

PERSUASIVE LEAFLET PROMOTION MEDIA AND ITS IMPACT ON KIDNEY HEALTH

Herry Prasetyo¹, Handoyo², Hartati³ & Dina Indrati DS⁴

^{1,2,3,4} Prodi Keperawatan Purwokerto, Jurusan Keperawatan, Politeknik Kesehatan Semarang

herryprast73@gmail.com; handoyo28@gmail.com; hartatisasa@gmail.com &
dinaindrati@gmail.com

ABSTRACT

Background: Kidney health is greatly influenced by lifestyle, especially eating and drinking patterns. Lack of self-awareness in the student group due to practical and economic reasons, health education using persuasive leaflets is very important to be carried out to increase awareness and change healthy living behavior.

Research objective: To determine the use of promotional media in the form of persuasive leaflets in increasing compliance with kidney health behavior in students.

Method: This study used a pre-experimental design with a one group pretest-post-test approach. The subjects of the study were 45 students at one of the health colleges in the city of Purwokerto. The intervention was in the form of providing persuasive leaflets designed with the principles of visual communication and simple language. Data were analyzed using a paired t-test to see changes before and after the intervention.

Research results: There was an increase in compliance with kidney health behavior in the student group where before the intervention there were 21 people to only 5 people after the intervention. The level of correlation based on the paired t-test statistical test obtained a value of 0.64 which means it has a moderate correlation coefficient. The p value = 0.000 < 0.005 indicates that there is a significant difference before and after the intervention.

Conclusion and suggestion: Persuasive leaflet promotion media can influence student behavior to maintain kidney health. Students must continue to maintain healthy living behavior because they can be role models and agents of change in society.

Keywords: *media, leaflet, persuasive, health, kidney*

INTRODUCTION

The use of health promotion media such as persuasive leaflets is important to increase everyone's awareness to maintain their health, one of which is maintaining the kidneys. The use of short, cheap and effective leaflet media is expected to bring about changes in improving individual behavior. Leaflet media that is attractively designed and has dense content, leaflets are

able to convey information briefly but clearly, so that it is easily understood by various groups in the social environment (Ariani & Rahmawati, 2021). In today's digital era, leaflet media is not only printed in hard copy form which has economic value, but can also be made in the form of e-leaflets that are easily accessed by every social media user.

Persuasive leaflets not only convey information, but are also designed to persuade or invite and motivate behavioral change. Provocative language, combined with facts, attractive visual images, can encourage readers to change unhealthy habits, such as excessive consumption of processed foods (Rahmawati & Kusumawati, 2020). Excessive consumption of processed foods or what is known as ultra-processed food (UPF) is one of the factors that causes decreased kidney health quality. So that through the use of this leaflet media, it can improve the individual's way of thinking and change unhealthy behavior.

In health promotion, leaflets complement oral counselling. When given in educational activities, leaflets help participants remember the material that has been presented, strengthen understanding, and provide practical direction (Ministry of Health of the Republic of Indonesia, 2020). The use of effective promotional media is important because the consumption patterns of modern society are currently experiencing a significant shift, marked by the increasing consumption of ultra-processed foods such as fast food, artificially sweetened drinks, and packaged snacks. UPFs are generally high in sugar, salt, saturated fat, additives, and low in fiber and essential nutrients (Monteiro et al., 2019). Excessive consumption of UPFs has been associated with various chronic health disorders, including obesity, hypertension, diabetes mellitus, and chronic kidney disease (CKD) (Chen et al., 2020). Therefore, health promotion efforts are needed to increase public awareness of the importance of maintaining a healthy lifestyle.

The kidneys are vital organs that function to filter waste and toxins from the blood, as well as maintain fluid and electrolyte balance. High consumption of UPF can cause the accumulation of harmful substances in the body which increases the workload of the kidneys. In the long term, these risks causing damage to kidney function (Srouf et al., 2019). Therefore, educating the public to reduce UPF consumption is very important in efforts to prevent kidney disease. One effective education method is through persuasive leaflet media, because it is informative, attractive, easy to read, and designed with a persuasive approach that can influence the attitudes and behavior of readers through inspiring language and supporting visuals (Ariani & Rahmawati, 2021). Through this media, information about the dangers of UPF and how to maintain kidney health can be conveyed more effectively to the public, especially students as a productive age group who are vulnerable to consuming UPF.

METHOD

This study was a quantitative study with a pre-experimental approach using one group pretest-post-test design. The study population came from health students and was taken by purposive sampling of 45 respondents who met the inclusion criteria, namely students who had never received education with persuasive leaflet media about kidney health and UPF. Pre-test measurements were carried out before the persuasive leaflet intervention to measure student compliance in reducing UPF consumption. Furthermore, a post-test was carried out 14 days after the leaflet was given to measure changes in their healthy lifestyle. The data obtained were subjected

to descriptive analysis for the distribution. of respondent characteristics and paired t-test statistical tests to determine differences in changes before and after the intervention.

RESULT AND DISCUSSION

This research activity has been carried out by involving 45 health students from one of the Nursing Study Programs in Purwokerto City. The following is the distribution data of respondents based on gender, age, and last education. The data from the pre-post-test measurements are also presented and equipped with correlation and significance values.

Table 1. Data of research respondents

NO	Characteristics	Treatment Group	
		Amount	%
1	Gender		
	Male	4	8,9
	Female	41	91,1
2	Age		
	18-19 years	11	24,4
	20-21 years	32	71,1
	≥ 22 years	2	4,4
3	Last Education		
	SMA	33	73,3
	MA	8	17,8
	SMK	4	8,9
	Kesehatan (Health)		
	Amount	45	100

Based on table 1 above, it can be explained that the gender of respondents who participated in this research activity was mostly female, 41 people (91.1%), and only 4 men (8.9%). Furthermore, the age of students in this study was mostly in the range of 20-21 years, there were 32 people (71.1%), 18-19 years old, there were 11 people (24.4%) and only 2 people (4.4%)

with age ≥ 22 years. The last education before they were currently in college was from SMA 33 people (73.3%), MA 8 people (17.8%) and SMK Kesehatan 4 people (8.9%). Female students tend to consume ultra-processed foods (UFP) more often than male students due to several contributing factors, namely stress and emotional problems, comfort and time, and psychological motivation.

Female students who experience stress are 2.22 times more likely to choose fast food than when they are not stressed and their mental health is stable. The emotional condition of women is very different from male students who experience stress, feelings of discomfort Where they prefer cereals, seafood instead of UFP (Moreno, et al, 2022 & Liana, et al, 2018). This shows that stress in female students is more directly related to the consumption of emotional eating activities UFP. Furthermore, female students with busy academic activities, they feel comfortable choosing to eat and drink UFP and faster access to time plus cheaper costs also strengthen their reasons (Milli, 2025). So, female students, especially those who often cook or curate nutritional intake, can feel tired so they choose practical UFP.

The results of the study showed that students aged 20-21 years like to consume UFP foods and are less aware of the impact of this behavior on their kidney health. Students aged 20-22 years who experience drastic changes in their diet have various reasons including lack of time to cook, so they rely on fast food and the belief that healthy food is expensive and difficult to find (Marchese, et al. 2021). The results of previous research by Nurfaidah et al. (2025) stated that 65.5% of high school students

have a high fast food consumption pattern, and its frequency is significantly related to the increase in students who experience obesity problems. The importance of making changes towards a healthy lifestyle for each individual to have an impact on efforts to maintain the health of their kidneys.

Table 2. Persuasive leaflet media and maintaining kidney health

Respondents	Treatment Group			
	Pre test	Post test	Correlations	P value
Compliance Level:				
Very Compliant	-	1		
Compliant	2	11	0,64	0,00
Quite Compliant	22	28		0
Not Compliant	21	5		
Amount	45	45		

Table 2 shows that before the intervention of this study, there were no respondents who were very compliant in reducing UPF consumption as a form of healthy living behavior. Most of them were in the non-compliant and fairly compliant categories with a total of 21 people (47%) and 22 people (49%) respectively. After the health education intervention with persuasive leaflet media and another measurement after 14 days, the results showed that most students were in the fairly compliant category, 28 people (62%) and compliant, 11 people (24%). However, in this post-test measurement, there were still students who were not compliant in changing their healthy lifestyle. The correlation level based on the paired t-test statistical test obtained a value of 0.64, which means it has a moderate correlation coefficient. The p value = 0.000 < 0.005

indicates that there is a significant difference before and after the intervention.

Students who were given health education with leaflet media had an increased understanding of the role of the kidneys in the body as blood filters, maintaining fluid and electrolyte balance. The next identifiable impact is that students reduce their interest and consumption of foods that are high in sodium, sugar and preservatives where these contents are in UPF. Students in their daily lives and activities are also more likely to choose to drink water and eat fresh food. Previous studies have also found that leaflets are more effective for initial understanding than audio-visual media if given in an educational atmosphere such as seminars, training, or student campaigns (Kusumawardani, 2021). This condition is a fact that the use of leaflets that touch the context of students' lives has a greater impact because it is relevant to their daily lives. Leaflet media allows someone to read information independently, anytime and anywhere, and can be read repeatedly until the message is fully absorbed.

This is very important in kidney health education, because lifestyle changes such as a low-salt diet and drinking water require repeated and consistent understanding. Ramdaniati & Somantri (2022) stated that leaflets are an effective educational tool because they are portable and can be taken home, making it easier for adolescents and young adults to internalize health messages. Persuasive leaflets must be designed in an attractive way to increase understanding compared to plain text media, especially regarding the topic of diet to maintain kidney health (Kusumawardani, 2021). This shows that leaflets can be used as an

effective health education media, especially for groups of students in the transition period from adolescence to adulthood.

CONCLUSION

1. Before the health education intervention using persuasive leaflets, most students were in the category of non-compliant in maintaining their kidney health.
2. There was a change in student compliance to maintain their kidney health by reducing consumption of ultra food process (UFP).
3. Persuasive leaflet promotional media has been proven to have an impact on changes in students' healthy lifestyles as an effort to maintain kidney health.

SUGGESTIONS

1. The University is expected to integrate persuasive leaflet media as part of sustainable kidney health promotion.
2. Health students must be role models for the community to implement healthy living behaviors, especially in maintaining kidney organ health.
3. Further research can develop integrated promotional media to reach groups of adolescents and adults as productive ages more widely and interactively.

ACKNOWLEDGEMENTS

We would like to express our gratitude to the Director of the Health Polytechnic of the Ministry of Health, Semarang, and the Head of the Centre for Research and Community Service who have provided the 2025 Simlitabkes research grant. The research team would also like to thank the students who have participated in this research activity.

REFERENCES

- Ariani, I., & Rahmawati, D. (2021). *Efektivitas Media Leaflet dalam Meningkatkan Pengetahuan Kesehatan pada Remaja*. Jurnal Promosi Kesehatan Indonesia, 16(1), 24–31.
- Rahmawati, A., & Kusumawati, D. (2020). *Peran Leaflet dalam Edukasi Kesehatan untuk Perubahan Perilaku*. Media Informasi Kesehatan, 8(2), 44–50.
- Kementerian Kesehatan RI. (2020). *Pedoman Promosi Kesehatan dengan Media Cetak*. Jakarta: Pusat Promosi Kesehatan.
- Chen, X., Zhang, Z., Yang, H., & Qiu, P. (2020). Consumption of Ultra-Processed Foods and Health Outcomes: A Systematic Review of Epidemiological Studies. *Nutrients*, 12(7), 1955. <https://doi.org/10.3390/nu12071955>
- Monteiro, C. A., Cannon, G., Levy, R. B., Moubarac, J. C., Louzada, M. L. C., Rauber, F., ... & Jaime, P. C. (2019). Ultra-processed foods: what they are and how to identify them. *Public Health Nutrition*, 22(5), 936-941. <https://doi.org/10.1017/S1368980018003762>
- Srour, B., Fezeu, L. K., Kesse-Guyot, E., Allès, B., Méjean, C., Andrianasolo, R. M., ... & Touvier, M. (2019). Ultraprocessed food intake and risk of chronic kidney disease: a prospective cohort

- study. *Clinical Nutrition*, 38(3), 1321–1328.
<https://doi.org/10.1016/j.clnu.2018.05.006>
- Liana, A.P; Suharno & Panjaitan, A.A. (2018). Hubungan antara pengetahuan tentang gizi seimbang dengan indeks masa tubuh pada mahasiswa. *Jurnal Kebidanan* Vol 7 No 2. Source: <http://journal.akpb.ac.id/index.php/JK/article/view/10>
- Moreno, M.R. et al. (2022). Ultra-Processed Foods and Drinks Consumption Is Associated with Psychosocial Functioning in Adolescents. *Nutrient Journal* 14 (22). Source: https://pmc.ncbi.nlm.nih.gov/articles/PMC9694351/?utm_source=chatgpt.com
- Milli Hill (2025). *Ultra Processed Women*. The Times
- [Marchese, L](#), [Katherine M Livingstone](#), [Julie L Woods](#), [Kate Wingrove](#), [Priscila Machado](#). (2021). Ultra-processed food consumption, socio-demographics and diet quality in Australian adults. *Public Health Nutr Journal* 25(1) page 94–104. Source:
- Nurfaidah dkk. (2025). Hubungan Konsumsi Fast Food dengan Obesitas pada Remaja di SMA Negeri 5 Makassar. *Al GIZZAI: Public Health Nutrition*.
- Kusumawardani, S. (2021). *Perbandingan Media Leaflet dan Audiovisual terhadap Kepatuhan Edukasi Gizi Ginjal*. *Jurnal Ilmiah Kesehatan Media Husada*, 10(2), 160–168. ojs.widyagamahusada.ac.id
- Ramdaniati, A., & Somantri, W. (2022). *Pencegahan kesehatan remaja: Pendidikan kesehatan dan peran keluarga di daerah pesisir*. ResearchGate.
<https://www.researchgate.net/publication/377743818>