



## SUBSTITUTION PROGRAM IN INDONESIA AND AUSTRALIA AS HEALTH PROMOTION MODEL AT SCHOOLS (An Effort to Decrease Obesity)

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### Abstract

Obesity has been increasing as much as twice on age 6-12 years. The increase is happening both in Indonesia and Australia. The objective of this research is to construct a program model in Australia that can be substituted to be a health promotion model at School in effort to suppress child obesity. Research was conducted in 2014 with qualitative approach. Instruments used are as follow 1) Secondary data filling form 2) In depth interview guidance instrument 3) FGD (Focus Group Discussion) and BST (Brain Storming Technique). The informations were obtained by purposive and snowball technique. Data analysis by Miles and Huberman model. Substitution model is based on consideration that applied model has potential to be developed and other models whether internal or external ones in Indonesia. The model will be substituted by considering school condition and situation. School Health Unit (SKU) is a potential platform to promote health by these activities 1) Formal health education as taken place curriculum 2) Informal health education in forms of (1) health education information (2) Self health behaviour monitoring and control (3) Health promotion by doing healthy life (4) distribution of health education booklet to teachers and parents.

### Introduction

Children, in this case elementary schoolers are in the age of grow and development and in learn process determining quality of human resources in the future, that need attention. Ivanovic (2008), concluded child with complicated nutritional status when under 5 years has tendency to drop out of school or postpone to higher class since it influence brain development, intellegency and study achievement.

Beside complicated nutritional status, overweight (obesity) has been a serious concern.

Within 25 years, from 1976 to 1999, there were increase in obesity index twice on 6 to 11 years old children and three times on adolescent. It has been a global issue (Gibney, 2009). Obesity has relation with mortality, risk of metabolism disease, cardiovascular disease and high costs of lifetime health insurance.

Increased BMI (Body Mass Index) is moving higher as improvement of national income. On a state with high income and middle up income, overweight prevalence is twice higher than low income and middle low income (WHO, 2011). Event in high income

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and middle up income, obesity prevalence is increase three times from 7% in low and middle low state to 24%.

WHO predicted overweight prevalence on baby and child on 2008 was 40 millions or 6% of world population. The highest overweight prevalence was on baby and child in middle to high income state. Yet the fastest increase was indicated in the middle to low income state instead. Like Indonesia. Improvement of state income has relation with overweight occurrence on baby and child. On the other hand, on high income state such as USA, England and Australia, low socioeconomic status has relation with obesity prevalence increase (Mc Murray, 2000; Wang, 2001)

On 5-12 years old, obesity prevalence in national scale is still very high, reach 18.8%. In fact, it has tendency to rise from 1.4% (2007) to 18.8% (2013). One of it is on Jawa Tengah Province. Based on Health Ministry record (2012) efforts has conducted by the government are student weight monitor, health promotion and cases search and maintain. The executors are School Health Unit (SHU)/(Unit Kesehatan Sekolah/UKS) and Public Health Care (Pusat Kesehatan Masyarakat/Puskesmas). The efforts, obviously have not given expected result. The obesity prevalence is higher tough, in national scale.

As one of Indonesia neighbour, Australia has problem with numbers of obesity as well. In 2011 -2012, 10.8 million in the population has been categorized obesity and overweight. While 4.7 million of them are obesity only. (NHPA, 2013). This report showed that obesity prevalence is vary between 3 region in Australia. From 14% on Sydney North Shore and Beaches to 41% on Loddon-Mallee-Murray. Obesity prevalence increases on remote area with low socioeconomic status. Yet half of city population (54%) have obesity or overweight and 2 of 10 (19%) have obesity. Obesity and overweight is increasing rapidly in Australia. It is stated from obesity prevalence in 1989 was 44% and increased to 63% in 2011/2012. Policies and programs have been applied such as Australian Curriculum, Assessment, and Reporting Authority (ACARA).

The objective of this research is to form a

program as been applied in Australia and then substitute it into a health promotion model on school institution in effort to suppress school students obesity in Indonesia. Based on similarity of the problem and consideration that Australia has a longer experience and more programs to deal with obesity.

### **Method**

The research approach is qualitative approach, focusing on programs currently applied in Australia that can be substituted to a health promotion model on school institution in effort to decrease student obesity number in Indonesia. Research instruments are 1) Secondary Form Filling to obtain health promotion model data from research result conducted in Indonesia 2) Primary data in Indonesia and Australia by in depth interview guide instrument, FGD (Focus Group Discussion) and BST (Brain Storming Technique). FGD is used to assist conclusion taking and BST to obtain health promotion model.

Initiate informant from Indonesia 7 persons by purposive technique, consist of 2 headmaster, 2 School Health Unit head, 2 health education teacher and 1 puskesmas head. Then 3 persons added by snowball technique, 3 teachers. Data analysis technique by Miles and Huberman model (Basrowi, 2008), consists of data reduction, data display and conclusion (verification).

### **Result and Discussion**

Health promotion model related with obesity on elementary school in Indonesia, specially the School Health Unit program whose activity called SHU Trias consists of 1) health school environment 2) school health education and 3) school health service. The SHU programs which is runned nearly on all school is health education included in the education curriculum, the materies are included in sport class, yet in limited proportion. So can be concluded that school requirement will not be able to fulfill completely. The obstacles are : 1) Limited human resources and uncompetence in health education 2) Limited SHU facility 3) Lack of coordination of related institution.

Health promotion models based on research have been conducted by researcher and the team are :

1) Exercise and diet intervention for obesity child, exercise intervention is programmed in frequency and duration as follow 3x45 minutes/weeks in form of running and gymnastic. Diet intervention is programmed as students' parent counselling.

2) Parent involvement in SHU for obesity student, the activities are: (1) Information brochures with title "Prevent obesity early, avoid uninfectious disease" are distributed to students parent. (2) Posters regarding how to avoid uninfectious disease picturing healthy food, exercise, drug and smoking avoidance are posted on schools at sites that easily looked and read by students. (3) Exercise, healthy food education and song with title "Healthy (Sehat)" as motivation. Exercise intervention such as mid intensity morning jogging twice a week 50 minutes each leaded by sport teacher. (4) Guidance books to prevent obesity since early to avoid uninfectious disease are distributed to SHU teachers and sport teachers.

3) School based education intervention, by distributing booklet to students and parents.

4) Computer based nutrition educational games. Intervention by involving 1st year class to 6th year class teachers, sport class teachers, computer class teachers, head master, and students from 1st year class to 6th year class. The game play is constructed by refer to data and photos of meals commonly consumed by the students. The energy and protein ingredients are analyzed by refer to tag line "healthy life, healthy food, healthy activity". Nutrition education media developed has been completed with operational guidance and the achievement will cross related and complete each other with nutrition education in elementary school curriculum.

5) Nutrition education through comic, comic instrument is constructed and tested, then hand up to class teachers with proper explanation from research team. Two months period gave to the teachers to read the comic for their students, with variation and initiative from the teacher as long as aligned with the comic story.

6) Child Obesity Therapy Diary (Media Diary TERATAS/Terapi anak obesitas), to develop student behavior to overcome obesity. Treatment intervention on experiment group

in form of education and nutrition behaviour monitoring specially consumption pattern and physical activity by filling in the diary.

In Australia, health education is included in school curriculum Australian Curriculum Assesment and Reporting Authority (ACARA). The phisical education get more portion in it than health education. Incompetence human resources in health has become one of the obstacles. This program supported with another one Smart Choice, Smart Moves and Stepanie Alexander Kitchen Garden Nation Program. As strategy to support health education through school curriculum. Supporting program is related with health food consumption choice, encourage student activity in sport and grow student enthusiast of health foods and memorize them. Not all school has conducted the program well and the authority is given to each school in the state.

Health promotion in Australia is conducted maximally with many approaches through education curriculum, non formal writing, poster (smart choice), knowledge application (smart moves dan Stepanie Alexander Kitchen Garden Nation Program) and supported by government policies. Swinburn (2008) described Some roles of Australian government to control obesity (Table 1)

Based on the analysis of research result, then the basics used to construct Health Promotion Substitution Model for school institution in Indonesia are as follows :

1. Increase obesity level of elementary students is caused by unhealthy behaviour, which more or less is contributed by insufficient health education at school. As mention by Ziraba (2009), saying overweight or obesity increasing 5% annually and insignificant result is obtained between the poor and wealth, it is influenced more by low education. Also the region characteristic has less influence to child nutrition status (Oktia, 2014). The main factor is education level. Although high education level is not instantly describe nutrition well knowledge (Richard, 2014; Mariela, 2015; Chittur S, 2013; Zulhaida, 2014).

2. School is a proper place to educate the student in the relation to their potention. Such as norms and value at school. School is a place

Table 1: Roles of government in obesity prevention

Action area	Description	Rationale	Examples
<b>Leadership</b>	Providing a visible lead Reinforcing the seriousness of the problem Demonstrating a readiness to take serious action	All societal change needs strong leadership The role of governments is central, powerful and carries sufficient authority to stimulate a sustained multi-sector response Government voices speak loudly about problems Government actions speak louder about solutions	Being visible in the media Role modelling healthy behaviours (at an individual level) Role modelling healthy environments (at a government agency level) Creating mechanisms for a whole-of-government response to obesity Lifting the priority for health (versus commercial) outcomes
<b>Advocacy</b>	Advocating for a multi-sector response across all societal sectors (governments, the private sector, civil society, and the public)	Solutions will need to involve many sectors within governments and all sectors outside government Authoritative mechanisms will be needed to achieve cross-sectoral collaboration and coordination	Advocating to the private sector for corporate responsibility around marketing to children Creating a high-level taskforce to oversee and monitor multi-sector actions Encouraging healthy lifestyles for individual and families
<b>Funding</b>	Securing increased and continuing funding to create healthy environments and encourage healthy eating and physical activity	Changing environments requires funding Social marketing and programs require funding Supporting actions (eg training, research, evaluation, monitoring) require funding Public good funding comes mainly from government sources	Establishing a health promotion foundation (eg using an hypothecated tobacco tax) to fund programs and research Moving from project funding to program and service funding for obesity prevention Creating centres of excellence for research, evaluation and monitoring
<b>Policy</b>	Developing, implementing, and monitoring a set of policies, regulations, taxes, and subsidies that make environments less obesogenic and more health promoting	Most behaviours are heavily influenced by environmental factors (physical, economic, policy, socio-cultural) Changing environments often requires policy drivers Education-based approaches are weak without supportive environments	Banning the marketing of unhealthy foods to children Subsidising public transport and active transport more than car transport Requiring 'traffic light' front of pack labelling of food nutrient profiles Restricting the sale of unhealthy foods in schools

Source : Primary Data

where education is given formally as well. Based on Thasin (2013) and Sartika (2011), nutrition education is highly influence protein and fat consumption of the students. It is recommended to give health education to the children early through CIE improvement (Communication, Information and Education), as vegetable and fruit consumption movement and to commonly ask physical activity which have been effectively decrease obesity to elementary school children and by integrating it into education curriculum and extracurricular activity (Krolner, 2012; Fung, 2012; Donnelly, 2012)

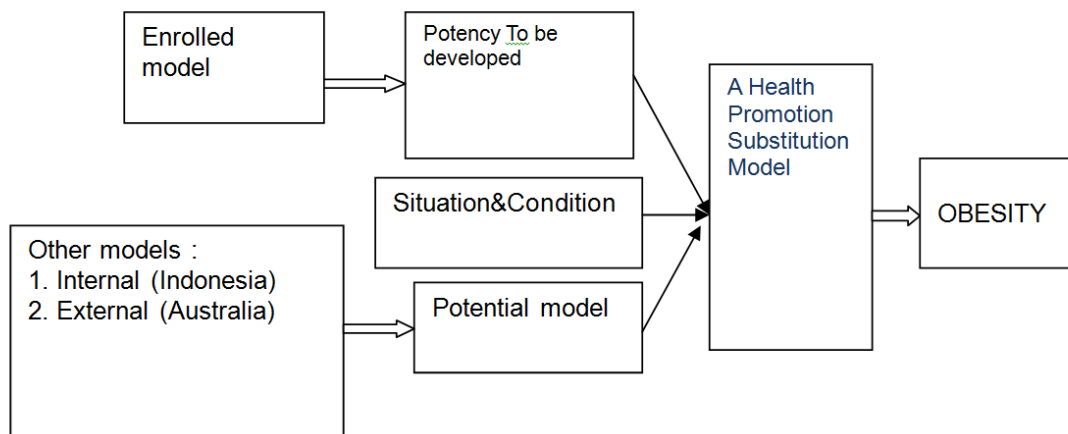
3. SHU is a valuable program and required by school, by its complexity and complete elements to support students health, but have not been well applied since the obstacles (1) lack of qualified human resources, (2) related institution commitment, (3) school commitment and (4) funding matter.

4. There are some health promotion models in Australia can be substituted to construct one in Indonesia, specially on Semarang, Jawa Tengah as pilot model.

Health promotion Substitution model on school institutions in Indonesia concluded based on BST result, taken by decision makers on City Health Office, Puskesmas and experts in health and nutrition policy. Decision obtained from Substitution model decision flow (Picture 1). Substitution Model based on enrolled model with development potentition, other models from Indonesia and Australia, and then potentition model obtained and adopted. The model that will be substituted considers school condition and situation.

The research result obtained a conclusion that SHU is a potentition form to publish health promotion on school institution in Indonesia. With Indonesian culture, environment and situation, the SHU should be supported by central government, regional government, school and parent. In addition it should involve private partners as well.

Each institution has a clear task. Government as policy maker, who sets and instructs the policy, along with support consequence to fulfill. As qualified human



Picture 1 : Substitution model decision flow

resources on school, health service support on school by Puskesmas and notifications for non-compliant school. School has role as technical executor in the program. It should be able to execute the policy by translate it into school internal policy and strategy based on situation and condition. In this term, school should have a firm commitment to conduct health promotion program. The involment and concern of parent is required, which is regulated or conditioned by school policy.

Health promotion model on school institution in Indonesia suggested based on this research is SHU optimalization through 1) formal education as applied curriculum. 2) health promotion by informal channel, such as (1) health education information by poster, wall info, warning related with healthy food and behaviour at every strategic point on school, in form that interest students and up to date style. (2) health behaviour monitor and control, include food consumption through Diary TERATAS book (Therapy for Obesity Child), monitored by parent, mainly applied for obesity child. (3) Health promotion through healthy life, by the extra-curricular exercise program and plants and healthy food pilot project on school canteen, catering, yard and kitchen. (4) Distribution of health education booklet to teachers and parents as basic hand book.

### Conclusion

Substitution model by refer to enrolled model has potention to develop, other internal models in Indonesia and external models in Australia. Model that will be substituted consider school condition and situation. SHU

is potential form to conduct health promotion on school institution in Indonesia, through : 1) formal health education as applied education curriculum. 2) Health promotion through informal channel, such as (1) Health education information. (2) self monitor and control of healthy behaviour (3) Health promotion through healthy life application. (4) distribution of health education booklet to teachers and parents.

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