

PENDIDIKAN KESEHATAN PENYAKIT GERD PADA SISWA SISWI SMK WIDURI DI LEBAK BULUS JAKARTA SELATAN

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ABSTRAK

GERD adalah suatu kondisi dimana asam lambung naik kembali ke kerongkongan sehingga menimbulkan rasa panas di dada, yang terjadi ketika otot cincin esofagus bagian bawah tidak menutup dengan baik sehingga menyebabkan asam lambung mengalir kembali ke kerongkongan. Penyakit GERD ditemukan terjadi pada remaja usia 12-21 tahun. Secara umum pemahaman remaja mengenai pencegahan GERD masih rendah sehingga mudah memicu penyakit tersebut yang dapat diakibatkan karena aktivitas pembelajaran yang padat sehingga kebiasaan remaja kurang memperhatikan pola makan, dan jenis makanan. Metode penelitian yang digunakan adalah cross sectional dengan sampel sebanyak 35 orang, simple random sampling, Metode edukasi, responden akan diberikan pre-Test dan post-Test penyakit GERD dengan quesinoer. Hasil penelitian meliputi: a). Distribusi berdasarkan gender; GERD banyak dialami oleh wanita b). Gejala yang sering dialami : 1) Mual setelah makan (28,5%), 2). Sakit dada (23%), 3). Naiknya makanan atau asam lambung ke dalam mulut (17,2%). 4). Orang sering bersendawa (14,3%). 5). Bau Mulut (8,5%). c) Sebaran penyebab GERD: 1) konsumsi makanan pedas sebanyak 15 orang (43%), 2). Obesitas sebanyak 10 orang (28,5%), 3) Perokok aktif sebanyak 5 orang (14,3%), 4). Makan dalam porsi besar sebanyak 3 orang (8,5%), 5). 2 orang (5,7%) mengonsumsi makanan bersoda. Metode penilaian menggunakan Pre-Test & Post-Test pada awal dan akhir kegiatan. Kesimpulannya melalui hasil pre-test dan post-test menunjukkan bahwa peserta dapat memperoleh pengetahuan tentang GERD, dan menerapkan teknik relaksasi dengan baik.

Kata kunci : GERD, pencegahan GERD, pengabdian masyarakat

ABSTRACT

GERD is a condition where stomach acid rises back into the esophagus, causing a burning sensation in the chest, which occurs when the muscles of the lower esophageal ring do not close properly, causing stomach acid to flow back into the esophagus. GERD was found to occur in adolescents aged 12-21 years. In general, teenagers' understanding of preventing GERD is still low, so it is easy to trigger this disease, which can be caused by busy learning activities so that teenagers pay less attention to eating patterns and types of food. The research method used is cross sectional with a sample of 35 people, simple random sampling, educational method, respondents will be given a pre-test and post-test for GERD disease with a questionnaire. Research results include: a). Distribution by gender; GERD is experienced by many women b). Symptoms frequently experienced: 1) Nausea after eating (28.5%), 2). Chest pain (23%), 3). Rising food or stomach acid into the mouth (17.2%). 4). People often burp (14.3%). 5). Bad Breath (8.5%). c) Distribution of causes of GERD: 1) consumption of spicy food as many as 15 people (43%), 2). Obesity was 10 people (28.5%), 3) Active smokers were 5 people (14.3%), 4). Eat large portions for 3 people (8.5%), 5). 2 people (5.7%) consumed fizzy foods. The assessment method uses Pre-Test & Post-Test at the beginning and end of the activity. Conclusion: the results of the pre-test and post-test show that participants can gain knowledge about GERD and apply relaxation techniques well.

Keywords : community service, GERD, GERD prevention

PENDAHULUAN

GERD (Gastroesophageal Reflux Disease) is a condition where stomach acid rises back up into the esophagus, causing a burning sensation in the chest, known as heartburn. This condition occurs when the muscles of the lower esophageal ring do not close properly, causing stomach acid to flow back into the esophagus (Munandar & Muhammadong, 2024). GERD is a condition of tissue damage caused by the backward movement of stomach contents. Meanwhile, it occurs when acid from the stomach flows into the esophagus. Inability of the lower esophageal sphincter allows reflux of stomach contents into the esophagus, causing burning pain. If there is prolonged reflux it can cause esophagitis, stricture, and possibly metaplasia or cancer (Bunting, J., & de Klerk, M., 2022). GERD is an important health problem that can cause significant reduction in quality of life and morbidity. Successful treatment of GERD symptoms has been associated with significant improvements in quality of life, including decreased physical pain, increased vitality, physical and social functioning, and emotional well-being (Clarrett, & Hachem, 2018).

GERD is a health problem that generally occurs in various countries. In the United States, around 7% of the population experiences heartburn with an estimate of around 20% - 40% suffering from GERD, in Iran the prevalence ranges from 6.3% - 18.3%, in Palestine reaching 24%, in Japan and Taiwan around 13% - 15% (Tayibu et al., 2024). According to WHO in Indonesia, the incidence of gastritis in several regions in Indonesia is quite high with a prevalence of 274,396 cases out of a population of 238,452,952 (Zebua & Wulandari., 2023). Data for 2023 shows that around 27.4% of Indonesian people have experienced GERD, with an increase in cases of 4% every year (Rosyidi, 2024). The incidence of GERD in adolescents ranges from 10% to 15%. According to research from the Journal of Pediatric Gastroenterology and Nutrition in 2023, around 20% of teenagers in the world experience symptoms of GERD. In Indonesia, research by the Indonesian Gastroenterology Association noted that GERD affects around 8.5% of the adolescent and young adult population aged 15–24 years (Fani, 2024). This condition can disrupt a teenager's quality of life and has the potential to cause long-term health complications if not treated properly (Atmojo dkk., 2024).

The pathophysiology of GERD is multifactorial and is best explained by various mechanisms involved, including the influence of the tone of the lower esophageal sphincter, the presence of a hiatal hernia, esophageal mucosal defense against the refluxate and esophageal motility (Antunes, Aleem, & Curtis, 2023). American College of Gastroenterology, states that GERD is a condition where stomach acid flows into back and up into the esophagus. If acute GERD is not treated, it causes chronic GERD resulting in reflux of acid fluid through the Lower Esophageal Spincter (LES) whose condition is weakening to in the esophagus or throat (oropharynx), which results in tissue injury esophagus (Desai et al, 2024). Repeated exposure to stomach acid can cause injury to esophageal tissue, such as esophagitis, esophageal stricture, or a precancerous condition known as Barrett's esophagus (Savarino et al, 2020).

GERD (Gastroesophageal Reflux Disease) occurs when acid from the stomach flows into the esophagus. Factors that may contribute to reflux include weight gain, fatty foods, caffeinated or carbonated drinks, alcohol, smoking, and medications. In addition, factors that contribute to gastroesophagitis include: the angle of the cardioesophageal junction, the action of the diaphragm, gravity (i.e. upright position), and the patient's age. In addition, drugs that reduce LES pressure include anticholinergics, antihistamines, tricyclic antidepressants, calcium channel blockers, progesterone, and nitrates (Bunting & De Klerk., 2022). Irregular eating patterns and consuming unhealthy foods are very influential in that they stimulate stomach acid production (Zebua & Wulandari., 2023). Causes of GERD Differences in GERD prevalence rates in each country can occur due to changes in social, economic and lifestyle factors (Tayibu et al., 2024).

Epidemiological estimates of the prevalence of primary GERD are that sufferers generally experience nausea, heartburn and regurgitation. Apart from that, the general population complains of dyspepsia, epigastric pain, nausea, bloating, belching, chronic cough, asthma, chronic sore throat, feeling full quickly, belching, and bloating. Chest pain is likely to occur so differentiating cardiac and non-cardiac chest pain is necessary before considering GERD as a cause of chest pain (Katz, Gerson, & Vela., 2013). Gastric acid that comes out of the stomach organ causes irritation and burns the esophagus so that sufferers feel heat in the chest (heartburn) and neck and even throat. Other symptoms of GERD can cause the taste of food to return, the tongue feels bitter, and sometimes causes fever (Ota et al., 2021).

Gastritis tends to attack teenagers to adults, including students who have irregular eating patterns due to busy lecture schedules, which triggers students not having time to eat breakfast and preferring to consume fast food that is high in fat, such as fried food, which has the potential for ulcers (Zebua & Wulandari., 2023). In teenagers, GERD can be triggered by the level of stressors in carrying out the learning process. Apart from that, teenagers often have poor breakfast patterns, as well as choosing unhealthy menus and types of food (Eka Novitayanti, 2020). In general, teenagers' understanding of preventing GERD is still low, so it is easy to trigger the disease. Apart from that, teenagers' habits pay less attention to food patterns and types of food (Waluyo & Solikah, 2023). He increasingly advanced and developing technology, industry and socio-economic improvements are changing the behavior and lifestyle of people, especially teenagers. Following the trend of consuming foods low in nutrition and high in saturated fat is a common thing for teenagers today (Hasibuan dkk, 2024).

One of the efforts to prevent GERD in teenagers can be done by providing education through health education. education about how to prevent and treat disease. Increasing stomach acid in teenagers has a positive impact in increasing knowledge (Waluyo & Solikah, 2023). When counseling is carried out, there are discussion activities and question and answer session which aims to give participants the opportunity to convey things they don't know about maintaining their health. So that through interactive discussions teenagers can be more nurturing better body condition and adopt a healthier lifestyle (Anggeria dkk, 2024). Kegiatan edukasi GERD pada Generasi Z memiliki dampak yang positif serta mampu memberikan kontribusi terhadap upaya preventif serta mencegah komplikasi lebih lanjut. (Atmojo dkk., 2024). Through health education about GERD, overall participants experienced 100% increased knowledge about GERD. The outreach carried out can increase awareness of the importance of maintaining a healthy lifestyle (Susanto, Sapundani, & Basuki, 2023).

According to data obtained directly from several Widuri Vocational School students, the disease that students often experience is GERD. In accordance with research conducted by Eka Novitayanti (2020) that stomach acid disease which attacks teenagers aged 12-21 years is 25.5% of 170 sufferers covering all age groups. Considering that GERD disease is more common in teenagers and adults, the author is interested in studying more deeply about GERD disease. Realizing the importance of public understanding about GERD and how to prevent it, first semester D3 Nursing students together with STIKes Mayapada held outreach activities. This activity aims to increase public knowledge regarding the symptoms, causes, risk factors and management of GERD. It is hoped that counseling will provide useful information to encourage people to be more alert and prevent the occurrence of GERD, as well as understand when to seek medical help.

METHOD

The research method used cross sectional with a sample of 35 consisting of 23 women and 12 men, using a descriptive analytical design. The sampling technique used in this research is simple random sampling. Educational methods, respondents will be given a pre-Test and post-

Test for GERD disease with the measuring instrument used in the form of knowledge level questionnaire about GERD before counseling and after. Implementation of community service activities includes: Initial preparation, namely conducting literature studies, creating educational materials about the prevention and management of GERD. The Chief Executive asks for approval from the chairman of the LPPM, and the Chairman of Stikes for PKM activities. Target preparation through coordination with Widuri Vocational School in planning the time and place of implementation. Implementation activities include: registration of participants who attend, giving pre-tests to participants, providing materials, demonstrating the implementation of deep breathing relaxation techniques to reduce pain. The termination session includes: information on pre and post test results, reinforcement for participants to be able to practice the material that has been provided in daily activities, evaluation of activities and documentation.

RESULTS AND DISCUSSION

Before The data analysis used is univariate analysis aimed at describing the characteristics of each research variable and bivariate analysis to determine the relationship between two variables, namely the independent variable and the dependent variable.

Table 1. Gender Frequency Distribution

Sex	GERD	NON GERD	Total
Male	3 (13%)	20 (87%)	23
Female	4 (33 %)	8 (67%)	12
Total	7	28	35

The total number of participants was 35 people consisting of: 28 people were female, while there were 7 people who were male. The data results showed that there were 20 female participants who experienced GERD, and 8 male participants. Meanwhile, the remaining 7 people did not experience GERD, consisting of 3 female participants and 4 male participants. Based on the results of GERD research using analytical observational methods using a cross-sectional study design with a sample size of 86 people, it shows that the majority of respondents were women with a total of 66 people (73.3%) (Saraswati, A. P., & Gariato, E. 2021). Other research shows data from a total of 143 respondents consisting of 37 men (25.9%) and 106 women (74.1%), 24 respondents suffering from GERD (16.8%), the majority of whom are women, namely 17 people (70.8%) (Kuswono, Yurizali, & Akbar, 2021).

In contrast to the research results of Muhammad, H. (2023), the results of the study on the Profile of Gastroesophageal Reflux Disease Sufferers at Dr. Hospital. M. Djamil Padang In 2019-2020, based on age and gender, GERD occurred more often in the 30 until 39 year age group, 19 people (29.2%), and more often in men, 36 patients (55.4%). %) while there were only 29 women (44.6%). According to the Ministry of Health of the Republic of Indonesia (Kemenkes, 2022), GERD (Gastroesophageal Reflux Disease) occurs more often in men than women. However, this prevalence may vary depending on population and other risk factors, such as lifestyle, diet, and certain medical conditions

Table 2. Distribution Identification of GERD Symptoms

symptoms	n	%
Nausea after eating	10	28.5
Heart Burn	8	23
Feels like food is rising into your mouth	6	17.2
Frequent belching	5	14.3
Bed breath	3	8.5
The cough doesn't go away	2	5.7

Out of breath	1	2.8
Total	35	100

Based on the Identification of GERD causes table, the results show that the symptoms of GERD generally felt by the participants based on the order of GERD symptoms felt from highest to lowest data are as follows: 1) Nausea after eating as many as 10 people (28.5%), 2). HeartBurn as many as 8 people (23%), 3). As many as 6 people (17.2%) had food or stomach acid rising into their mouths. 4). Frequent belching as many as 5 people (14.3%). 5). Bad breath as many as 3 people (8.5%). 6). There were 2 people (5.7%) who didn't get better. 7). Shortness of breath as many as 1 person 9) (2.8%).

Supporting research by Ajjah, Mamfaluti, & Putra (2020) found that the sequence of GERD symptoms that most frequently occur is nausea, heartburn, regurgitation, and heartburn. Based on severity, the most common symptom is nausea in contrast to Dhiva Maharani's (2024) research, the main symptoms of GERD that arise in sufferers are heartburn, pain or discomfort in the epigastric region, dysphagia, fluid regurgitation, chest pain, hoarseness, cough due to aspiration, and even asthma.

Table 3. Distribution of identification of factors that cause GERD

Faktors that cause GERD	n	%
Consume spicy food	15	43
Obesity	10	28.5
Active smoker	5	14.3
Irregular eating patterns	3	8.5
Consume caffeinated drinks	2	5.7
Total	35	100

Based on table 3, the identification of factors that cause GERD based on the order of GERD symptoms felt from highest to lowest data is as follows: 15 people (43%) consume spicy food. GERD can be treated by reducing consumption of foods that stimulate the stomach, such as spicy foods with high spices, too sour, and avoiding foods that form gas which can cause flatulence (for example sweet potatoes and jackfruit) (Barkah, & Agustiyani, 2021). Obesity was 10 people (28.5%), in accordance with cross sectional research using primary data with a sample size of 37 respondents, that the results of statistical tests showed that there was a relationship between obesity and the incidence of GERD ($p=0.02$) (Dana, Ivan, & Anggraini, 2024). Obese sufferers with abdominal circumference exceeding normal limits can increase the risk of developing GERD because the accumulation. of fat in the abdomen can interfere with the motor function of the esophagus and lower esophageal sphincter (LES), increasing intragastric pressure and stomach capacity. This increase can increase the formation of hiatal hernias which make it easier for gastric reflux to rise into the esophagus and cause GERD (Šimunić, M., & Meštrović, A., 2018).

There are 5 active smokers (14.3%), in accordance with research that conventional smoking has a significant influence on the incidence of gastritis as evidenced by data of 54.3% of GERD occurrences caused by smoking behavior (Nurhamidah, Sophia, & Astuti, 2024), which supported by research by Dhiva Maharani, S. (2024) that smoking is one of the factors that can cause GERD. Irregular eating patterns were 3 people (8.5%), in accordance with research by Artini, Prasetyo & Lestari (2022) that GERD generally occurs in people who have irregular eating patterns. GERD occurs because the time needed to help digest food is 4 hours depending on the amount of food. When the stomach is empty, stomach acid will digest the mucosal lining of the stomach, resulting in pain. According to Hidayat, Susanto, & Lestari, (2023) in Literature Review: The Relationship between Eating Habits and Dyspepsia in Adolescents. *Amerta Nutrition*, 7(4) that bad eating habits can cause various diseases due to

consumption of unbalanced food in the body. In line with other research conducted on medical students in Chennai, South India with a total of 263 subjects, it was reported that there was a relationship between skipping meals and the occurrence of GERD ($p= 0.037$).

2 people (5.7%) consumed caffeinated drinks, these results are in accordance with the research results of Ilham, M. I. (2019) that there is a relationship between caffeine consumption patterns and the incidence of GERD in students. GERD patients are advised to maintain their weight and avoid bad eating habits by preventing GERD factors such as elevating their sleeping position after eating, reducing consumption of coffee, spicy foods, carbonated drinks, and fat intake as recommended by the American College of Gastroenterology (Ajjah, Mamfaluti, & Putra, 2020).

Table 4. Distribution of Pre-Test GERD Understanding Level

Question 1-5	Percentage (100 %)	
	Correct	Wrong
Question 1	80	20
Question 2	90	10
Question 3	80	20
Question 4	60	40
Question 5	60	40
Total	54	66

Based on the results of the data above, it shows that the understanding of GERD among Widuri Vocational School students involving 35 students is known from the average number of pre-test questions of 5 questions. The results of the questions were 54% answered correctly and 66% answered incorrectly. Based on these results, it can be seen that many students answered correctly on questions no. 1, 2, and 3 regarding definition, GERD, etiology of GERD, and symptoms of GERD. This proves that most students know the discussion. Meanwhile, errors in the answers to questions are found in questions 4 and 5, which discuss how to prevent and initially treat GERD.

Table 5. Distribution of Post-Test GERD Understanding Level

Question 1-5	Percentage (100 %)	
	Correct	Wrong
Question 1	100	0
Question 2	100	0
Question 3	100	0
Question 4	100	0
Question 5	100	0
Total	100	0

Based on the results of the post-test that was given, all questions could be answered correctly by the students, namely with a percentage of 100%. Based on the comparison of the pre-test and post-test results shown in the table above, it can be seen that the counseling participants were able to receive knowledge and increase understanding regarding GERD disease. The lifestyle of today's teenagers influences their eating habits, such as teenagers who are busy with schoolwork and other activities often delay eating or adopt the wrong eating patterns, which if left unchecked can trigger GERD (Hidayat, Susanto, & Lestari, 2022). The counseling had a positive impact on participants as seen from the increase in the percentage of correct answers for each question on the post-test given. It is hoped that this knowledge can provide a solution for students to know the dangers and importance of preventing GERD and that students can prevent and take preventive action against GERD and develop a healthy lifestyle from an early age both for themselves and their surrounding environment.

CONCLUSION

Counseling about GERD succeeded in increasing students' understanding of this disease by up to 100%. Through this activity, students are expected to be able to apply the knowledge gained to prevent and better manage GERD symptoms. Thus, this outreach activity not only provides new information and knowledge, but also encourages participants to be more concerned and responsive to their health, especially regarding preventing and treating GERD. In the future, it is hoped that cooperation between extension workers, health workers and the community can continue to be improved in order to achieve a level of public health through regular outreach programs or the formation of discussion groups that can continue to educate the wider community. Especially for teaching staff, it is hoped that in carrying out community service successfully, they must pay attention to the problemsolving Approach with the hope that the community involved can be active in solving the problems they face.

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