



Warta Pengabdian Andalas

Jurnal Ilmiah Pengembangan dan Penerapan Ipteks

ISSN (Print) 0854-655X | ISSN (Online) 2797-1600

Improving Parents' Knowledge through Ultra Processed Food Education in RA Fatanah, Padang

Risti Kurnia Dewi^{1*}, Rahmi Martfida², Muhammad Agung Satriya²

¹Department of Nutrition, Faculty of Public Health, Universitas Andalas, Padang, Indonesia

²Department of Nutrition, Faculty of Human Ecology, IPB University, Bogor, Indonesia

*Corresponding author: ristikurniadewi@ph.unand.ac.id

Submitted: September 25, 2025

Accepted: December 16, 2025

Published: December 27, 2025

ABSTRACT

Ultra-Processed Foods (UPFs) are industrially manufactured products high in sugar, salt, and fat, with minimal whole-food content. The increasing consumption poses significant health risks, particularly for children. This community service program aimed to improve parents' knowledge and awareness regarding the importance of limiting UPF intake and promoting balanced nutrition consumption. The program was conducted at RA Fatanah, Padang City, from June to July 2025 and involved 22 parents selected through total sampling. Nutrition education was delivered via a lecture method supported by PowerPoint materials, leaflets, and booklets. Participants completed pre- and post-tests to assess changes in knowledge. The proportion of individuals with low knowledge decreased from 18.2% to 0%, while those with high knowledge increased by 22.8%. On average, participants' scores rose by 18 points after the intervention. Overall, this program demonstrated that structured nutrition education effectively enhances parental knowledge. Strengthening educational initiatives may contribute to reducing UPF consumption and supporting improved dietary behaviors within families.

Keywords: children, education, nutrition, parents, ultra processed food

INTRODUCTION

Ultra Processed Food (UPF) can be defined as food formulated from various ingredients and processed through multiple industrial techniques. UPFs typically contain very few whole food ingredients and instead consist primarily of sugar, oils, fats, salt, and various additives (colorants, preservatives, and flavor enhancers). In 2020, UPF consumption has replaced a significant portion of whole foods. It shows that 50–60% of total energy intake among global populations was derived from UPFs (Pagliai et al., 2021). Similar pattern, although not as high, can be seen in several Asian countries, particularly Korea, Malaysia, and Indonesia. The data shows that the average UPF consumption contributed to 19.5–29% of total energy intake daily (Rusfianti & Widyaningsih, 2023).

UPFs are energy-dense foods that often provide only empty calories. It offers a little substantial nutritional benefit since their caloric content is derived mainly from sugar, salt, and fat. Such foods can lead to energy imbalance and reduced dietary quality. Prolonged UPF consumption among children can lead to obesity, metabolic disorders, mental and behavioral problems, impaired cognitive function, and oral and dental health issues. In the

long term, UPF consumption increases the risk of cancer, atherosclerosis, diabetes, hypertension, and hyperlipidemia in children (Diba, 2025; Popkin, 2019; Sushma et al., 2025).

Several factors, including family eating habits, sociocultural aspects, food availability, household income, and frequent exposure to advertisements, influence children's dietary preferences. The family plays a central role in shaping a child's dietary patterns; poor household eating habits are likely to be adopted by children and carried into adulthood. Nutrients from whole foods are essential for optimal child growth and development, particularly because the growth rate during childhood is higher than in adolescence and adulthood. Parents often perceive UPFs as cheaper and more practical, without recognizing their associated risks, especially when parents have insufficient time to prepare whole-food meals (Carlesso et al., 2025; Monteiro et al., 2019). Therefore, education regarding the importance of whole-food consumption and limiting UPF intake is crucial to protect children from potential health risks.

The team's first visit to RA Fatanah was conducted in 2022. The visit found that 20% of the children had nutritional problems. It was also found that only half of the parents had high nutrition knowledge. Another issue was that every child consumed ready-processed food and unhealthy snacks daily. Moreover, 75% of the parents stated that they relied on UPF for its practicality on a daily basis. These issues were quite problematic and must be addressed accordingly. A simple intervention that can be implemented is through education.

Parental education can be conducted using various methods, one of which is lectures. This community service activity aimed to increase parents' knowledge and awareness of the importance of limiting UPF consumption in children and promoting the consumption of diverse, nutritious, balanced, and safe whole foods. This activity is expected to motivate parents to improve both the quality and quantity of food provided to their children and to counter the perception that whole foods prepared from natural ingredients are always expensive. At the same time, UPFs are the only affordable option.

METHOD

The community service was conducted in RA Fatanah, located in Kuranji District, Padang City, West Sumatra. The participants in this community service activity were the parents of the children attending RA Fatanah. The number of participants in this community service was 22 parents. We used total sampling to calculate the number of participants. Total sampling was chosen because the target population was small.

The community service was conducted from June to July 2025. It has three main programs, such as:

1. Program Preparation

The first program of the community service was program preparation involving RA Fatanah and the team. It was started by a permit proposal. During the process, the parties involved also discussed the timing and technical aspects of the main program, which was nutrition education. The preparation program was conducted from mid-June to early July 2025.

2. Main program

The main program was conducted on July 12th, 2025. The activity began with the opening, proceeded by a pre-test, then continued into the main activity, which was nutrition education. We delivered materials related to Ultra-Processed Food. Started by definition and then the process, including the adverse risks of UPF. Materials regarding balance nutrition was also delivered. All the materials were delivered using lecture

methods. We also used a PowerPoint presentation as the media. The participants were also given leaflets and booklets regarding UPF to be studied at home. The next program consisted of a question-and-answer session, followed by a post-test, and concluded with documentation.

3. Program Evaluation

The evaluation in this community service was focused on the improvement of participants' knowledge. Participants' knowledge was analyzed through the calculation of ten structured questionnaires administered during both the pre-test and post-test. The total score would be 100. The knowledge was then categorized into low (<60), medium (60-80), and high (>80). To analyze the effectiveness of the nutrition education, the delta total score from the post-test was compared to the pre-test. All the data was analyzed descriptively.

RESULTS AND DISCUSSION

This nutrition education was conducted on July 12th, 2025. It was located at PAUD RA Fatanah, Kuranji District, Padang City. The education began with baseline data collection through a pre-test assessment. It was intended to assess participants' initial understanding of Ultra-Processed Foods. In the end, we also conducted a post-test assessment. Twenty-two participants whom were the parents' of children attending RA Fatanah, attended this activity.



Figure 1. Speaker delivered UPF education through lecture method

Nutrition education was delivered through a lecture method using PowerPoint media, with a presentation lasting approximately 30 minutes. The material started with the definition of UPFs, types of UPFs, differences between UPFs and real foods, and the impacts of UPFs on health and the environment. Lastly materials regarding how to prepare balanced nutrition food was also delivered. In this education, we gave the participants leaflet and booklets to be studied at home. Following the presentation, a question-and-answer session allowed for interaction between participants and the presenter, enhancing understanding and encouraging active engagement. To evaluate the effectiveness of the educational intervention, a post-test using the same questions as the pre-test was administered. After the activity concluded, the session ended with a group photo. The nutrition education is expected to increase public awareness in selecting packaged foods.



Figure 2. Participant participated in question-and-answer session

Table 1. Participants' knowledge

Participants' knowledge	Pre-test		Post-test	
	n	%	n	%
Low (<60)	4	18,2	0	0
Medium (60-80)	4	18,2	3	13,6
High (>80)	14	63,6	19	86,4
$\bar{x} \pm \text{Stdev}$	72 $\pm$ 20		90 $\pm$ 12	

Table 1 shows the participants' knowledge scores before and after the educational session on Ultra-Processed Food. The results indicated that there was an improvement in participants knowledge. In the beginning there was 18.2% of the participants with low knowledge on UPF. But after the education, we found no participants with low knowledge level. There was also an increased by 22,8% on the participants with high knowledge related to UPF after post-test. Overall, after the education, there was an increased by average of 18 points on participants knowledge scores.

Similar results were found on previous community service using nutrition education as the main program. After the education, an increased in participants' knowledge was apparent. As the education will give new information to the participants (Dewi et al., 2020; Dewi & Satriya, 2024). The information will be processed as a new knowledge which also improve the awareness of the participants. Improve knowledge and awareness can be a starting point to in improving the attitude to attain healthier habits (Dewi et al., 2023; Mahmudiono et al., 2022).

Previous paragraph shows the importance of health education for the parents. It was also supported by more similar studies. The studies showed that health education for parents played a vital role in promoting the health of children and adolescents by improving knowledge, attitudes, and health-related behaviors. Evidence showed that multifaceted and interactive interventions can substantially increase parental knowledge and support positive behavioral changes, remarkably. Especially when it grounded in behavior change theories and tailored to family needs. Statistical analysis demonstrates a significant positive effect of family health education on adolescent disease prevention ($p = 0.019$). It is evident that families played a central role in effective health promotion and disease prevention through targeted health education (Al Mushaikhi et al., 2025; Lubis, 2025).

The participants were highly enthusiastic about this community service program. They had previously provided a substantial amount of ultra-processed foods (UPFs) to their children without being aware of the associated adverse effects. Previously, they chose

UPF for its practicality and convenient. After the education, they determined to provide healthier and more nutritious meals to their children.

UPFs are energy-dense foods that often provide only empty calories. The processing stages of UPFs involve a lengthy series of steps, beginning with the breakdown of raw foods into smaller components, followed by chemical processing, the addition of additives, and finally packaging. UPFs are ready-to-eat or ready-to-drink products, such as soft drinks, candies, chocolate bars, ice cream, breakfast cereals, mass-produced bread, biscuits, and many other similar items. UPFs offer various advantages in the food industry market, including lower production costs, longer shelf life, modifiable sensory qualities, and practicality due to their ready-to-consume nature (Monteiro et al., 2019).

The emergence of a modern food environment characterized by the increasing prevalence of commercial food industries, which has shifted dietary patterns from traditional, whole foods to Ultra-Processed Foods. Poor dietary patterns are one of the contributing factors to both undernutrition and overnutrition. UPF consumption may worsen overnutrition problems because these foods are high in calories but low in nutrients. Long-term, continuous consumption of UPFs increases the risk of obesity as well as non-communicable diseases such as type 2 diabetes, cardiovascular disease, metabolic syndrome, and cancer (Faza et al., 2023; Mutawakillah et al., 2025).

Awareness regarding UPF consumption must be strengthened across all population groups to reduce associated health problems. Through this nutrition education, we expect the respondents to have an increasing awareness regarding this matter. In the future we hope that the government would strengthen the regulatory framework regarding UPFs. The policy should support food system transformation and integrate the nutrition education.

CONCLUSION

This community service program demonstrated that nutrition education effectively improved participants' knowledge regarding ultra-processed foods (UPFs). Enhanced knowledge is an essential foundation for fostering positive attitudes and encouraging healthier dietary behaviors. Furthermore, participants expressed strong enthusiasm for the program and acknowledged that they had previously provided UPFs to their children due to convenience, without understanding the potential adverse health effects. Their feedback indicated a willingness to reduce UPF consumption and adopt more nutritious food practices. Overall, the program successfully raised awareness and motivated participants to consider healthier dietary choices for their families.

ACKNOWLEDGMENT

We would like to thank Faculty of Public Health for funding this community service through DIPA FKM number: T/66/UN16.12/PT.01.03/KI-PKM/2025

REFERENCES

- Al Mushaikhi, M., Taylor, J., Donagh, B., & Swift, A. (2025). Health Education, its Methods and Effects on Parents' Knowledge, Attitudes, and Behaviours to Prevent Unintentional Child Injuries at Home: A Systematic Review. *Child Care in Practice*, 31(2), 210–235. <https://doi.org/10.1080/13575279.2022.2121682>.

- Carlesso, D. A., Amaral, L. A., Arelhano, G. E., Castagnoli, J. de L., dos Santos, E. F., & Novello, D. (2025). Use of Whole Foods: Educational Action for School Age Children. *Revista De Estudos Interdisciplinares*, 7(4), 01–18. <https://doi.org/10.56579/rei.v7i4.1769>
- Dewi, R. K., Mahmudiono, T., Yuniar, C. T., Zebadia, E., Sahila, N., Wijanarko, M. A. V., Haliman, C. D., Adrianus, R., & Tang, S. G. H. (2023). Nutrition Education has Significant Impact on Perceived Barriers to Healthy Diet among Adults with and without COVID-19 History. *Journal of Public Health in Africa*, 14(11), 2430. <https://doi.org/10.4081/jphia.2023.2430>
- Dewi, R. K., Rahmy, H. A., Firdaus, & Symond, D. (2020). Pelatihan Daring Emo Demo pada Kader Kesehatan Puskesmas Pangkalan dalam Rangka Penanggulangan Anemia pada Ibu Hamil. *Logista*, 4(2), 298–304.
- Dewi, R. K., & Satriya, M. A. (2024). Edukasi Gizi sebagai Bentuk Pencegahan Stunting pada Anak – Anak Siswa TK Kartika Bunda. *Warta Pengabdian Andalas*, 31(4), 731–737. <https://doi.org/10.25077/jwa.31.4.731-737.2024>.
- Diba, F. (2025). Makanan Ultra-Proses, Inovasi dalam Industri Makanan Modern. *Ibnu Sina*, 24(1), 191-201. <https://doi.org/10.30743/ibnusina.v24i1.798>
- Faza, F., Bafani, U. F. F., & Fikha, I. I. (2023). Ultra-Processed Food can be a Mediator Between Food Security Status and Overweight or Obesity among Adults: A Literature Review. *Amerta Nutrition*, 7(1), 161–174. <https://doi.org/10.20473/amnt.v7i1.2023.161-174>.
- Lubis, S. (2025). The Role of Family-Based Health Education in Preventing Adolescents Diseases. *An Idea Health Journal*, 5(02), 190–197. <https://doi.org/10.53690/ihj.v5i02.433>.
- Mahmudiono, T., Yuniar, C. T., Dewi, R. K., Rachmah, Q., Atmaka, D. R., Zebadia, E., Sahila, N., Wijanarko, M. A. V., Haliman, C. D., & Tang, S. G. H. (2022). Dissecting Supplement and Nutrients Intake of Adults with and without COVID-19 History through the Lens of Health Belief Model. *Nutrients*, 14(21). <https://doi.org/10.3390/nu14214450>
- Monteiro, C. A., Cannon, G., Lawrence, M., Louzada, M. L. da C., & Machado, P. P. (2019). Ultra-Processed Foods, Diet Quality, and Health Using the NOVA Classification System. *Food and Agriculture Organization of the United Nations*.
- Mutawakillah, H., Sari, R., Afiva, N., Thahara, A. R., Nurchalizah, R. Z., & Rosidati, C. (2025). Hubungan antara Konsumsi Ultra-Processed Food dengan Status Gizi : Studi Potong Lintang pada Mahasiswa Kesehatan Masyarakat UIN Jakarta. *Jurnal Gizi dan Dietetik*, 4(1), 9–14. <https://doi.org/10.25182/jigd.2025.4.1.9-14>
- Pagliai, G., Dinu, M., Madarena, M. P., Bonaccio, M., Iacoviello, L., & Sofi, F. (2021). Consumption of Ultra-Processed Foods and Health Status : A Systematic Review and Meta-Analysis. *The British Journal of Nutrition*, 125(3), 308–318. <https://doi.org/10.1017/S0007114520002688>
- Popkin, B. (2019). Ultra-Processed Foods’ Impacts on Health. *Food and Agriculture Organization of the United Nations*.
- Rusfianti, A., & Widyaningsih, V. (2023). The Impact of Ultra-Processed Food Consumption on the Increase of Degenerative Diseases Incidence : A Scoping Review. *Icomesh*, 154–162.
- Sushma, V., Shirsat, P., Sonavane, K., Parsi, S., Ravi, U., Choudary, H., Bindlish, S., Nadler, E. P., Kashyap, R., & Ro, S. (2025). The Impact of Ultra-Processed Foods nn Pediatric

Health. Obesity Pillars, 16(July), 100203.
<https://doi.org/10.1016/j.obpill.2025.100203>

@2025 Dewi et al.

This is an open access article licensed under the terms of a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License (<http://creativecommons.org/licenses/by-nc-sa/4.0>).