



Health Education Media Through Mandarin Language Posters in Increasing Knowledge and Local Food Consumption of Chinese Ethnic Children

Sopiyandi^{1*}, Sely Sonia¹

¹ Department of Nutrition, Poltekkes Kemenkes Pontianak, Pontianak Indonesia

* Correspondence: yandiadilphoto@gmail.com

Abstrak.

Nutritional problems in schoolchildren are often associated with food consumption patterns and behaviors at home and at school. Singkawang City has a variety of diversity, including ethnicity, one of which is ethnic Chinese. The culture of eating plays an important role because eating is seen as a family unifier as well as a clan unit (social structure) that affects the economic unity of the family. Increase a person's knowledge to get behavior changed by providing information about nutrition education through posters in Mandarin. This study aims to determine the effect of Chinese posters on the knowledge and consumption of local food of ethnic Chinese children at Asoka Elementary School, Bahussuta Foundation, Singkawang City. This research is a pre-experimental study with a one-group pre-test and post-test design and the purposeful sampling method. The sample of this study amounted to 26 4th grade students of Asoka Elementary School, aged 9–12 years. The instrument used was the Mandarin food poster instrument. Data collection was done by interview using a questionnaire and a 24-hour food recall form. The results showed that the average difference in knowledge before and after was 20.04, and the average difference in energy consumption (kcal) before and after was 203.09 kcal. There was an effect of knowledge ($p = 0.000$) and local food consumption before and after being given Chinese posters ($p = 0.000$). The conclusion is that there is an influence on knowledge and energy consumption (kcal) of local foods before and after being given posters in Mandarin.

Keywords: Health Education, Poster, Chinese, Mandarin.

1. Introduction

Singkawang City is one of the cities in West Kalimantan with a high plurality, where the population consists of various ethnicities, languages, religions, and cultures. One of them is the ethnic Chinese in Singkawang City. In the Chinese culture itself, food plays a major role because eating is seen as a family unifier, as is the unity of the clan (social structure), which affects the economic unity of the family (Irfani A, 2018).

The problem of food consumption in West Kalimantan, especially in Singkawang City, in general, has not reached the ideal value of calorie and protein consumption adequacy standards set based on the X National Widyakarya of Food and Nutrition (2012), which is 2,150 kcal of calorie consumption and 57 grams of protein consumption. The average calorie consumption (kcal) per capita per day of the people of Singkawang City in 2019 was 1,968.55, and the average protein consumption (grams) per capita per day in 2016 was 50.36 grams (BPS, 2018).

Healthy food includes food that is nutritious and safe for consumption. Eating safe food will provide nutritional benefits for growth, development, and health, especially for

school-age children. Therefore, children need knowledge about safe food so that they can be free from diseases or hazards that come from these foods (Kementerian Kesehatan, 2018).

Nutritional knowledge plays a role in providing ways to choose food properly so as to achieve adequate nutrition. The level of knowledge that determines food consumption behavior is obtained through nutrition education, which is generally considered better given as early as possible to increase knowledge and improve food consumption habits (Rahayu, A., Yulidasari, F., & Putri, A. O, 2019).

One way to increase a person's knowledge to obtain behavior change is by providing nutrition education information to support changes in knowledge and food consumption in children, carried out by applying nutrition education through the provision of posters. The appropriate age for children to be given nutrition education is 6 to 12 years, because at this age children begin to mature and learn because it is an intellectual period (Kurdanti, W., Khasana, T. M., & Fatimah, A. S. (2019).

The results of previous research conducted by Nuryanto et al. (2014) using posters regarding knowledge and attitude changes about nutrition of elementary school children in the influence of nutrition education before and after the intervention showed positive results, namely that the average knowledge of children before being given poster media intervention was 66.46, and after being given the intervention, the average knowledge of children became 71.61. This indicates the use of poster media in the learning process makes it easier for children to receive new knowledge.

The use of posters in teaching is expected to attract students' attention because posters use Mandarin, which is identical to using attractive colors and has a special appeal in the form of images, so as to facilitate students' understanding of vocabulary in accordance with ethnic Chinese in Singkawang City. The posters used must, of course, be adapted to the theme being taught so that students can connect with existing concepts. By using learning media in the form of posters, it is hoped that it can generate interest as well as creativity and motivation for students in learning local Chinese food, so that students can get maximum benefits both from the process and the learning outcomes.

2. Metode

This study uses a type of pre-experiment research, and the design used is a group pre-and post-test design. The intervention was in the form of giving local food posters in Chinese. At the beginning of the study, a pretest was conducted, and at the end of the intervention, the sample was given a posttest of knowledge and energy intake of local food.

This research was conducted at Asoka Singkawang Elementary School for 3 months, from June 1 to August 30, 2022. The population in this study were ethnic Chinese children at Asoka Elementary School in Singkawang. Population is the whole object of research. The sample size was calculated using the Lameshow formula (1997) for as many as 26 respondents. The sampling technique used purposive sampling. The sample criteria in this study were children aged 9-12 years, able to speak Mandarin, and willing to become respondents.

Interviews were conducted to collect primary data in the form of local food knowledge using a questionnaire and food consumption with a 1×24 hour recall form. From the Asoka Singkawang Elementary School database, secondary data were gathered to show where the research site was and to give a general idea of the people who answered the survey.

The analysis used was a bivariate analysis before and after giving Chinese posters. The normality test used was the Shapiro-Wilk test. Knowledge data with an abnormal distribution

continued to be tested with the Wilcoxon test, while energy intake data with a normal distribution continued with the paired sample T-test.

3. Results

3.1 Characteristics of Respondent

Table 1 Distribution of Respondents by Age Group and Gender

Variable		n	%
Age (years)	9	5	19.2
	10	14	53.8
	11	5	19.2
	12	2	7.7
Gender	Male	14	53.8
	Female	12	46.2
Total		26	100.0

Table 1 shows that the highest percentage age is 10 years old as many as 14 respondents (53.8%), as well as the gender distribution of male respondents as many as 14 respondents (53.8%).

3.2 Knowledge of Local Food

Table 2. Statistical description of the difference in knowledge of local food before and after the Chinese poster intervention

Score	Pre test	Post test	Selisih
Median	43.32	63.36	20.04
Minimal	6.67	33.35	26.68
Maximum	73.37	93.38	20.01
Std, Deviasi	15.97	20.54	4.57
p-value	0.000*		

*Description: Wilcoxon test

There is an average difference of 20.04 (p=0.000) which means that there is a difference in knowledge before and after being given a Chinese poster.

3.3 Energy Consumption (Kcal) Local Food

Table 3: Statistical Description of the Difference in Energy Consumption (Kcal) of Local Food Before and After the Intervention

Score	Pre test	Post test	Difference
Mean (Kcal)	436.96	640.05	203.09
Minimal	187.20	250.70	63.50
Maximum	843.30	994.30	151
p-value	0.000*		

*Description: Paired Sample T-Test

There is an average difference of 203.09 kcal (p=0.000) which means that there is a difference in energy consumption (kcal) before and after being given a Chinese poster.

4. Discussion

Based on the results of the study, there was a difference in knowledge before and after being given a Mandarin poster (p = 0.000) (Table 2). Mandarin posters consisting of pictures and colors dominated by red and yellow as a symbol of colors often used by ethnic Chinese look very striking and provide an attraction to students as respondents to see and pay attention to the material contained in the poster. The use of images from photos of food ingredients in the respondent's environment is one of the added values of the use of poster

media that increases knowledge about local food. Likewise, the way Chinese posters are installed in places that are often seen by schoolchildren, such as classrooms, hallways, terrace walls, bathroom directions, and parking lots, makes students more interested and easier to access. In addition, each student is also given one poster that is the same as the one installed at school to take home, which is expected to help student learning.

The use of Chinese poster media is one of the added values in increasing schoolchildren's knowledge about local food, especially for schoolchildren with Chinese ethnicity in Singkawang City. Seeing these results is in line with the research of Nasution NH and Nasution ZA (2021) regarding changes in snack food selection behavior, where health education in the selection of snacks using poster media is effective in increasing student knowledge ($p = 0.000 < 0.05$). Likewise, Indraswari (2018) found that elementary school children increased their knowledge of balanced nutrition after being given poster media. Research by Harsismanto J. et al. (2019) found the effect of posters on the knowledge of elementary school students in preventing diarrheal diseases.

This research is also in line with the research of Indah J, Junaidi (2021) which states that the use of poster media can increase students' knowledge about fruits and vegetables. Likewise, research by Sagita A et al (2019, 2022) showed the effect of posters on the knowledge of obese children in elementary schools. In the research of Nurfitriani, et al (2023), it can be seen that the provision of nutrition education using posters and animated videos has increased after the intervention.

Based on the results of the study, there were differences in consumption before and after being given a Chinese poster ($p = 0.000$) (Table 3), or, in other words, Chinese poster media encourages the implementation of local food consumption in Singkawang City in ethnic Chinese children. Chinese language posters also make it easier for school-age children to understand the local food selection material provided because this medium conveys information in an interesting way, is liked by children, and demands student interest and participation. In addition, the selection of striking red and golden yellow colors according to Chinese ethnic culture also makes the poster easier to accept, thus affecting the level of knowledge and consumption among children.

When viewed, the results of this study are in line with the research of Noviyanti (2018), which examined the effect of changes in actions before and after the poster method on food snacks on students. Likewise, Salawati (2018) found that posters can affect elementary school children's vegetable consumption. However, it was still found that there was no effect of posters on students' vegetable and fruit consumption, as in Farida et al.'s research (2019).

The research that has been done is also in line with the research of Latif et al. (2018), which states that there is an effect of poster media display at SMP 1 Patampanua on school snack consumption. Likewise with the research of Siagian et al. (2010), which showed the results of an increase in the food consumption behavior of high school students after counseling with poster media.

5. Conclusion

There was an increase in local food knowledge before and after being given Chinese posters. Energy consumption (kcal) of local food before and after being given Chinese posters also increased. Suggestions for using Mandarin local food posters with Chinese ethnic elementary school children.

References

- BPS, 2018, *Data Konsumsi Dan Pengeluaran*, Kota Singkawang
- Harsismanto J, Eva Oktavidiati, Dina Astuti; Pengaruh Pendidikan Kesehatan Media Video Dan Poster Terhadap Pengetahuan Dan Sikap Anak Dalam Pencegahan Penyakit Diare. *Jurnal Kesmas Asclepius*, Volume 1, Nomor 1, Juni 2019
<https://doi.org/10.31539/jka.v1i1.747>
- Indraswari S.H Pengaruh Pendidikan Gizi Dengan Poster Dan Kartu Gizi Terhadap Peningkatan Pengetahuan Dan Sikap Anak Tentang Gizi Seimbang Di SDN Ploso I-172 Surabaya. FKM_UNAIR All right reserved. License doi: 10.20473/ijph.v1i4il.2019.216-227
- Irfani, A, (2018), Pola Kerukunan Melayu Dan Tionghoa Di Kota Singkawang, *Al-Hikmah*, 12(1), 1–16,
- Indah, J., Junaidi, (2021), Efektivitas Penggunaan Poster dan Video dalam Meningkatkan Pengetahuan dan Sikap Tentang Buah dan Sayur pada Siswa Dayah Terpadu Inshafuddin, *Jurnal SAGO: Gizi dan Kesehatan*, Vol. 2(2) 129-135.
- Kurdanti, W,, Khasana, T, M,, & Fatimah, A, S, (2019), Pengaruh Media Promosi Gizi Terhadap Peningkatan Pengetahuan, Sikap Dan Perilaku Gizi Pada Siswa Sekolah Dasar, *Gizi Indonesia*, 42(2), 61,
- Latif, R, Haniarti, Herlina M, (2018), Pengaruh Media Poster dan Leaflet terhadap Tingkat Pengetahuan dan Sikap Konsumsi Makanan Jajanan Anak Sekolah SMP 1 Patampanua Pinrang, *Jurnal Ilmiah: Manusia dan Kesehatan*, Vol. 1 No.3
- Liza Salawati; Pengaruh Poster Ayo Makan Sayur Terhadap Konsumsi Sayur Pada Anak Usia Sekolah Dasar Di Banda Aceh. *Jurnal Kedokteran Syiah Kuala* Volume 18, Number 1, April 2018.
- Nasution, N, H,, & Arifin, Z, (2021), Pengaruh Metode Role Play dan Poster Terhadap Perubahan Perilaku Pemilihan Makanan Jajanan pada Siswa Sekolah Dasar, *Jurnal Kesehatan Medika Sainatika*, 12(1), 1–10
- Noviyanti (2018) 'Pengaruh Media Promosi Kesehatan Dengan Perilaku Jajanan Makanan Siswa', *Jurnal Kesehatan Medika Sainatika*, 9(1), pp, 95–107,
- Nurfitriani, J, Ratih, K. (2023). Edukasi Gizi Menggunakan Media Video Animasi dan Poster terhadap Peningkatan Pengetahuan Gizi Seimbang pada Remaja. *Media Publikasi Promosi Kesehatan Indonesia*. Vol. 6 No. 3
- Nuryanto, dkk. (2014) Pengaruh Pendidikan Gizi terhadap Pengetahuan dan Sikap tentang Gizi Anak Sekolah Dasar. *Jurnal Gizi Indonesia*
- Rahayu, A,, Yulidasari, F,, & Putri, A, O, (2019), *Ekologi Pangan Dan Gizi*
- Sagita A, Ratih Kurniasari, Linda Riski Sefrina: Pengaruh Pendidikan Gizi Dengan Poster Dan Kartu Gizi Terhadap Peningkatan Pengetahuan Dan Sikap Anak Tentang Gizi Seimbang Di SDN Ploso I-172 Surabaya. *Indonesian Journal of Public Health*, Vol 14, No 1 July 2019: 216-227
- Sagita A, Ratih Kurniasari, Linda Riski Sefrina; Pengaruh Edukasi Melalui Media Poster, Animasi dan Miniatur Terhadap Pengetahuan Obesitas Anak Sekolah Dasar, *JGK-Vol.14, No.1 Januari 2022*
- Siagian, A. Jumairah, Fourgelina Tampubulon. (2010). Media Visual Poster dan Leaflet Makanan Sehat serta Perilaku Konsumsi Makanan Jajan Siswa Sekolah Lanjutan Atas di Kabupaten Mandailing Natal. *Jurnal Kesehatan Masyarakat Nasional*. Vol 4 No. 6 Juni 2010

- Syiva Nurul Faridah, Laras Stoayu, Rachamida Nurzrina; Efektivitas Veggie-Fruit Dart Game Terhadap Konsumsi Sayur Dan Buah Pada Siswa SDN Duri Kepa 05 PG. Indonesian Journal Of Human Nutrition 2019 P-ISSN 2442-6636 E-ISSN 2355-3987
- Ulfah, IM, (2008), Perilaku hidup bersih dan sehat, pengetahuan gizi dan pola asuh kaitannya dengan diare anak balita di desa cikarawang bogor, Skripsi, Bogor: Institut Pertanian Bogor,
- Yurni, A, F,, & Sinaga, T, (2018), Pengaruh Pendidikan Gizi Terhadap Pengetahuan Dan Praktik Membawa Bekal Menu Seimbang Anak Sekolah Dasar, *Media Gizi Indonesia*, 12(2), 183,
- Wantina, M,, Rahayu, L, S,, & Yuliana, I, (2017), Keragaman Konsumsi Pangan Sebagai Faktor Risiko Stunting pada Balita Usia 6-24 Bulan, *Journal UHAMKA*, 2(2), 89-9,
- Winarni, Endang W. (2011). Penelitian Pendidikan. Bengkulu: FKIP Univeritas Bengkulu