than their counterparts 50 years ago' (Boreham and Riddoch, 2001). However, low physical activities are always correlated with a number of diseases diabetes, hypertension, hypercholesterolaemia, obesity even in very young school children (Andersen, 2011). Good 'cardiovascular fitness', 'improved bone density', and 'lower prevalence of overweight and obesity' are observed among the individuals who has practiced consistently physical activity in childhood (Janz *et al.*, 2001; Janz *et al.*, 2002; Hasselström *et al.*, 2002; Moore *et al.*, 2003; Sääkslahti *et al.*, 2004; Strong *et al.*, 2005; Sakuragi *et al.*, 2009). Therefore low 'physical activity actually means low physical fitness' (Andersen, 2011). Schools are considered the best place to promote 'positive health behaviour' among the children because in these days children are spending almost whole day in school (Russell *et al.*, 2006). Again at many occasion children are fascinated with teachers so they lessen what their teachers are instructed. "Physical activity is our evolutionary heritage. Human being were 'designed', as a species, for physical activity, and yet we are now living in an environment in which the opportunities to be physically active are quickly disappearing" (Boreham and Riddoch, 2001). Strict incorporation of physical activity in school curriculum can improve and save tomorrow's adult from multiple disease and benefitted them with a healthy life (Boreham and Riddoch, 2001; Russell *et al.*, 2006).

Therefore, the current study was conducted with objective is to identify children's awareness towards healthy lifestyle in the aspects of eating behavior, personal hygiene and

physical activities. The specific objectives are: to evaluate the awareness level of children towards healthy lifestyle; to identify the attitude level of children in practicing healthy lifestyle; to document and correlate the level of awareness and attitude of children in practicing healthy lifestyle.

## MATERIALS AND METHODS

This study is a cross sectional study and was conducted among children of a kindergarten named Tadika Nurul Iman As-Siddiq, Kuala Terengganu, Terengganu, Malaysia. Total population of the Kindergarten was 150. Study subjects were selected between the ages 4 to 6 years old. Again those children who did not respond to the questionnaire more than 10 questions were excluded. Thus purposive sampling technique was used to select the sample. The period of study was from 7<sup>th</sup> to 17<sup>th</sup> July 2013. The data was conducted by medical students of Year-II as part of elective programme. An instrument (questionnaire) was developed in English language through extensive review of literatures. Questionnaire was pretested and validated. In order to accommodate with the language capabilities of the children, the questionnaire, introduction, explanations and clarifications are given in Malay language during the period of data collection. The children received a full explanation on how to fill in the questionnaire. The investigators were always available during the completion of the questionnaire and the children were encouraged to approach the investigators whenever they need clarification. Mainly consist of questions on their personal healthy lifestyle including eating behaviour, physical activities and hygiene. It's also take part to quest the children about their knowledge on healthy diet according to food pyramid, who exposed them to healthy lifestyle and their option about doctor and traditional medicine. Proper consent in written was taken from the respective children parent or guardian. The data was then compiled and analysed using SPSS version-17. The study was approved by the committee of the FPSK, UniSZA for medical-students in-course research.

## RESULTS

Present study population was 60 children out 150 of the whole kindergarten school. These students meet the study criteria. All the students are Malay in race and religion is Islam. The children are having 4 (2, 3%), 5 (1, 2%), and 6 (57, 95%) years of age. The guardians who signed informed consent are parents (57, 95%), grandparents (2, 3%) and others [school authority approved first degree relatives (1, 2%)]. Seventeen (28%), 42 (70%), 1 (2%) children takes meals twice, three to five meals, and six to eight meals a day respectively. Forty-one (68%) of kids have knowledge and interpret the types of food to stay healthy but rest 19 (32%) have no idea about healthy food. Same population 47 (78%) agreed that knowledge of good and healthy food is importance and rest 13 (22%) were unaware of food quality. The children having foods in their meal (Figure 1) were fruits (53), vegetables (45), fish (46), beef (40), chicken (50), rice (50) and

milk (47). Children's also comment about their favourite foods (Figure 2) and those are vegetables (18), fruits (16), chocolate (18), beef (3), fish (12), milk (10), sweets (1), and fast food like KFC / McDonalds / Pizza Hut (36). Our children identified vegetables as healthy (45, 75%), tasty food (6, 10%), parents' choice (8, 13%), and influence of others (1, 2%). These young children spent their leisure time by watching television (28, 47%), playing (12, 20%), reading (7, 12%), doing homework (6, 10%), and sleeping (7, 11%). Majority (56, 93%) were interested in sports but only 4 (7%) is shows no interest in sports. Again majority (41, 68%) likes outdoor games like football, running, and hide and seek etc. but even at this young age 19 (32%) likes computer operated video game and traditional home based games. Current study find that children's are were playing 1 to 6 hours. Number of children playing 1, 2 to 3, 3 to 4, 5 to 6 hours were 5 (8%), 32 (53%), 13 (22%), 10 (17%) respectively.

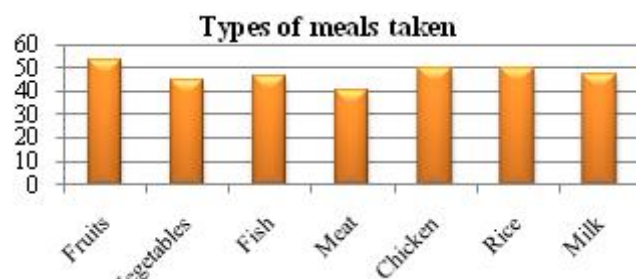


Fig. 1: Types of Meal Taken by Kindergarten Children.

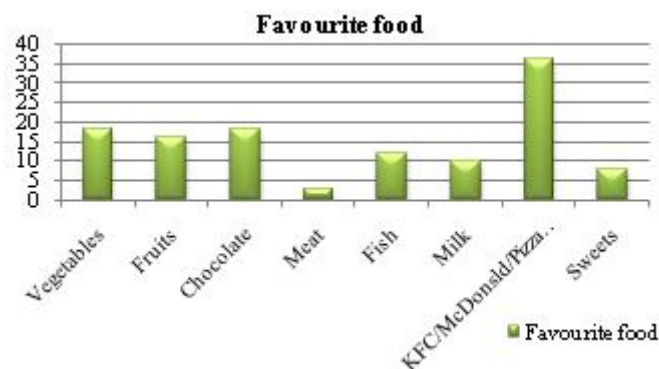


Fig. 2: Types of Favourite Foods among Children.

Regarding hygiene, our children brush their teeth once (12, 20%), twice (24, 40%) and thrice (24, 40%) a day. These children 100% percent i.e., 60 out of 60 washes their hands before taking food. Again maximum children (57, 95%) wear shoes before playing but still 5% (3) plays with bare foot. They have habit of cutting nails every week (40, 67%), bi-weekly (19, 32%), and one student cannot figure it out. These children's washes (59, 98%) their hand after coming back from toilet, only one (2%) student is not practicing this very necessary measure. Forty (67%) of our children have pets and rest 20 (33%) do not possess in any animal. Eighty-eight percent (53) students' washes their hand after handling and playing with their pets. Remaining five (8, 12%) children do not have such good habit. All of our respondents were agreed that they have exposure of healthy life-style. Fifty-one

(85%) learned from their parents, 8 (13%) from teachers and last but not least from mass media (2%). Our respondents majority (57, 95%) agreed that if they are sick then their parent took them to graduate medical doctors and rest 3 (5%) informed that they were not taken for such intervention.

## DISCUSSION AND CONCLUSIONS

“Poor diet, low levels of physical activity and emotional and mental health problems are a major concern for our children and young people's health and well-being, now and in later life” (NCB). Similar conclusion also found with other researcher also “children who are not even overweight have inadequate physical activity, poor nutrition, excessive television and other screen time, or some combination thereof. The solution lies in the community” (Saxe, 2011). Globally, television (TV) watching is the ‘favorite pastime’ and this is the major cause of obesity (Bureau of Labor Statistics, 2013; OOPEC, 2003; Grøntved and Hu, 2011; The Nielsen Company; 2010; Dietz and Gortmaker, 1985). There is mounting evidence that ‘TV watching’ is a major contributor to the obesity epidemic than few decades before (Dietz and Gortmaker, 1985; Anderson *et al.*, 1998). Currently modern people even at work are more involved with sedentary activities like working at desk jobs, using computers, playing video games, driving cars, which burn few calories (Mendoza *et al.*, 2007).

“When we see a child playing with a flower, or in the dirt, or skipping or playing tag, we should remind ourselves that what we are looking at is the child-like result of a deep and irresistible urge to interact with and have knowledge of the world and everything in it” (Hughes, 2001). Preschool children curriculum describes their aims “to enable every person to attain all-round development in the domains of ethics, intellect, physique, social skills and aesthetics according to his/her own attributes, so that he/she is capable of life-long learning, critical and exploratory thinking, innovating and adapting to change” (The Education Bureau HKSAR, 2006). Children how they are building up and their understanding about the quality lifestyle create a great influence in their future health and wellbeing (Bevan and Reilly, 2011). Study conducted in number of German preschool children found they can prepare ‘magic fruit plate’ twice weekly. Therefore, it was recommended that health promotional activities should increase in preschool children in Germany (Herbert *et al.*, 2012). In corporation of increase health educational programme and implementation in preschool children has been considered as ‘worthy social investments in the human capital of children’ (Ling *et al.*, 2014; Duncan and Magnuson, 2013; Obeng, 2010; Logue and Harvey, 2010). Young children are considered as like soft mud so if society can intervene in proper time children will be develop with healthy lifestyle. Eminent scholars believe that once bad habit has been developed it is very difficult to rectify in adult age. More research is advocated to have ‘a full understanding of health implications’ of preschool children (Pate *et al.*, 2013).

Current study found that majority of the young, even in so early age know and differentiate between healthy foods and junk foods. This extremely good quality has been achieved by our study population and definitely is due to the parents and teachers’ great success indeed. Kids showed more interest in taking fruits, vegetables, chicken, rice, milk and fish more than beef. These are very healthy practices that they have develop in very early age. Although our study group were very young pupils; even then they have knowledge about healthy foods but majority of them prefer or favorite to eat from KFC/ McDonalds/ Pizza Hut. These findings are quite consistent with study conducted in UK (Cooke and Wardle, 2005). Childrens’ food is actually selected by their parents’ influence which is have much similarity with another research work (Skinner *et al.*, 2002). Although 93% is interested sports and 68% of study respondents want to mean outdoor sports but almost half (47%) passes their leisure by watching television. Similar findings also observed in USA (AACAP, 2011). This is a global phenomenon (Bureau of Labor Statistics, 2013; OOPEC, 2003; Grøntved and Hu, 2011; The Nielsen Company; 2010; Dietz and Gortmaker, 1985) and fairly difficult to get rid of watching TV especially in urban communities. In spite majority our children reported that they use to play 2 to 4 hours. Thus, still there much hope exists as outdoor playing will be very helpful for their future healthy lifestyle. As there are multiple reports published that ‘children who play outdoors regularly become fitter and leaner, develop stronger immune systems, have more active imaginations, have lower stress levels, play more creatively, have greater respect for themselves and others’ (Fjortoft, 2004; Burdette and Whitaker, 2005). Bulk (92%) of our study subjects brushes their teeth regularly. This is also excellent habit their parents have successfully developed. This will actually protect oral and dental health in their whole life. NHS of UK describes ‘a regular teeth-cleaning routine is essential for good dental health’ (NHS). Therefore, this study expects that in future Malaysian youngster will have good better oral health. Almost all kids wash their hands before eating, after toilet, after playing with pets’ and cut their nails regularly. Centre for Disease Control describes ‘reduce the spread of diarrheal and respiratory illness’ (CDC). Therefore regarding good habit of hygiene our population and there is quite efficacious. Finally majority (95%) of current study population agreed that their parent took them to medical doctor for necessary treatment. This is may be because of these children are from heart of the city, totally urban community. Again this is a private preschool thus it is possible children are from better educational background and also from affluent community. Moreover, this kindergarten is situated very near to the Hospital Sultanah Nur Zahirah, which a tertiary care hospital. Thus, community living for years beside a tertiary government hospital became much careful. This is cross sectional study thus it has its’ own limitation. Even then the current research has able to detect a number of good qualities in very young children of kindergarten. These good qualities need to be practiced throughout the life. Appropriate authority should take initiative to have more detail research in this regard. Therefore necessary measures and

interventions can be initiated very early to have healthier Malaysian national.

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