

INTEGRATION COORDINATED SCHOOL HEALTH MODEL (CSH) AND FAMILY CENTERED NURSING (FCN) TO REDUCE AND PREVENT CHILDHOOD OBESITY

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ABSTRAK

Literatur review ini membahas integrasi beberapa model yang dapat digunakan untuk mengelola masalah obesitas pada anak usia sekolah. Obesitas bukan hanya masalah bagi kalangan dewasa, namun sekarang sudah menjadi masalah serius pada kalangan anak usia sekolah. Setiap tahun selalu terjadi peningkatan prevalensi yang dapat memicu masalah serius lainnya seperti diabetes dan hipertensi. Tulisan ini memberikan beberapa solusi dengan mengkombinasikan model coordinated school health dan model family centered nursing. Berdasarkan hasil temuan, diketahui bahwa baiknya program kesehatan di sekolah dapat meningkatkan motivasi siswa dalam berperilaku sehat. Model Coordinated school health menawarkan konsep promosi kesehatan yang berfokus pada pembangunan kesehatan dan perubahan perilaku. Jika model ini digabungkan dengan model family centered in nursing yang diterapkan di rumah anak, maka diharapkan dapat menjadi sebuah konsep yang lengkap dan dapat meningkatkan motivasi anak untuk merubah perilaku kesehatannya. Literatur review ini mendiskusikan penjabaran gabungan kedua model tersebut dalam sebuah program yang dinamakan ABCD sebagai alternatif solusi mengelola masalah obesitas pada anak usia sekolah. Pada bagian akhir, tulisan ini menawarkan rekomendasi bagi puskesmas untuk menerapkannya dalam program UKS di Indonesia.

Keywords: *Anak Usia Sekolah, Model Coordinated school health, Obesitas, & Sekolah*

ABSTRACT

This paper literature reviewing about integration model which can use in manage children with obesity problem. Obesity not just a problem for an adult, now this is a serious problem in school age children too. Every year the prevalence always increasing, this can be trigger for another serious problem such as diabetes and hypertension. This paper suggest some solution with combine coordinated school health model and family centered nursing. Based on findings the good program in school will increasing student motivation in health behaviour. Coordinated school health model offering intervention for children based on the principle of promotion that sees improvements in health development and changing in health behaviour. If this model combine with the family centered in nursing in their home, it will be completed and it must be can increasing student motivation to change their behaviour. This literature review also discuss about the ABCD programe as alternative for obesity children in elementary school. The final section of this paper offers recommendations for possible way forward for the puskesmas in implementing UKS program in Indonesia.

Keywords: Coordinated school health , Obesity children , School, & School age children

INTRODUCTION

Obesity has been described as an international epidemic with increasing prevalence of obesity and overweight (NIH, 2014). The publish findings of OECD (2014) report that one from five children in the world has overweight or obesity. In Indonesia, we found that 18.8% school age children has an overweight or obesity (Kemenkes, 2013). This prevalence is bigger than underweight which has same serious problem as obesity. Obesity problem in childhood will leading health risk to children when he being adult such as diabetes melitus, hypertension, stroke, etc (Jones, 2010). In other hand obesity can cause the lack of child development because of inactivity and lazinees children to move and lack of interaction with other people because of shy with his obesity (Sjarif, 2005).

Research into the causes and incidence of obesity in children has been taking place for many years. There are many factors that can lead obesity in children, all of which must be considered and understood before an effective strategy can be implemented to tackle the problem. According to Epstein et.al (2010) as community health nurse we recommended to perform nutritional assessment at schools, educate children, family and staff to promote healthy life style for healhty children to make a bright future for our children without risk of health.

Number of strategies for preventing obesity in children have been suggested and tried over the years. A recent analysis of reviews of diet, physical activity, and behavioural approaches has been published by Centers for Disease Control and Prevention WHO made a comprehensive model to tackle obesity in school. this model integrated all factor that can help maintain chidren behaviour.

Promoting healthy and safe behaviors among students is an important part of the fundamental mission of schools, which is to provide young people with the knowledge and skills they need to become healthy and

productive adults. Improving student health and safety can increase students' capacity to learn, reduce absenteeism, improve physical fitness and mental alertness (CDC, 2014).

CDC (2014) acquaint *Coordinated School Health* (CSH) as a guide to tackle obesity problem in school.

Coordinated School Health (CSH) is able to guide nurses in the assessment, planning, implementation and evaluation of nursing interventions given to school-age children both in the order of individuals, families and communities. Used of CSH was initiated by Kolbe and Allensworth (1987, in CDC, 2014) in overweight containment procedures focused on the points of health education, physical education, nutrition, parent involvement, and school involvement as a provider of policy makers and health care providers in schools for school age children. CSH is used as a model for nursing care of individuals, families, and communities around the world including the United States. Twenty Two district in United States implement this CSH and can improve the quality of life in school age.

CSH model application in an elementary school in the United States is based on the principle of promotion that sees improvements in health development is more effective if done on the level of learning in elementary school children than trying to change unhealthy behaviors in adult group (CDC, 2010). At this time the nurse plays an important role and will be able to build a child's behavior for life.

METHOD

The method of literature review was carried out in three phases. First, utilizing academic databases, we searched for and retrieved articles and resources relevant to the topics being explored. Second, we filtered through retrieved articles and resources to identify those most likely to offer substantive support data. Third, we compiled information, charts and data tables, with the hope of

identifying and prioritizing the interventions, treatments and organizational strategies best aligned with the goals of improving access, opportunity and holistic wellbeing for school age children. Numerous databases were used in the process of our search, including WHO Source, Kemenkes, International Bibliography and Google Scholar. Over one hundred variations of keywords and search term phrases were used including: school age children, obesity, Scholl age framework, Theory, nurse assesment, school health theory, and family centered nursing.

DISCUSSION

Schools play a critical role in promoting the health and safety of young people and helping them establish lifelong healthy behaviors. Research has shown that school health programs can reduce the prevalence of health risk behaviors among young people and have a positive effect on academic performance. Use of Coordinated School Health (CSH) make it better. For example implementation CSH in San Antonio, Texas, in diabetes prevention program, significantly decreased fasting glucose levels, increased fitness scores, and increased dietary fiber intake compared with students who did not participate in the program (CDC, 2010).

Other program, in Baltimore Maryland, who participated in a school breakfast program increased their nutrient intake and were more likely to improve their academic and psychosocial functioning than those who did not participate in the program (CDC, 2010). Other School in Texas, South Carolina and Baltimore reported an increase in the skills of students from the academic, physical fitness, psychological, motivational fruit and vegetable consumption and increased social functioning in school-age children who participate in school health programs based on the model of CSH (CDC , 2010). We can conclude that CSH is the useful program that can help school problem in health and can be

use in MI Nurul Fallah to help children increasing health status without obesity.

CSH integrates health promotion efforts across eight interrelated components that already exist in most schools. These components include the following: health education, physical education, health services, nutrition services, counseling, sosial, and psychological services, healthy and safe school environment, staff wellness, and family /community involvement. The eighth component in Coordinated School Health (CSH) showed that the contribution of each component is needed to realize an integrated program, planned, and continuous (Stanhope & Lancaster, 2012). Coordinated School Health (CSH) focused on learning for children health in the future include health knowledge, attitudes, skills, and healthy habits of students to support optimal quality of life (CDC, 2010).



Coordinated School Health (CDC, 2014)

In children with obesity, the main focus is helping students develop healthy habits and make smart choices, and its not easy so we need integrates all of componen in CSH to make a good environment to children, and increase their motivation to have a good habits in life such us choose only fresh food, fruit, vegetable, and doing exercise as long as they can do it, even its just walking, running, or cycling. Community nurse in school has a role to make this habits happens with make a

good planing and good implementation with good approach to children.

Application of Coordinated School Health model will focus in 5 component CSH : health education, physical education, health services, nutrition services, and family involvement. This 5 component is suitable with elementary school condition in Indonesia. This condition make nurse need to doing something more than just adopt and implement CSH programe.

Modifying CSH based on hear and now situation in elementary school , nurse will add health services management model to improving involvement teacher in school health program. Health services management model consist of planing, organizing, staffing, actuating, and controlling. This model will help nurse to make an management activity about school health program with more easy. It can leading nurse to make a program planning based on school needed and school condition. Implementation in this model is make a group of cadre in school. With this kader, we can have a mediator from us to student to doing health promotion regularly.

Other modifying of this CSH Program is add Family Centered Nursing by Friedman to increase family involvement in school programe. Family centered nursing have a purpose to increasing family role in children health. Family centered Nursing means that we support the parents to be involved as much as possible in the child's care such us in optimize diet management and children physical activity in home.

Nurse can combine this model, and make it in community programe for children, management program for teacher, and family coaching for family who has children with obesity to change children's life styles. Healthy life styles that needed to have by child with obesity is ability of children to maintain diet and exercise. No more bad eating and lack exercise. Wijayanti (2013) said that bad eating in child who has obesity is hobby to eat fast food, skip fruit, skip

vegetables, and too much snacking. children likes to snacking such as chips, chocolate, and fried food with flour as basic material which can increasing weight with slowly but sure every day.

Good diet recommended by indonesian ministry of health for school age is to eating fruit and vegetables 3 times every day (Kemenkes, 2014). Diets rich in foods containing fiber, such as some vegetables and fruits, may reduce the risk of heart disease, obesity, and type 2 diabetes (Keller, 2008). Eating foods such as fruits that are lower in calories per cup instead of some other higher-calorie food may be useful in helping to lower calorie intake and support weight loss in children (Keller, 2008). The 2010 Dietary Guidelines for Americans (DGA) and 2020 Healthy People (USHHS, 2010) are expressly cognizant of the associations between diet and body weight and overall health.

The keys to building a healthy diet are to increase nutrient-dense foods particularly fruits and vegetables, and reduce energy-dense foods, and thereby to balance calories. Healthy diets are not only solutions to health problems, but also central to sustainable health and wellness, life quality and satisfaction, and more productive and longer lives for the current and future generations.

Epstein (2001) in his research said that percentage of overweight change was greater for parents who targeted increases in fruit and vegetable intake than reductions in high-fat/high-sugar intake. The main contribution to weight control is a reduction in caloric intake, and dietary restriction is needed to lose weight. These results suggest that a differential focus on what can be eaten versus what cannot be eaten may make it easier to adhere to the caloric reductions needed for weight control. The interventions were designed to improve child eating habits and to prevent increases in the percentage of overweight in these high-risk children. The interventions were successful in meeting this goal, and if continued over time, the

interventions might be useful in preventing the development of obesity. So we can say that diet high in fruits and vegetables contributes to reducing risks of many health conditions as well as weight management.

Another diet method can be used to lose weight such as low carbohydrate diet and low fat diet. Based on the research which was done by 24 weeks in 120 people showed that low carbohydrate diet program had better participant retention and greater weight loss. During active weight loss, serum triglyceride levels increase more with low carbohydrate diet than with the low fat diet (Yancy, 2004). This research supported by another research, Shai (2008) made another research that indicated weight loss program can be done by using low carbohydrate diet was based on Atkins diet. The result showed decreasing weight in 109 participants.

Changes over 1 year in research by Epstein (2001) showed that treatment influenced targeted parent and child fruit and vegetable intake and high-fat/high-sugar intake, with the Increase Fruit and Vegetable group also decreasing their consumption of high-fat/high-sugar foods. Parents in the increased fruit and vegetable group showed significantly greater decreases in percentage of overweight than parents in the decreased high-fat/high-sugar group. But both of kind of diet still can be used and mixed to reduce children weight and maintain a healthy habit for children.

Another method to increase healthy life style in children is increasing level of activity. Sigal, Kenny, Wasserman, Sceppa, and White (2006) stated that the optimization of physical activity has a high probability to lose weight. It is the most effective strategy for reducing total body fat, abdominal fat and visceral fat tissue.

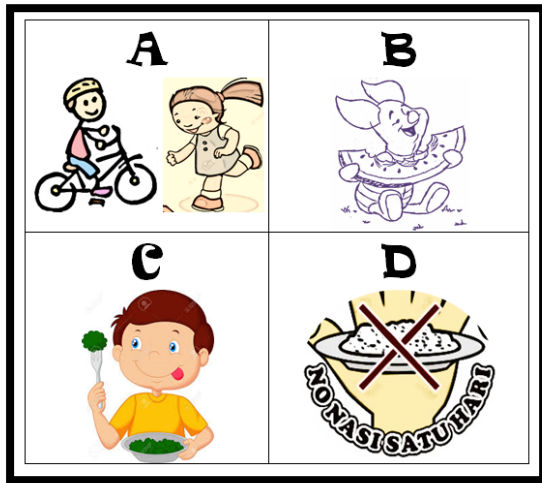
Physical activity is one of the most basic human functions. Physical activity includes all physical movements made by the body, bones, muscles, and other support systems to run, climb, descend, and the result is above the energy expenditure of energy at

rest (Cavill, Kahlmeier, and Racioppi, 2006). Indonesian Ministry of Health (2002) suggested the same thing that physical activity is any body movement that increases energy expenditure and energy or calorie burning which has the benefit of the physical to maintain ideal body weight as well as psychological benefits to reduce stress.

Researchers recommend aerobic type of exercise to lose weight, with moderate or severe intensity (NIH, 2014; CDC, 2011). Endurance exercise is also known as aerobic exercise or cardiovascular exercise which is defined as the activities carried out to increase the heart rate and breathing. These exercises keep the heart, lungs and circulation of the body to stay healthy, and improve physical fitness, which in turn can delay or reduce the likelihood of occurrence of diabetes and heart disease. Physical exercise activities that are included in the category of endurance exercise such as brisk walking, running, cycling, dancing, playing basketball, and swimming (NIH, 2014).

All of them can be combined in a simple community program for children named ABCD (4i), consist of :

- A: Aku senang berjalan kaki dan bersepeda setiap hari (I walk or bicycle everyday)
- B: Buah setiap hari (I eat fruit everyday)
- C: Cintai sayur setiap hari (I love vegetables everyday)
- D: Di hari Selasa, aku mengganti makan nasi dengan sumber zat tenaga lain (ODNR) (One day no rice in Tuesday)



ABCD Program

This program combining two therapy in weight loss. Nutrition therapy and Physical activity therapy. This two programe then add with local program of Depok City in Indonesia named ODNR (one day no rice) to help obesity people reduce their index glicemic in the body.

Management programe for teacher is coaching teacher to help children in maintain body weight, this is include giving a measuring body weight and height competence to teacher, and health promotion competency to implement in children in their classes. The last is family programe, that combining four nursing therapy, such us activity therapy (interval training), nutrition therapy (food combining), zona therapy, and hypnosis therapy.

We suggest to implement a real ABCD program in school with this step : First program is give a health promotion to all student in school about healthy food based on balanced nutrient in food pyramid and about nutrition status including obesity. In health promotion nurse input ABCD point and make it as a short message for children to easy to remember about ABCD. After that nurse make a simple program to play in the class to make children always remember about food pyramid and ABCD.

Another progam after playing together and health promotion is workout together with children in physical education class and

make some exta time to bicycle together with class. Another workout program from children who has obesity is walking together with children when children going home together with nurse, its been expected can exemplify and make a good habits for children. Children be taught to doing walk or bycycle with interval training technique, who has more advantages than with regularly walk.





This can be followed by eating together program when children has time off in 12 pm. Eating together with children who has obesity held every Tuesday and sometimes every day to make sure that children doing BCD point that consist of : eating fruits, eating vegetables, and no eat rice in Tuesday. not all children eating as prescribed by nurse, but it's okay, nurse view it as a process for children bit by bit look friend eating vegetables, fruit, and substitute carbohydrate.

Beside, nurse must give some motivation to children to have a good habits in implement ABCD to have a good health and good body. Periodic health promotion not just doing by nurse, it's assisted by kader anak cilik (kancil) who always remind their friend to doing ABCD everyday.

As controller, nurse can make Kartu Anak Sehat (KAS) or other modified for children who has obesity.

Kartu Anak Sehat

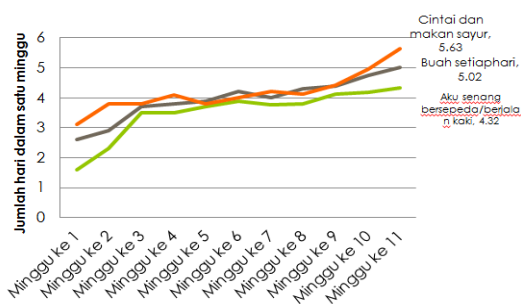
Nama Anak :
Kelas :

Tanggal	Jenin	Selasa	Rabu	Kamis	Jumat	Sabtu	Minggu
A  Aku senang berjalan kaki atau bersepeda setiap hari							
B  Buah setiap hari							
C  Cintai dan makan sayur setiap hari							
D  Di hari selasa, aku mengganti makan nasi dengan sumber zat tenaga lain seperti jagung, ubi, dll (One Day No Rice)							

- * Kartu anak sehat diisi setiap hari oleh anak dan orang tua
- * Beri tanda centang (✓) jika kegiatan dilakukan oleh anak, kosongkan bila tidak dilakukan

Healthy Card “Kartu Anak Sehat”

KAS will show how much children can change their behaviour. the results will show an increase or decrease in child health behavior based ABCD points.



Sample of Children Assesment Grafik

KAS will show how much children can change their behaviour. the results will show an increase or decrease in child health behavior based ABCD points.

CONCLUSION

This community program can manage an obesity problem in children. It's based on coordinated school health (CSH) program which published and used by CDC in United States. Nurse adopt this model and then integrating with family centered nursing by friedman.

Combining of all that intervention in ABCD Program to children, parents, and teacher can help children to have a good environment to have a good habits in eating and physical activity to make a bright future for our children without risk of health. ABCD can improve children habits . Children need to create good habits little by little, so it can implement in their whole life to have an good life style and good health.

Puskesmas in Indonesia need to be concern in school age obesity problem. They need to implement their UKS programe in every school. UKS program implementation could be combined with this Integration Coordinated School Health Model (CSH) and Family Centered Nursing (FCN) To Reduce and Prevent Childhood Obesity. This schema in integrating all student component in school and their parents in home, so the result can be great in decreasing obesity prevalence. Community nurses may consider to implement ABCD programs as part of non-communicable disease promotion and prevention program which can starts in school.

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