GENIUS JOURNAL
general nursing science journal
e-ISSN: 2723-7729
Vol. 00 No. 00 PP. 00 E-ISSN 2723-7729

The Influence of Health Education Using Leaflets and Flashbacks on Patient Knowledge about Gastritis

Valenchia Geraldyne Latupapua[1], Rima Berti Anggraini[1], Hermain[1]
[1]*Department of Nursing, Institut Citra Internasional, Bangka Belitung Indonesia*

Correspondence author: Valenchia Geraldyne Latupapua
Email: valengeraldyne20@gmail.com
address : Jl. PulauPelapas RT 013 Desa Beluluk Kabupaten Bangka Tengah Provinsi Kepulauan Bangka Belitung. 085783051682
DOI:

ABSTRACT

Introduction: Gastritis, or what we commonly know as stomach ulcers, is the beginning of a disease that can disrupt a person's quality of life. According to WHO data, the incidence of gastritis in Indonesia is 40.8%. This is due to a lack of public awareness about gastritis.
Objective: This study aims to determine the effect of health education using leaflets and flipcharts on patient knowledge about gastritis.
Method: The study used a quasi-experimental design with a two-group pretest and posttest. The sample size was 82 patients. Quota sampling was used as the sampling technique. The instruments used were leaflets, flipcharts, and questionnaires. Data were analyzed using a paired sample t-test and an independent t-test with a 95% confidence level (α 0.05).
Result: The results of the study indicate that health education using leaflets and flipcharts has an effect on patient knowledge about gastritis. The results of each study using leaflets and flipcharts obtained a p-value of (0.000) < α (0.05). This data was also analyzed using a T-test of different variants, which showed a difference in the average level of patient knowledge after receiving health education about gastritis using leaflets and flipcharts. Judging from the average score of patient knowledge using leaflets and flipcharts, health education using flipcharts proved more effective in increasing patient knowledge about gastritis. The recommendation from this study is the need to increase awareness and commitment to providing information about gastritis, preferably using flipcharts and leaflets.

Article in press 2025 - https://genius.inspira.or.id/index.php/gj

Conclusion: The suggestion from this research is the need to increase awareness and commitment to be willing to provide information about gastritis, preferably using flipchart media and also through leaflets.

Keywords: health education, gastritis, leaflets

Introduction

Gastritis, or what we commonly know as stomach ulcers, is a non-communicable disease often underestimated, even though gastritis is the beginning of a disease that can disrupt a person's quality of life (Sinaga, Apriza, & Widawati, 2024). Gastritis is an inflammation of the gastric mucosa that causes white blood cells to migrate to the stomach wall in response to abnormalities in that area. Gastritis is classified as acute gastritis and chronic gastritis (Wibowo, 2007 in Harni 2023).

The latest World Health Organization (WHO) survey data in 2022 showed that the percentage of gastritis sufferers in several countries globally is quite high: 22% in the UK, 31% in China, 14.5% in Japan, 35% in Canada, and 29.5% in France. According to WHO data, the incidence of gastritis in Indonesia is 40.8%. In Southeast Asia, approximately 583,635 of the total population are affected annually (Jusuf et al., 2022 in Sinaga, Apriza, & Widawati, 2024).

Data from the Indonesian Ministry of Health in 2022 shows that gastritis ranks sixth among inpatients, accounting for 33,580 (60.86%), while outpatients rank seventh among gastritis cases, accounting for 201,084. In some regions of Indonesia, the prevalence of gastritis remains quite high, reaching 40.8%, with a prevalence of 274,396 cases, making it the fourth-highest in the world for gastritis. The highest incidence of gastritis in several Indonesian cities is in Medan (91.6%), followed by Jakarta (50%), Denpasar (46%), Palembang (35.5%), Bandung (32.5%), Aceh (31.7%), Surabaya (31.2%), and Pontianak (31.1%) (Yunanda et al., 2023). Data from the Bangka Belitung Islands Provincial Health Office shows an increase in gastritis cases from 2019 to 2020. In 2019, there were 1,393 cases, 2,663 cases in 2020, and another increase in 2023, reaching 3,523 cases (Bangka Belitung Islands Provincial Health Office, 2023). Data from the Central Bangka Regency Health Office shows that there were 1,220 cases of gastritis in 2021, 1,791 cases in 2022, and a significant increase in 2023, reaching 2,459 cases. In 2024, gastritis cases in Central Bangka Regency reached 1,679 cases Data from the Pangkalan Baru Community Health Center (UPTD) in Central Bangka Regency shows that gastritis was among the top 10 most common diseases throughout 2021, ranking fourth with 135 cases. A significant increase occurred in 2022, with 296 cases, 399 cases in 2023, and 410 cases in 2024. This suggests that gastritis has increased in the Pangkalan Baru Community Health Center over the past four years (UPTD Puskesmas Pangkalan Baru, 2024). Many people still believe that gastritis is caused by eating late and that they treat it by eating rice. This is due to a lack of public knowledge about gastritis. The causes of gastritis are generally divided into two main categories: internal and external factors. Internal factors refer to conditions that cause excessive gastric acid secretion and certain external substances that cause gastric infection and irritation. Furthermore, stressful situations, such as anxiety, fear, and overthinking, increase gastric acid production, which can irritate the gastric mucosa and, if left untreated, lead to gastritis (Sinaga, Apriza, & Widawati, 2024).

The impact of gastritis can disrupt daily activities due to various symptoms such as heartburn, burning, nausea, vomiting, weakness, loss of appetite, and other symptoms. If this disease is not optimally treated and allowed to become chronic, gastritis can develop into a

Article in press 2025 - https://genius.inspira.or.id/index.php/gj

gastric ulcer, which ultimately leads to complications such as bleeding, peritonitis, and even death (Harni, 2023). Gastritis is a common condition and is increasing in prevalence due to various factors, including a lack of nutritional knowledge, an unhealthy lifestyle, and increased activity (including homework and schoolwork) that leads to forgetting to eat. Gastritis typically affects adolescents and adults, so knowledge is essential for treating and, better yet, early prevention (Sinaga, Apriza, & Widawati, 2024).

Research conducted by Destiyanih, Hisni, & Fajariyah (2022) found that health education influenced respondents' preventive behavior regarding gastritis. This was due to the provision of flipcharts, which increased respondents' interest in learning and studying, leading to an increase in knowledge and preventive behavior (Destiyanih, Hisni, & Fajariyah, 2022).

Based on a preliminary survey conducted by researchers from December 3, 2024, to December 5, 2024, through brief interviews and a questionnaire containing 23 questions about gastritis knowledge to 30 people seeking treatment at the Pangkalan Baru Community Health Center, 27 of the 30 (90%) experienced gastritis (ulcers). Fifteen respondents (50%) stated that this was due to irregular eating habits, frequently eating late, frequent consumption of spicy and sour foods, and carbonated or caffeinated drinks. Respondents indicated that they were not fully aware of gastritis and how to prevent it.

From the description above, the researcher is interested in conducting research with the title "The Effect of Health Education Using Leaflet and Flip Sheet Media on Patient Knowledge About Gastritis in the Pangkalan Baru Community Health Center Work Area in 2025".

Objective

This study aims to determine the effect of health education using leaflets and flipcharts on patient knowledge about gastritis.

Method

This study used a quasi-experimental design with two trial groups (pre-test and post-test). The sample size was 82 patients. The sampling technique used quota sampling. The instruments used were leaflets, flipcharts, and questionnaires. This study was conducted from June 10, 2025, to June 20, 2025, at the Pangkalan Baru Community Health Center, Central Bangka Regency. Primary data in this study were respondents who received treatment at the Pangkalan Baru Community Health Center, secondary data included books, journals, reviews, documentation, and other data sources related to this study. Data were analyzed using paired sample t-tests and independent t-tests with a 95% confidence level (α 0.05).

Result

Table 1. Patient Knowledge about Gastritis Before and After Health Education Using Leaflets

Knowledge Level	N	Mean	SD	SE	r	p
Before Health Education	41	46.1	14.812	2.313	0.446	0.000
After Health Education	41	66.22	19.358	3.023		

Based on the paired sample t-test above, the p-value (0.000) < α (0.05) is obtained, therefore, H0 is rejected. It is concluded that there is a difference in the average level of patient knowledge before and after receiving health education about gastritis using leaflets. The correlation before and after receiving health education using leaflets was 0.446, which is categorized as a moderate correlation, in the range of 0.26-0.5. Thus, it can be said that health education using leaflets given to patients has proven effective in increasing patient knowledge about gastritis.

Table 2. Level of Patient Knowledge about Gastritis Before and After Health Education Using Flip-Flop Media

Knowledge Level	N	Mean	SD	SE	r	P
Before Health Education	41	54.63	11.090	1.732	0.566	0.000
After Health Education	41	79.15	11.774	1.839		

Based on the paired sample t-test above, the p-value (0.000) < α (0.05) is obtained, therefore, H0 is rejected. It is concluded that there is a difference in the average level of patient knowledge before and after receiving health education about gastritis using flip-flop media. The correlation before and after receiving health education using flip-flop media was 0.566, which is categorized as a strong correlation, in the range 0.51-0.75, thus it can be said that health education using flipchart media given to patients has proven effective in increasing patient knowledge about gastritis.

Table 3. Differences in Average Patient Knowledge about Gastritis After Health Education Using Leaflets and Flip-Flop Media In the Pangkalan Baru

Knowledge Level	N	Mean	SD	SE	F	T
Health Education Using Leaflets	41	66.22	19.358	3.023	0.001	0.001
Health Education Using Flip-Flop Media	41	79.15	11.774	1.839		

Based on the Homogeneity of Variance Test above, the p-value (0.001) < α (0.05) indicates that H0 is rejected. It is concluded that the variance in the knowledge level of patients who received the leaflet intervention differs from the variance in the knowledge level of patients who received the flip-flop media. Based on the T test of different variants, p (0.001) < α (0.05) was obtained, so H0 was rejected, it was concluded that there was a difference in the average level of patient knowledge after being given health education about gastritis using leaflets and flipcharts, seen from the average score of the level of knowledge of patients who were given health education using leaflets, namely 66.22 and the average score of the level of knowledge of patients who were given health education using flipcharts, namely 79.15, indicating that the level of knowledge of patients who were given health

Article in press 2025 - https://genius.inspira.or.id/index.php/gj

education using flipcharts was higher than that of patients who were given health education using leaflets, thus it can be said that health education using flipcharts given to patients was proven to be more effective in increasing patient knowledge about gastritis.

Discussion

Researchers believe that providing health education using leaflets is expected to change patient behavior to prevent gastritis recurrence. In addition to being based on knowledge, supporting factors are also needed to ensure proper and correct application of this knowledge, such as support from others, such as family, healthcare workers, and the surrounding community. Therefore, health education, which begins with increased knowledge, is the first step in changing individual behavior toward healthy behavior. Without knowledge, a person will lack a basis for making decisions and determining actions. Therefore, with increased knowledge, it is hoped that individuals can make decisions and take action to prevent gastritis recurrence, thereby reducing morbidity and even mortality due to gastritis, as early prevention offers a significant chance of recovery.

According to Sinaga et al. (2024), there was a difference in the average knowledge of gastritis in patients before and after receiving health education using leaflets. This suggests that health education using leaflets has an impact on patient knowledge about gastritis (Sinaga, Apriza, & Widawati, 2024). Previous research has shown that health education has a positive influence on increasing patient knowledge and changing attitudes.

Researchers believe that providing health education using flipcharts is expected to change patient behavior to prevent gastritis recurrence. In addition to being based on knowledge, supporting factors are also needed to ensure proper and correct application of this knowledge, such as support from others, such as family, healthcare workers, and the surrounding community. Therefore, health education, which begins with increased knowledge, is the first step in changing individual behavior toward healthy behavior. Without knowledge, a person will lack a basis for making decisions and determining actions. Therefore, with increased knowledge, it is hoped that individuals will be able to make decisions and take action to prevent gastritis recurrence, thereby reducing morbidity and even mortality due to gastritis, as early prevention offers a significant chance of recovery.

According to Destiyanih, Hisni, & Fajariyah (2022), health education significantly impacted respondents' preventive behavior regarding gastritis. This was due to the provision of flipcharts, which increased respondents' interest in learning and studying, leading to an increase in knowledge and preventative behavior (Destiyanih, Hisni, & Fajariyah, 2022). Data from this study corroborates the findings that health education plays a crucial role in improving patient knowledge, particularly for gastritis patients, by incorporating various educational methods tailored to the patient's needs and characteristics.

Based on research at the Pangkalan Baru Community Health Center, researchers found that after health education using flipcharts, respondents understood the disease, as evidenced by the absence of questions related to gastritis. After receiving health education related to their illness, their knowledge of the disease increases, as they no longer need to fear or worry about managing it, as they already know how to prevent it. Thus, the researcher concluded that "There is an influence of health education using flipchart media on patient knowledge about gastritis in the Pangkalan Baru Community Health Center Work Area, Central Bangka Regency in 2025".

Article in press 2025 - https://genius.inspira.or.id/index.php/gj

This study used a Quota Two Group Pretest and Posttest research design, with 82 samples, 41 patients each, using leaflets and flipcharts. One of the objectives of this study was to determine the difference in the average level of knowledge of gastritis patients who received health education using leaflets and flipcharts about gastritis in the Pangkalan Baru Community Health Center work area of Central Bangka Regency in 2025.

Based on the Homogeneity of Variance Test, the p-value (0.001) < α (0.05) was obtained, so H0 was rejected. It was concluded that the variance in the level of knowledge of patients who received leaflets was different from the variance in the level of knowledge of patients who received flipcharts. The T test of different variants obtained a p value (0.001) < α (0.05) then H0 was rejected, it was concluded that there was a difference in the average level of patient knowledge after being given health education about gastritis using leaflet and flipchart media, seen from the average score of the level of patient knowledge given health education using leaflets, namely 66.22 and the average score of the level of patient knowledge given health education using flipcharts, namely 79.15, indicating that the level of patient knowledge given health education using flipchart media was higher than that of patients given health education using leaflet media, thus it can be said that health education using flipchart media given to patients proved to be more effective in increasing patient knowledge about gastritis. Thus, it can be concluded that health education using flipchart media given to respondents proved to be more effective in increasing respondents' knowledge about gastritis.

Conclusion

The study conducted in the Pangkalan Baru Community Health Center Work Area, Central Bangka Regency, in 2025 demonstrated differences in the average knowledge of gastritis patients before and after receiving health education using both leaflets and flipcharts. The findings also revealed variations in the level of knowledge between patients who received health education through leaflets and those who received it through flipcharts. Among these methods, health education using flipcharts was proven to be more effective in enhancing patients' knowledge about gastritis.

Conflict of Interest

No declare.

Acknowledgement

Researcher would like to thanks to my parents, supervisor, friends, and all parties involved in compiling this research

References

1. Arikunto, S. (2015). *Metode Penelitian Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta.
2. Adiputra, I. M. S., Trisnadewi, N. W., Oktaviani, N. P. W., Munthe, S. A., Hulu, V. T., Budiastutik, I., Faridi, A., Ramdany, R., Fitriani, R. J., Tania, P. O. A., Rahmiati, B. F., Lusiana, S. A., Susilawaty, A., Sianturi, E., Suryana. (2021). *Metedologi penelitian kesehatan*. Yayasan Kita Menulis.
3. Aji, S. P., Nugroho, F. S., Rahardjo, B. (2023). *Promosi dan pendidikan kesehatan di masyarakat (strategi dan tahapannya).* Padang: PT Global Eksekutif Teknologi.
4. Darsini., Fahrurrozi., Cahyono, E. A. (2019). Pengetahuan: artikel review. *Jurnal Keperawatan*. Volume 12. Nomor 1.

Article in press 2025 - https://genius.inspira.or.id/index.php/gj

5. Destiyanih, R., Hisni, D., Fajariyah, N. (2022). Pengaruh edukasi kesehatan gastritis terhadap perilaku pencegahan pada remaja di Depok. *Jurnal Promotif Preventif*. Volume 4. No 2.
6. Dinas Kesehatan Provinsi Kepulauan Bangka Belitung. (2024). *Angka kejadian gastritis di Kepulauan Bangka Belitung.*
7. Harleli. (2025). Upaya peningkatan sikap remaja dalam pencegahan gastritis melalui pola makan sehat. *Jurnal Pengabdian Kolaborasi dan Inovasi IPTEKS*. Vol. 3 No 2.
8. Harni, S. Y. (2023). *Asuhan keperawatan gastritis pada lansia*. Daerah Istimewa Yogyakarta: CV Mitra Edukasi Negeri.
9. Jatmika, S. E. D., Maulana, M., Kuntoro., Martini, S. (2019). *Buku ajar pengembangan media promosi kesehatan*. Yogyakarta: K-Media.
10. Marbun, D. S. H., Manalu, N. V. (2023). Hubungan pengetahuan dan perilaku pencegahan gastritis pada mahasiswa keperawatan tingkat II. *Jurnal Penelitian Perawat Profesional*. Volume 5 Nomor 2.
11. Miftahussurur, M., Rezkitha, Y. A. A., Itishom, R. (2021). *Buku ajar aspek klinis gastritis.* Jawa Timur: Airlangga University Press.
12. Notoatmodjo, S. (2018). *Metedologi penelitian kesehatan*. Jakarta: PT Rineka Cipta.
13. Sinaga, M. E. G., Apriza., Widawati. (2024). Pengaruh penyuluhan kesehatan menggunakan media leaflet terhadap pengetahuan siswa tentang gastritis di SMAN 1 Perhentian Raja tahun 2023. *Jurnal Kesehatan Terpadu*. Volume 3, No 1.
14. UPTD Puskesmas Pangkalan Baru. (2024). *Angka kejadian gastritis di Puskesmas Pangkalan Baru.*
15. Yunanda, F. T., Wahyurianto, Y., Retna, T., Triana, W. (2023). Gambaran faktor penyebab terjadinya gastritis di Desa Tlogon Aru wilayah kerja Puskesmas Temandang Kabupaten Tuban. *Jurnal Multidisiplin Indonesia*. Volume 2 Nomor 8.

Article in press 2025 - https://genius.inspira.or.id/index.php/gj