Journal of Positive Psychology & Wellbeing http://journalppw.com
2022, Vol. 6, No. 2, 560 – 569 ISSN 2587-0130

The Effect of Giving Mixed Juice of Papaya (Carica *papaya)* and Honey (Lyopercisum *Esculentum)* on Intensity of Stomach Pain in Patients with Gastritis

Dali[1], Sitti Rachmi Misbah[2], Asminarsih Z.P[3], Harlyanti Muthma'innah Mashar[4], Nurmiaty[5], Agussalim[6]

[1, 3,4]*School of Nursing, Polytechnic of Health Ministry of Health, Kendari, Indonesia*
[2]*School of Nutrition, Polytechnic of Health Ministry of Health, Palangka Raya, Indonesia*
[5]*School of Midwifery, Polytechnic of Health Ministry of Health, Kendari, Indonesia*
[6]*School of Nursing, Polytechnic of Health Ministry of Health, Makassar, Sout Sulawesi Province, Indonesia.*
Correspondence author: Dr. Agussalim, Email: salim170878@gmail.com

Abstract

This study analyzed the Effect of Giving Papaya Fruit Mixed Juice (Carica papaya) and Honey (Lyopercisum Esculentum) on the Intensity of Stomach Pain in Gastritis Sufferers in Posyandu Elderly Talia Village Working Area of Abeli Health Center Kendari City in 2019. The method used is quasi experiment t with pre and post test design with control group. The population in the study was the entire gastritis sufferer with a sample of 60 people (30 cases and 30 people control). Sampling is done by simple random sampling. The data was analyzed using the paired T-Test to analyze differences in pain intensity, and the T-Test pooled test to analyze the effect of giving papaya fruit mixture juice (Carica papaya) and honey (lycopercisum esculentum) decreased pain intensity in people with gastritis. The results of this study, found that there is a meaningful influence on the juice of a mixture of papaya fruit (Carica papaya) and honey (lycopercisum esculentum).

Keywords: Papaya and Honey, Mixed Juice, Pain, Gastritis

Introduction

Gastritis is a clinical condition that indicates inflammation (cellular) due to injury to the gastric mucosa. External causes of gastritis include nonsteroidal anti-inflammatory drugs (NSAIDs), alcohol, chemicals, and radiation [1,2]. In the last decade, the prevalence of gastritis has decreased, but it is still one of the most common serious pandemic infections with the highest mortality rate in gastric ulcers or gastric cancer. This condition is also closely related to the failure to absorb essential vitamins, such as vitamin B12, micronutrients (such as iron, calcium, magnesium, and zinc), diet, and drugs [1,3]. The prevalence of gastritis in Indonesia based on data from the World Health Organization (2012) was 40.8%. Based on data from the Kendari City Health Office, gastritis was still the 10 biggest health problem in Kendari City. Data last 3 years were obtained from the City Health Office Kendari increased cases of gastritis erratic, and successively that: in 2013 a prevalence of 5.5 per 1 million population, in 2014 was 1.9 per 1 million population, and in 2015 the prevalence of gastritis was 2.2 per 1,000,000[4–6]

In a condition of gastritis, there is an attack of stomach pain, so one effort to overcome it is to give papaya fruit juice to treat a sore stomach [7] Papaya (*Carica papaya*), included in the Caricaceae family, is a tropical fruit that is rich in antioxidants (vitamin C, tocopherols, total phenols, and β- carotene) and other bioactive chemical compounds that also have antioxidant

activity (benzyl isothiocyanate). Various parts of *Carica papaya* (leaves, bark, roots, fruit, flowers, and seeds) have been used in various traditional medicines to treat various diseases [8,9]. Papaya contains papain in the form of a protease enzyme that functions to help accelerate the healing of irritation and injury to the stomach wall. The fruit juice of papaya is very suitable used to reduce the acidity of the stomach, so that it can help in treating gastritis. The results of research conducted by Suharyanti et al (2017), regarding the effect of giving papaya juice (*Carica papaya*) on the level of chronic pain in patients with gastritis found that there was a significant difference between the level of pain before and after the giving papaya juice (*Carica papaya*) in the intervention group [10]

Apart from papaya, the community also recognizes honey as an alternative to treat various diseases and has been proven effective. Honey contains sugar, water, several vitamins, especially B complex, and vitamin C, as well as minerals such as calcium, copper, iron, magnesium, manganese, phosphorus, potassium, and zinc. Other honey content is amino acids, antibiotic-rich inhibin, phenol protein and antioxidants, flavonoids, organic acids, carotenoid derivatives, nitric oxide (NO) metabolites, amino acids, and protein. Honey can reduce the activity of cyclooxygenase-1 and cyclooxygenase-2 which show anti-inflammatory activity [11] Honey is effective as an antimicrobial against *Helicobacter pylori* in vitro. The infection caused by *H. pylori* bacteria causes chronic inflammation and significantly increases the risk of developing stomach and intestinal ulcers. Honey can control infection due to H. pylori by inhibiting inflammation that damages the gastric mucosa in vivo [12]

Based on the results of the above studies, giving a mixture of papaya juice with honey is an effective alternative to treat gastritis. The study about giving a mixture of papaya fruit juice and honey to gastritis patients has not been done. While papaya and honey are easy to obtain, available throughout the season in all corners of Indonesia, and have a high nutritional content. This was what encouraged researchers to know more deeply about the effectiveness of giving a mixture of papaya juice (*Carica papaya*) and honey (*Lyopercisum esculentum*) to reduce the intensity of stomach pain in patients with gastritis.

This study aimed to know the effect of mixed fruit juice of papaya (*Carica papaya*) and honey (*Lyopercisum esculentum*) against gastric pain intensity in patients with gastritis in Integrated Healthcare Center (IHC) of Talia village, the working area of Public Health Center of Abeli, Kendari City in 2019. The results of this study were expected to provide information on the use of herbs without side effects, such as papaya and honey as an alternative to overcome the intensity of pain in gastritis patients and to become an alternative for treating the disease through the use of natural local ingredients without side effects.

Method

This study was quasi-experimental with a pre-post test with a control group design. This study compared the effectiveness of giving a mixture of papaya juice and honey to the intensity of pain in patients with gastritis in the intervention and control group. The measurement of pain intensity was done twice, before and after the intervention. The intervention given was the provision of 220 ml of juice (150 grams of papaya, 20 ml of honey, and 50 ml of water), given 2 times a day (morning and evening) for 10 consecutive days so that the frequency of giving juice was 20 times. The population in this study were all adults and elderly who experienced gastritis at the IHC of Talia Village, the working area of Public Health Center of Abeli, Kendari City, totaling 103 people. The sampling technique was *simple random sampling*, a sample of 60 people, consisting of 30 the intervention group and 30 control group. Data analysis used a t-test, both *paired t-test* to determine the effect of the independent variable with the dependent variable. This study received ethical approval from the Health Research Ethics Committee of Health

Polytechnic of Makassar with no. 1182 / KEPK-PTKMKS / XII / 2019.

Results

1. Characteristics of Respondents

The characteristics of gastritis patients studied included gender, age, and marital status. The characteristics were presented in the form of frequency distribution in numbers and percentages (Table 1). From a total of 60 respondents, the highest frequency were women, as many as 47 people (78.3%), most of the largest age category were 30-59 years as many as 30 people (50.0%), and marital status of high frequency was married, namely 35 people (58.4%).

Table 1. Distribution of Characteristics of Respondents

Characteristics	Group				Total	
	Intervention		Control		n	%
	n	%	N	%		
Gender						
Male	6	20	7	23,3	13	21,7
Female	24	80	23	76,7	47	78,3
Age						
30-59	10	33,3	20	66,7	30	50
60-74	15	50	10	33,3	25	41,7
75-90	5	16,7	0	0	5	8,3
Marital status						
Married	12	40,0	23	76,7	35	58,4
Widows	2	6,7	1	3,3	3	5,0
Widower	15	50,0	5	16,7	20	33,3
Single	1	3,3	1	3,3	2	3,3

Source: Primary Data, 2019

2. Description of Pain Intensity for Gastritis Patients Before and After Giving Mixed Juice of Papaya (*Carica papaya*) and Honey (*Lyopercisum esculentum*) in the Intervention and Control Group

The results of the analysis of the distribution of patients with gastritis based on the intensity of pain in the intervention group showed that in the moments before the intervention, the average pain intensity was 5.20 with the highest pain category was severe pain, namely 12 people (40%). After the intervention, the average intensity of pain was 0.27 and SD 0.785 with the highest pain intensity category was not pain, namely 26 people (86.7%). The results of the analysis of the distribution of patients with gastritis based on the intensity of pain in the control group showed that in the moments before the intervention, the average pain intensity was

5.17 (SD = 1.555) with the highest category of pain was in category moderate pain, namely 13 people (43.3%). After the intervention, average pain intensity was 5.40 with SD 1.589 and the highest pain intensity category was severe pain, namely 15 people (50.0%).

Table 2. Distribution of Pain Intensity Before And After Intervention Giving Mixed Juice Papaya Fruit And Honey in Intervention and Control Group

Pain Intensity	Frequency (%)		Mean (SD)	
	Pre	Post	Pre	Post
Intervention Group				
No pain	0 (0)	26 (86.7)	5.20 (1,937)	0.27 (0.785)
Light	11 (36.7)	4 (13.3)		
Moderate	7 (23.3)	0 (0)		
Severe	12 (40.0)	0 (0)		
Control Group				
No pain	0 (0)	0 (0)	5.17 (1,555)	5.40 (1,589)
Light	8 (26.7)	4 (13.3)		
Moderate	13 (43.3)	11 (36.7)		
Severe	9 (30.0)	15 (50)		

3. Analysis of the Effect of Giving Mixed Juice of Papaya (*Carica papaya*) and Honey (*Lyopercisum esculentum*) on the Intensity of Pain in Gastritis Patients

The effect of giving a mixture of papaya juice (*Carica papaya*) and honey *(Lyopercisum esculentum)* on the pain intensity of gastritis patients can be determined by analyzing the difference between before and after the intervention between the intervention and control group.

a. The Difference in Pain Intensity of Gastritis Patients Before and After the Intervention of Giving Mixed Juice of Papaya (*Carica Papaya*) and Honey (*Lyopercisum Esculentum*) in the Intervention Group

Analysis of differences in pain intensity in patients with gastritis before and after intervention in the intervention group was a bivariate analysis. The analysis used was the paired t-test. Table 3 below showed the results of the analysis of differences in pain intensity of gastritis patients in the intervention group before and after the intervention.

Table 3. Analysis of the Difference in Pain Intensity of Respondents in the Intervention Group Before and After Intervention, November 2019 (n 1 = 30)

Pain Intensity	N	Mean	Mean Difference	SD	pValue
Before Intervention	30	5,20	4,93	1,937	0,000
After Intervention	30	0,27		0,785	

Source: Primary Data, 2019

The average pain intensity of patients with gastritis before the intervention was 5.20 with a standard deviation of 1.937. After the intervention, the average pain intensity of gastritis patients was 0.27 with a standard deviation of 0.785. The results of the analysis showed that there was a difference in the pain intensity of gastritis patients before and after the intervention. The average pain intensity of patients with gastritis after the intervention was lower than before intervention in the intervention group ($p = 0.000$; $\alpha = 0.05$).

b. The Difference in Pain Intensity for Gastritis Patients Before and After the Intervention of Mixing Papaya (*Carica papaya*) and Honey (*Lyopercisum esculentum*) Juice in the Control Group

Analysis of differences in pain intensity in patients with gastritis before and after intervention in the control group was a bivariate analysis. The analysis used was the paired t-test. Table 4 below showed the results of the analysis of differences in pain intensity of gastritis patients in the control group before and after the intervention.

Table 4. Analysis of the Difference in Pain Intensity of Respondents in Control Group Before and After Intervention, November 2019 (n1 = n2 = 30)

Pain Intensity	N	Mean	Mean Difference	SD	pValue
Before Intervention	30	5,17	0,23	1,555	0,214
After Intervention	30	5,40		1,589	

Source: Primary Data, 2019

The average pain intensity of gastritis patients in the control group before the intervention was 5.17 with a standard deviation of 1.555. After the intervention, the average pain intensity of gastritis patients was 5.40 with a standard deviation of 1.589. The results of the analysis showed that there was no difference in pain intensity before and after the intervention ($p = 0.214$; $\alpha = 0.05$).

c. The Difference in Pain Intensity of Respondents after Intervention with Mixed Juice of Papaya (*Carica papaya*) and Honey (*Lyopercisum esculentum*) between Intervention and Control Group

Analysis of differences in pain intensity of gastritis patients between the intervention and control group after the intervention using pooled

t-test. Table 5 below showed the results of the analysis of differences in pain intensity of gastritis patients between the intervention and control group after the intervention.

Table 5. Analysis of the Difference in Pain Intensity of Respondents After Intervention with Mixed Juice of Papaya (*Carica papaya*) and Honey (*Lyopercisum esculentum*) between the Intervention and Control Group, November 2019

Pain Intensity	N	Mean	SD	pValue
Intervention group	30	0,27	0,785	0,000
Control Group	30	5,40	1,589	

Source: Primary Data, 2019

In table 5, it was known that there was a difference in pain intensity between the intervention and the control group after the intervention ($p = 0.000$; $\alpha = 0.05$). This showed that the p-value $<\alpha$ which indicated that there was an effect of giving mixed juice of papaya (Carica papaya) and honey (Lyopercisum esculentum) on the intensity of pain in patients with gastritis at IHC of Talia Village, Public Health Center of Abeli, Kendari City in 2019.

Discussion

The results showed that patients with gastritis were mostly female as many as 47 people (78.3%). This is following the research of Nurjannah (2018) which states that there is a significant relationship between gender and the incidence of gastritis, where the percentage of female sufferers is higher than that of men [13]. Rahman (2013) in his research also showed that respondents who suffer from gastritis were more women than men [14] However, further research is needed regarding the relationship between sex and infections caused by *Helicobacter pylori* [15] The high rate of gastritis in women can be caused by the dual role conflicts experienced, especially in women who are married and working. This is reinforced by the theory presented by Ahmad (1995) that multiple role conflicts are closely related to the emergence of anxiety disorders, depression, and feelings of guilt [16] Sources of stress include the lack of time available for rest at home and having to do household chores and take care of children, and if there is poor communication with other family members it causes women to experience stress. Lack of social support from the family can lead to conflict between family and work [17,18] This is what causes stress for women so that it can lead to high rates of gastritis in women.

Based on the age characteristics of the respondents, the highest frequency of age was 30-59 years, namely 30 people (50.0%). There is no significant relationship between age and the incidence of gastritis. This is consistent with the results of research by Nurjannah (2018) which showed that there was no relationship between age and the incidence of chronic gastritis. If viewed from the age frequency distribution of respondents to the incidence of gastritis, the dominance of cases occurred at> 40 years old, namely 28 respondents (66.7%). From these data, it can be said that the incidence of gastritis tends to occur in old age, although statistical analysis shows there is no relationship between age and the incidence of chronic gastritis [19]

The results of the study regarding the characteristics of the respondents' marital status

revealed that the high frequency was married, namely 35 people (58.4%). The incidence of gastritis is not directly related to marital status but is influenced by other factors such as anxiety, stress, and depression. Married women experience more conflict between family and work, compared to single women, this can cause stress, especially for women [18] Married women who work face more problems related to the roles they face, namely as a wife, mother, housekeeper, and a worker [16]. Stress can cause an increase in the production of stomach acid, which causes ulcers in the stomach, especially during times of emotional states, the tension of thoughts, and irregular eating hours. Increased stomach acid levels can irritate the gastric mucosa and if left untreated, it can cause gastritis and ulcers as well as bleeding in the stomach [20]

The mechanism of inflammation in the stomach due to stress is a decrease in the effectiveness of the body's immune system through the effect of the cortisol hormone produced by the cortex of the adrenal glands. Cortisol decreases the production of lymphocytes from the thymus and lymph nodes. The decrease in lymphocyte production causes the individual's immune response against pathogenic bacteria to decrease so that individuals are prone to experiencing gastric infections that have the effect of gastritis [21]. Histopathologically, the inflammatory process in the mucosa and submucosa of the stomach in gastritis patients can be proven by the infiltration of inflammatory cells in the gastric area [22]

Sipponen & Maaroos (2015) explained that if gastritis is not handled properly it will cause complications of other diseases [3] The pain that occurs due to gastritis is very disturbing to daily activities, both for adolescents, adults, and the elderly. Pain due to inflammation of the gastric mucosa caused by irritation and infection factors, if allowed to continue, it will damage stomach function and can increase the risk of developing cancer of the stomach to cause death [23]

The results showed that in the intervention group there was a decrease in pain intensity in patients with gastritis after being given the intervention of giving a mixture of papaya and honey juice by 4.93, while in the control group there was an increase in pain intensity in patients with gastritis after the intervention of 0.23. Furthermore, to prove the effect of giving mixed juice of papaya (Carica *papaya)* and honey (*Lyopercisum esculentum*) in reducing pain intensity, a statistical test was carried out with a *paired t-test*. The paired t-test results showed that there was a significant effect of giving mixed juice of papaya (Carica papaya) and honey (lyopercisum esculentum) on the intensity of gastric pain in patients with gastritis with pain intensity (p = 0.000). There was a significant effect of giving mixed juice of papaya fruit (Carica papaya) and honey (lyopercisum esculentum) on the intensity of gastric pain in gastritis patients in IHC of Talia Village, Public Health Center of Abeli, Kendari City, 2019.

Research on giving a mixture of papaya (Carica *papaya)* juice and honey (lycopercisum *esculentum)* has never been done before. The research that has been done is a separate study examining the effectiveness of papaya juice alone and honey alone in dealing with stomach pain and wound healing. Several studies on the effectiveness of giving papaya fruit juice to gastritis sufferers include research conducted by Indayani et al. (2017) concerning the Effect of Papaya Fruit Juice (Carica Papaya) on Chronic Pain Levels in Gastritis patients with the result that there is a significant effect of giving juice papaya fruit (Carica papaya) to reduce the level of chronic pain in people with gastritis.

Papaya juice is very good for reducing the acidity of the stomach so that it can treat gastritis. Papaya also contains papain, a protease enzyme that is useful to help accelerate wound healing and digest protein (Center for Fruit Studies, 2006). Papaya fruit also contains several minerals such as potassium and magnesium which are weak alkaline minerals, the body needs especially to neutralize stomach acid so that it can prevent and cure gastritis [24]. Papaya is also useful in relieving peptic ulcer pain [25]

The results of this study are in line with the theory presented by Wijayakusuma (2005) that papaya can relieve pain by mashing fresh ripe papaya into juice and then drinking it. Papain

contained in papaya fruit can help accelerate the healing of gastritis because in papain contains 11.6% potassium benzyl glucosinolate in the form of an enzyme that can help to treat dyspepsia symptoms (such as nausea, bloating) & chronic gastritis. This result is supported by Hendra et al., (2014) that papaya (Carica papaya L) is a tropical fruit that is rich in antioxidants such as vitamin C and beta-carotene which are strong antidotes for Reactive Oxygen Species (ROS) and have the ability to stimulate the body to convert toxic substances into compounds that can inhibit oxidative stress [26]Stress inhibition will accumulate in controlling stomach acid at normal limits so that stomach function remains normal and safe from gastric diseases such as gastritis. Honey (Lycopercisum esculentum) is also useful in curing stomach ailments. This is in line with the results of research by Molan (2015), a researcher from the Department of Biological Sciences at the University of Waikato, New Zealand, who found that honey is proven to contain antibiotics that are active against the attack of various disease-causing pathogens and can heal and treat wounds [27]. Various diseases can be prevented and cured by drinking honey regularly, including upper respiratory tract infections, coughs, fever, gastric ulcers, gastrointestinal infections, and skin diseases.

According to Napurwanti (2014), digestive tract disorders can be cured by giving honey [28] This is based on the results of previous research by Salem (1985) in Napurwanti (2014) with the intervention of giving 30 ml of honey to gastritis patients before eating 3 times a day. The results showed that two-thirds of patients experienced improvement from their disease after oral honey administration and their hemoglobin (Hb) levels also increased. In addition to the benefits of honey which have been described above, the following describes the benefits of honey which are described in the Qur'an in surah An Nahl: (68), "And your Lord inspired to the bee, “Take for yourself among the mountains, houses, and among the trees and (in) that which they construct.” (69), “Then eat from all the fruits and follow the ways of your Lord laid down (for you). There emerges from their bellies a drink, varying in colors, in which there is healing for people. Indeed in that is a sign for people who give thought.”

In this study, there were no respondents who experienced moderate pain intensity and severe pain intensity after 20 interventions by giving mixed juice of papaya (Carica papaya) and honey (lycopercisum esculentum). This showed that giving a mixture of papaya (Carica papaya) and honey (lycopercisum esculentum) juice is more effective in reducing pain intensity in gastritis patients. Papaya fruit which contains some minerals such as potassium and magnesium are needed to neutralize stomach acid and the papain content in papaya fruit can accelerate wound healing. If mixed with honey containing antibiotics that are active against the attack of various disease-causing pathogens and accelerate wound healing, it will accelerate even more the process of reducing pain intensity and accelerating the healing process of irritated gastric mucosal wounds in people with gastritis

Conclusion

The results of research conducted on 60 respondents suffering from gastritis, found that there was a significant effect of giving mixed juice of papaya (Carica papaya) and honey (lycopercisum esculentum) on reducing pain intensity in patients with gastritis at IHC of Talia Village, the working area of Public Health Center of Abeli, Kendari City ($p = 0.000 < \alpha = 0.05$), where the pain intensity in the intervention group was lower than the control group after the intervention**.**

Acknowledgements

We give our gratitude to Polytechnic of Health, Ministry of Health, Kendari, that have supported this research. Our appreciation also for all participant that have participated in this study.

Conflict of interest:

The authors have no conflicts of interest to declare.

References

[1] Nisa S. Gastritis (Warm-e-meda): A review with Unani approach. International Journal of Advanced Science and Research 2018; 3 (3):43–5.

[2] Wirth H, & YM. Different Pathophysiology of Gastritis in East and West A Western Perspective.Inflammatory Intestinal Diseases 2016; 1:113–22.

[3] Sipponen P, & MH. Chronic gastritis. Scandinavian Journal of Gastroenterology 2015; 50:657–67.

[4] Dinas Kesehatan Kota Kendari. Pola Penyakit Rawat Jalan di Kota Kendari Tahun 2015. Kendari: Dinas kesehatan kota kendari; 2015.

[5] Dinas Kesehatan Kota Kendari. Pola Penyakit Rawat Jalan di Kota Kendari Tahun 2013. Kendari: Dinas Kesehatan kota kendari; 2013.

[6] Dinas kesehatan kota kendari. Pola Penyakit Rawat Jalan di Kota Kendari Tahun 2014. Kendari: Dinas Kesehatan Kota Kendari; 2014.

[7] Mylanta. Pepaya Pleaser Untuk Tenangkan Lambung 2006.

[8] Chinnala KM, EMM, dan PS. Evaluation Of Antiulcer Activity Of Carica Papaya Seeds In Experimental Gastric Ulcers In Rats. International Journal of Biomedic and Pharmacy Research 2014; 3(1):19–23.

[9] Panzarini E, DM, MS, VC, dan DL,. Administration Dependent Antioxidant Effect of Carica papaya Seeds Water Extract.Evidence-Based Complementary and Alternative Medicine 2014:1–13.

[10] Suharyanti E. I& PS. . Pengaruh Pemberian Jus Buah Pepaya (Carica Papaya) Terhadap Tingkat Nyeri Kronis Pada Penderita Gastritis di Wilayah Puskesmas Mungkid Magelang. Magelang: Fakultas MIPA Universitas Muhammadiyah; 2017.

[11] Vallianou NG, GP, SA, PJ, dan KC. Honey and its Anti-Inflammatory, Anti-Bacterial and Anti-Oxidant Properties.General Medicine: Open Access 2014; 2(2):1–5.

[12] Amaral TY, dkk. Antimicrobial and anti-inflammatory activities of Apis mellifera honey on the Helicobacter pylori infection of Wistar rats gastric mucosa. Food Science Technology 2017; 37(1):34–41.

[13] Nurjannah. Hubungan Antara Umur dan Jeni Kelamin dengan Kejadian Gastritis Kronik Di Klinik Lacasino Makassar. Jurnal Ilmiah Kesehatan Diagnosis 2018;12 (1).

[14] Rahman A. Hubungan Antara Pola Makan Dengan Jenis Gastritis Pada Pasien yang Berobat Jalan di Puskesmas Bone-Bone Kecamatan Bone-Bone Kabupaten Luwu Utara. Makassar: STIK Makassar.; 2013.

[15] Agah S, KH, G-CME, HR, dan AA,. Female gender and Helicobacter pylori infection, the most important predisposition factors in a cohort of gastric cancer: A longitudinal study. Caspian Journal of Internal Medicine 2016:136–41.

[16] Ahmad A. Role conflict and coping behavior of working women. Pertanika J Social, Journal of Science and Humaniora 1995; 3:97–104.

[17] Carlson DW, & PPL, The role of social support in the stressor strain relationship: An examination of work-family conflict. Journal of Management 1999; 25(4):513–40.

[18] Greenhaus JH, & BNJ. Sources of conflict between work and family roles. 10(1). 1985.

[19] Rahmi K. Faktor-Faktor yang Berhubungan Dengan Kejadian Gastritis Pada Pasien yang Berobat Jalan di Puskesmas Gulai Bancah Bukit Tinggi. Padang: 2011.

[20] Suyono S. Buku Ajar Ilmu Penyakit Dalam. Jakarta: Balai Penerbitan FKUI; 2001.

[21] Al-Khalidy HSH, dkk. Role of Adiponectin in Endoscopic Gastritis. Journal of Pure and Applied Microbiology 2018;12 (3):1–5.

[22] Li Z, dkk. Epidemiology of Peptic Ulcer Disease: Endoscopic Results of the Systematic Investigation of Gastrointestinal Disease in China. The

American Journal of Gastroenterology 2010; 105:2570–7.
[23] Saydam G. Memahami Berbagai Penyakit (Penyakit Pernapasan dan Gangguan Pencernaan. Bandung: alfabeta; 2011.
[24] Djanggan Sargowo. PENELITIAN PSIKONEUROIMUNOLOGI : APAKAH STRESS MEMPENGARUHI IMUNITAS DAN MENYEBABKAN PENYAKIT ARTERI KORONER ? Djanggan Sargowo Dosen Fakultas Kedokteran Universitas Wijaya Kusuma Surabaya 2011.
[25] Arif A, dan SU. Farmakologi Dan Terapi. Jakarta: Universitas Indonesia; 2005.
[26] Hendra S, IJ, dan S. Pengaruh Pemberian Jus Buah Pepaya (Carica Papaya L) Terhadap Gambaran Histopatologik Fatty Streak Pada Dinding Aorta Abdominalis Tikus Wistar Jantan Hiperkolesterolemik. Jurnal Biomedik (JBM) 2014; 6(3):179–86.
[27] Molan P. The Antibacterial Activity of Honey: 2. Variation in the potency of the antibacterial activity. Bee World 73 101080/0005772X199211099118 2015.
[28] Napurwanti. Khasiat Madi Bagi Kesehatan. Https://NisapurwantiFilesWordpressCom Artikel965Pdf 2014.