

PRE-SCHOOL YOUNG DOCTOR (TUNAS DOKTOR MUDA) PROGRAMME AND THE DEVELOPMENT OF GOOD HEALTH BEHAVIOUR AMONG PRE-SCHOOL CHILDREN IN PAHANG

Nur Azurin binti Ramli
Pahang State Health Department
Email: nazurin00@yahoo.com, Tel: 09-570 7933

Nor Ayuni binti Ab Rahman
Pahang State Health Department
Email: ayuni1807@gmail.com, Tel: 09-570 7933

Hajah Azizam binti Mohd Ali
Pahang State Health Department
Email: azizam_ma@moh.gov.my, Tel: 09-570 7919

Ismawati binti Ishak
Pahang State Health Department
Email: ismaishak@moh.gov.my, Tel: 09-570 7918

Dato' Dr Mohamed Sopian bin Mohamed
Pahang State Health Department
Email: drhjsopian26@moh.gov.my, Tel: 09-570 7900

ABSTRACT

Tunas Doktor Muda programme was first introduced in 2016. The aims of this programme is to educate pre-school children about good health behaviour. The KEMAS (Department of Community Development) pre-school of the Indera Mahkota Parliament and Raub Parliament were chosen as the pilot projects. This research aims to evaluate the ability of the pre-school children about five (5) good health practices which include to observe seven (7) steps of hand washing, to observe brushing teeth correctly, to describe the child preferences in choosing various healthy food, to determine whether the pre-school children know how to throw away rubbish correctly and to determine whether they know about the safe and unsafe touch of others. This cross-sectional study was carried out in ten (10) KEMAS pre-schools which include five (5) classes in the Indera Mahkota, Parliament and another five (5) classes in the Raub Parliament. The classes were chosen by using simple random sampling technique. Altogether, one hundred and sixty-three (163) pre-school children were involved in this programme. One hundred and eight (108) children represent the Indera Mahkota Parliament while fifty-five (55) representative are from the Raub Parliament. Survey forms and observation forms were used in the research as research instruments. The research was carried out from the month of August until November 2018. The research managed to obtain the information that a hundred per cent (100%) of the respondents were able to carry out correctly the seven (7) steps of washing hands, brushing teeth, throwing rubbish and to know what the safe and unsafe touch are. However, regarding the topic of eating various healthy food, seven point nine eight per cent (7.98%) of the respondents rarely eat vegetable and eleven point zero four per cent (11.04%) do not like drinking plain water. This programme is successful in educating pre-school children regarding good health practices. This programme is suitable to be applied among pre-school children in order to generate health conscious younglings.

Keywords: pre-school children, Tunas Doktor Muda Programme, KEMAS pre-schools, health behaviour, good health practice.

Introduction

Health education at the pre-school level is important. Children undergo a learning process that can influence their personality, attitude and practice. Thus, they need to be exposed to good health knowledge. It is important therefore that guidelines and policies are developed to promote healthy lifestyle among pre-school children. The Pre-school Young Doctor programme in Pahang was launched in 2016 with the objective of producing pre-schoolers that are aware and conscious of their health practice. The pilot programmes were carried in the KEMAS (The Department of Community Development) pre-school of Indera Mahkota Parliament, Kuantan and of Raub Parliament, Raub. The choosing of these two places was determined by the Pahang Department of Community Development committee based on the ratio of 2.5% upon the whole total of KEMAS pre-school each year. Mikkonen & Raphael (2010) did mentioned that healthy child development in turn is associated with better health outcomes later in life. Therefore, to relay health education among pre-schoolers are very essential as the effect of such education will be shown in their future life, influencing their personality and health routine. According to the World Health Organisation, (WHO 2018), children with healthy habits are also more likely to grow into healthy and productive adults, and less at risk of developing chronic non-communicable diseases such as heart disease, diabetes, stroke, chronic lung disease and cancer during the life course. This study aims to evaluate the pre-school children ability towards the five (5) good health practices through seven (7) steps of hand washing, brush teeth correctly, choose vegetable and fruits, throw away rubbish correctly and know about safe and unsafe touches of others in Pahang

Problem Statement

Since the Pre-school Young Doctor programme was launched in 2016, no research has been done to find out whether the programme is effective or not. The main focus of this programme is to concentrate on five health practices which are the seven steps of washing hands properly, to brush teeth correctly, to dispose waste properly, to eat various healthy foods and to know of safe and unsafe touch. These skills are also in accordance with the present KEMAS standard curriculum for pre-school. Schools as a large place includes a crowd of children and plays an important role in the transmission of health information to individuals, families and the community (Kochaki et al., 2011). The development of students' health behaviors is possible through education (Kamrani et al., 2014).

The early child period is the most important developmental phase throughout the lifespan. Healthy early child development which includes the physical, social-emotional, and language cognitive domains of development, each equally important strongly influences well-being, obesity or stunting, mental health, heart disease, competence in literacy and numeracy, criminality, and economic participation throughout life. What happens to the child in the early years is critical for the child's developmental trajectory and life course (Irwin et al., 2007).

These children are exposed to these health practice knowledges in order to prevent them from health problems that can commonly occur such as food poisoning, hand foot and mouth disease (HFMD), dental caries, dengue fever, nutritional deficiency, obesity and early sexual threat. They need to be educated with proper health knowledge in order to infuse thus producing good health practice as their common habit.

At appropriate developmental levels, from pre-school through early adulthood, young people can engage in learning experiences that help them prevent disease and injury and that foster healthy relationships. They can acquire the knowledge and skills they need, for example, to practice basic hygiene and sanitation; negotiate and make healthy decisions about sexual and reproductive health choices; or listen and communicate well in relationships. As they grow into young adults, they can play leadership roles in creating healthy environments – advocating, for example, for a tobacco-free school or community (WHO, 2003)..

RESEARCH QUESTION AND OBJECTIVES OF THE STUDY

Research question: Does Pre-school Young Doctor programme manage to develop good health behaviour among pre-school children in Pahang.

This study aims to evaluate the pre-school children ability towards the five (5) good health practices through:

1. Demonstrate seven (7) steps of hand washing correctly.
2. Demonstrate brushing teeth correctly.
3. Choose various healthy food.
4. Throw away rubbish correctly.
5. Know about the safe and unsafe touch of others.

Literature Review

The Pre-school Young Doctor programme is a health education programme design for the pre-school children in order to develop among them good essential health practice. In the Eleventh Malaysia Plan (*Rancangan Malaysia 11*), this programme has been given a priority status among other health programmes. It targets pre-school children aging around five and six years old. The main goal of developing this programme is to increase the pre-school children health level through good daily health practice (*Tunas Doktor Muda* Health Guide Book, Ministry of Health Malaysia, 2015).

Framework of the Study

Figure 1: Framework of the study



Table 2: Students' participation in the class according to method and activity

Health behaviour	Methods used	Activities
Seven (7) steps of hand washing.	Demonstration, role play, interactive games.	Every time before and after a meal.
Brushing teeth correctly.	Demonstration, role play, interactive games.	After a meal.
Choosing various healthy foods.	Colouring, storytelling, quiz, singing and acting.	Before breakfast and lunch time.
Throw rubbish correctly.	Role play, acting, storytelling, interactive games.	Normal learning process.
Know the safe and unsafe touch of others.	Storytelling.	Normal learning process.

Source: Daily Teaching Plan KEMAS Pre-school

Methodology

Study Design

This research is based on the quantitative design and the main method used throughout the research is the cross-sectional method studies. (Leedy & Ormrod 2001; Williams, 2011) describe the research methodology as the holistic steps a researcher employ in embarking on a research work. Therefore, a quantitative research method deals with quantifying and analysis variables in order to get results. It involves the utilization and analysis of numerical data using specific statistical techniques to answer questions like who, how much, what, where, when, how many, and how. Expatiating on this definition, Aliaga & Gunderson (2002), describes quantitative research methods as the explaining of an issue or phenomenon through gathering data in numerical form and analyzing with the aid of mathematical methods; in particular statistics. Whereas, cross-sectional studies are simple in design and are aimed at finding out the prevalence of a phenomenon, problem, attitude or issue by taking a snap-shot or cross-section of the population. This obtains an overall picture as it stands at the time of the study (Unite for Sight, 2018).

Sample

One hundred and sixty-three (163) students and 10 teachers were chosen as sample for this study.

Table 3: Samples distribution according to Parliament in number and percentage

KEMAS Pre-school	Student (n)	Percentage (%)
Indera Mahkota Parliament	108	66.3
Raub Parliament	55	33.7
Total	163	100

Source: Statistic of KEMAS Pahang Pre-school Students 2018

Instrument

Twenty questions of self-administered questionnaire with researcher guide and observation checklist (for the washing hands properly scope and brushing teeth correctly scope) were given to the students as the instrument for this research. Questionnaires can be administered by an interviewer or answered by the respondents themselves (self-administered) (WHO, 2008). If questions are complex or nested or if significant probing is required, interviewer-administered questionnaires may be preferable. On the other hand, interview sessions were carried out with the KEMAS pre-school teacher by using an observation form supplied by The Malaysia Ministry of Health. The observation form is related to the programme's execution plan, learning and teaching material, teacher's training and student's involvement during class.

The questionnaires were distributed to the one hundred and sixty-three pre-school children. The research instrument contains four main constructs which included the seven steps of washing hands properly, disposing waste correctly, eating various healthy foods and to know about safe and unsafe touch of others. The scale range used was the Likert Scale from 1 (Low), 2 (Average) and 3 (High). The response continuum for each statement is a linear scale indicating the extent respondents agree or disagree with each statement (J. Robert Warmbrod, 2014). The observation checklists were utilized during the seven steps of washing hands properly and brushing teeth correctly demonstration. The scale range used was the three point Likert Scale which indicates 1 (Not Competent), 2 (Learning), and 3 (Competent).

Sampling Technique

The research used universal sampling method in choosing the samples from the KEMAS pre-school in Indera Mahkota Parliament and Raub Parliament. Universal sampling refers to the selection of sample where not all the people in the population have the same probability of being included in the sample and each one of them, the probability of being selected is unknown (Memoir Online, 2018).

Inclusion and Exclusion Criteria

Inclusion criteria:

- Students from five to six years old.
- Guardian granted permission for students to join the research.
- Teachers willing to participate in data collection session.

Exclusion criteria:

- Absent during the data collection session.
- Newly registered students of the pre-school.

Data Collection

The research was carried out in two pilot KEMAS pre-school which are in Indera Mahkota Parliament and Raub Parliament. The research started in August and ended in November 2018. Data were collected through questionnaire and observation. Reported document is used as secondary source in this research. The data collection session used questionnaire and was done during class hour. The session was managed by a researcher using a set of questions that was divided into four topics. The researcher needed to guide the students when they answered the questionnaire. Meanwhile, the teacher needed to answer five parts of question from the questionnaire. Observation on the seven steps of washing hands properly and brushing teeth correctly was done outside the class.

Data Analysis

The SPSS version 22.0 is used to analyse the data from the questionnaire and observation. The result from the data was analysed based on the percentage and mean score. The students need to achieve 3 as the mean score for all the health behavior scopes in the research. A mean score of 3 indicates that the students managed to perform the health practice required correctly.

Table 4: Questionnaire and observation mean score for students

Level	Score
Low	0 – 0.99
Average	1 – 1.99
High	2 - 3

Source: *Tunas Doktor Muda* Evaluation Form, KKM

Results

Quantitative data: Pre-school score

Table 5: Overall students' achievement score

Level	Mean
High	2.96

Table 6: Respondent mean score by behaviour

Behaviour	Min
7 steps in hand washing	3.00
Disposing waste correctly	3.00
To know about safe and unsafe touch	3.00
Eating various healthy foods	2.84

Table 7: The choosing of a variety of food according to number and percentage

Food	Number and Percentage
Fruits	163 (100%)
Milk	163 (100%)
Vegetables	150 (92.02%)
Plain water	145 (88.95%)

Observation: Pre-school score

Table 8: Observation on 7 steps in washing hands and brushing teeth

Construct	Min	Level
7 steps in washing hands properly	3.00	Excellent
Brushing teeth correctly	3.00	Excellent

Interviews with Teachers

Table 9: Teachers views

Questions	Answers
Is the program execution plan readily available?	R1: Yes. It is available in the KEMAS teaching and learning planning book. R2: Yes and it is readily available.
Does the Malaysia Ministry of Health provide any teaching and learning material for the Pre-school Young Doctor programme?	R1: Yes and it is provided during the training/briefing session. R2: Yes. I received worksheet exercise book for the children every year.
Have you (teacher) gone to any type of training for Pre-school Young Doctor programme?	R1: Yes, at the Dagangan Mahkota Complex, Kuantan. R2: Yes.
How do you encourage students' involvement during class?	R1: I teach them to sing, to watch some video on health issue, and do hands washing and teeth brushing demonstration. R2: I do the activity along with the student. R3: I use Big Book for storytelling session with the children.

Discussion

Objective 1: Demonstrate seven (7) steps of hand washing correctly

The result from the research shows that the mean score is 3.00. This indicates the student achievement is high which also means that the students know and are capable of performing the seven steps in hands washing properly. This implies that the respondents have good behavior practice in hygiene. It's particularly important that kids know the proper way to wash hands. With the CDC reporting that up to 80% of all infections are transmitted by hands, and kids often being in such close proximity to one another at pre-school and daycare, sharing snacks, toys and everything else, washing hands is an important tool in their arsenal to fight germs (Rock, 2018). When kids come into contact with germs, they can become infected just by touching their eyes, nose, or mouth. Good hand washing is the first line of defense against the spread of many illnesses - from the common cold to more serious infections, such as Meningitis, Bronchiolitis, The Flu, Hepatitis A, and many types of Diarrhea (Karten, 2018).

Objective 2: Demonstrate brushing teeth correctly

The result shows that the mean score is 3.00 and this also indicates the students achievement is high. In other words, students know and can brush their teeth correctly. This good dental behaviour will help the respondent to take good care of their teeth. Studies have shown that oral health care education during childhood, parental education, and educational tools have positive effects on oral care practices of children (Huebner & Milgrom, 2015). Effective plaque control depends not only on the toothbrush type but also on the correct tooth brushing technique. Training on tooth brushing techniques is very useful in improving oral hygiene (Hayasaki et al., 2017). Tooth brushing at a childcare center is not a replacement for proper dental care at

home, but it does give an advantage in the fight against plaque. It also helps to reinforce good dental practices from an early age (Moshman, 2018). Good oral hygiene should begin at an early age. It is important to start oral care at an early age. Learning good oral hygiene habits at a young age is important for long-term oral health (Eddis, 2018).

Objective 3: Choosing various healthy food

The result shows that the respondent scored 2.84 for this scope. This also indicates that there are certain foods that are not chosen according to the respondent liking. According to number and percentage, fruits and milk got a hundred percent score while only ninety-two-point zero two percent of respondent prefer to eat vegetable. Regarding plain water, only eighty eight point nine five percent of the respondent chose to drink it. Due to this information, it is important to increase promoting vegetable and drinking plain water among pre-school children.

The result obtains from this research resemble the result from previous research which show that children do not like to eat vegetable. (Perez-Rodrigo et al., 2003); Wardle & Cooke, 2008). Food preferences are not based only on taste; other sensory properties such as colour, appearance, and texture are important determinants of food acceptance among children. One possible reason is their appearance and bitter taste (Caton et al., 2014 ; Katz & Assor, 2007). Besides that, environmental factors are very influential in food preferences among children. The most important factors are those related to parents and the home (Wardle & Cooke, 2008). Parents play a pivotal role in the development of their child's food preferences and energy intake (Scaglioni et al., 2008).

Children's eating behaviors develop in early childhood (Birch & Fisher, 1998) and are related to food preference and intake in adolescence (Skinner et al., 2002). Much of the health promotion efforts for children's consumption of fruits and vegetables have emphasized quantity rather than a variety (Evans et al., 2012); however, reinforcing and supporting intakes and liking of a variety of fruit and vegetables in early childhood could have important implications for improving children's overall diet quality and health status later in life (Ramsay et al., 2017).

Children have a high tendency to take sweet drinks and foods. (Liem & Mennella, 2002; Liem et al., 2004). Children need plenty of water to stay hydrated and healthy. Water makes up more than half of your child's weight, and a steady supply is necessary to keep his body working properly. It can be challenging to get your child to drink enough water because most children prefer the sweet taste of juice, chocolate milk or soda over the plain taste of water. Teaching your child why drinking plenty of water is so important can motivate him to consume more, and entertaining activities can make learning about water more interesting (Ipatenco, 2018).

Objective 4: Disposing waste correctly

The result shows a mean score of 3.00. This indicates that the students know how to dispose waste correctly. In the Pre-School Young Doctor Module (Malaysia Ministry of Health, 2015), students are taught to dispose waste and to keep their school and home surrounding clean. They are taught to dispose waste correctly. Young children learn by doing. One way to teach pre-schoolers about littering and why it's important for everyone to throw their trash away is to engage them in a clean-up project (Lawrence, 2017).

Objective 5: Know about the safe and unsafe touch of others

The result shows the mean score of 3 which also indicates that the achievement shown by the students are high. In other words, students are knowledgeable regarding safe and unsafe touch of others. Safe touch includes touch during class session, shaking hands and playing with family members. Meanwhile unsafe touch includes touch when a girl pinches a boy's cheek, touching of private parts and attempts to purposely lift up a girl's skirt. Children as young as three can be effectively taught self-protection skills, parental and family involvement in training is important, and repeated exposure helps children maintain knowledge gains (Kenny et al., 2008). Personal safety skills (Runyeon et al., 1998) or abuse-response skills (Deblinger & Runyon, 2000) may decrease the likelihood that children are abused by increasing their awareness, knowledge and comfort level with disclosing inappropriate sexual advances.

Pre-school Young Doctor Module explains clearly that children must be educated about safe and unsafe touch in order to prevent them from being sexually harassed or abused. The main skill in this scope is student acknowledge their private parts regarding the safe and unsafe touch. They are also educated to be assertive when they are in a threatening situation and to avoid making any contact with stranger (Malaysia Ministry of Health, 2015).

Conclusion

The Pre-school Young Doctor programme launched in the Pahang state has managed to impart beneficial knowledge to the KEMAS pre-school children. The main health focus was emphasized on five aspects or scopes. The overall achievement of the children regarding the five-health behaviour was high.

The students managed to wash their hands properly, brush their teeth correctly, can dispose waste correctly and aware about safe and unsafe touch. These good health practices are a good sign of their hygiene awareness early development.

Never the less, eating vegetable and drinking plain water need more attention. An interesting approach must be created in order to promote these good eating habits among pre-school children. Parents should be also involved in the process since they spend a large contact hour with the children especially at home.

It can be noted here that the children can successfully absorb the knowledge imparted owing to the scheduled teaching and learning lesson plan. Teachers were also provided with ample training regarding the usage of the teaching material supplied by the Ministry of Health.

Teaching material supplied also covered a variety of approach and techniques. Materials such as story books, CD, flip chart, interactive games, worksheets and exercise books will attract children attention regarding the information that is tried to be relayed. These materials along with the teacher presentation will contribute to students' involvement during class and activity.

The limitation of the study is this study cannot be generalized due to the research is only conducted at ten (10) KEMAS pre-schools which include five (5) classes in the Indera Mahkota, Parliament and another five (5) classes in the Raub Parliament. Therefore, it is recommended that this study can be conducted at other Pre-school Young Doctor in other Parliaments in Pahang. The research cannot be conducted over a long period of time because the mood of the students should be taken into account.

Based upon the result from this research, this program is suitable to be applied among pre-school children in order to generate health conscious younglings.

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