

DIET AND LIFESTYLE FOR THE ELDERLY WITH COMORBIDITIES BEFORE AND DURING THE COVID-19 PANDEMIC

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Abstrak

Penelitian ini bertujuan untuk mengetahui pola makan dan gaya hidup lansia dengan penyakit penyerta sebelum dan selama pandemi covid-19. Penelitian ini menggunakan desain penelitian deskriptif potong lintang. Penelitian ini dilaksanakan di salah satu wilayah kerja Puskesmas Gondang yaitu posyandu lansia Desa Ngrendeng, Kecamatan Gondang, Kabupaten Tulungagung, Jawa Timur, Indonesia pada tanggal 29 November 2021 sampai dengan 10 Desember 2021. Sampel yang digunakan adalah purposive sampling sebanyak 40 subjek. Instrumen yang digunakan berupa kuesioner (google form). Analisis data menggunakan analisis bivariat, univariat, dan multivariat. Tidak terdapat perbedaan bermakna antara frekuensi makan lansia dengan penyakit penyerta sebelum dan selama pandemi covid-19 ($p > 0,05$). Sementara itu, jenis makanan yang dikonsumsi, pola aktivitas, kebersihan lingkungan tempat tinggal, dan personal hygiene lansia dengan penyakit penyerta terdapat perbedaan bermakna antara sebelum dan selama pandemi covid-19 ($p < 0,05$). Secara keseluruhan, terdapat perbedaan yang signifikan antara pola makan dan gaya hidup lansia sebelum dan selama pandemi covid-19.

Keywords: covid-19, diet, gaya hidup, lansia, komorbid

Abstract

This study aims to determine diet and lifestyle of the elderly with comorbidities before and during the covid-19 pandemic. This study used a descriptive cross-sectional study design. This study was conducted in one of the working areas of the Gondang Health Center, namely the elderly posyandu of Ngrendeng Village, Gondang District, Tulungagung Regency, East Java, Indonesia on November 29, 2021 to December 10, 2021. The sample used the purposive sampling of 40 subjects. The instrument used is form of a questionnaire (google form). Data analysis uses bivariate, univariate, and multivariate analysis. There was no significant difference between feeding frequency of the elderly with comorbidities before and during the covid-19 pandemic ($p > 0.05$). Meanwhile, the type of food consumed, activity patterns, cleanliness of the living environment, and personal hygiene of the elderly with comorbidities have significant differences between before and during the covid-19 pandemic ($p < 0.05$). Overall, there have been significant differences between the diet and lifestyle of the elderly before and during the covid-19 pandemic.

Keywords: covid-19, diet, lifestyle, elderly, comorbid.

INTRODUCTION

2020 is a year that has a significant impact on the lives of the world community, including Indonesia. The World Health Organization (WHO) announced the findings of a new type of virus caused by the SARS-CoV-2 Virus and the virus is called corona virus disease-2019 (covid-19) (WHO, 2020). Efforts to prevent and handle this virus continue to be carried out until now. On March 2, 2020, the Indonesian government for the first time announced that there were positive cases of covid-19 patients (Amaliyah et al, 2021).

Weekly trend of covid-19 cases in July 2021, Indonesia is ranked 2nd in Asia and 3rd in the world (Worldmeters, 2021). From March 2020 to July 2021, active cases of

covid-19 in Indonesia experienced fluctuations. Based on data dated July 13, 2021, East Java Province is ranked 4th in Indonesia with a death rate of 14280 people and the number of positive confirmed cases of covid-19 as many as 194361 people (KPCPEN, 2021). Meanwhile, in Tulungagung Regency, as of July 13, 2021, it is ranked 14th in East Java with a cumulative number of cases of 4054 people and a death rate of 74 people (Pemprov Jatim, 2021). This covid-19 virus can affect anyone from babies to the elderly. The elderly group have high risk of being infected with covid-19 (Siagian, 2020).

Comorbidities in the elderly can aggravate complications arising from covid-19 and can even lead to death. The elderly with comorbid diseases are susceptible

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to various diseases including covid-19, this is due to the decreased immune system, especially in the elderly with comorbid diseases (Setyaningsih et al, 2020). Based on basic data collected by the author in Ngrendeng Village, Gondang District, Tulungagung Regency as of June 2021, 70 elderly people are registered and active in the elderly posyandu and more than 50% have comorbid diseases such as hypertension, diabetes mellitus, cholesterol, gout, heart disease, and stroke.

In order to break the chain of the spread of covid-19 infection, the government urges the public to comply with health protocols and self-isolate. Preventing the spread of covid-19 can be done by limiting physical interactions between people which has an impact on a person's diet and lifestyle (Amaliyah et al, 2021). The application of a good lifestyle must be applied, especially by the elderly because it can improve the immune system and can prevent contracting the covid-19 virus. Person's immunity level plays an important role in determining the magnitude of the chance of being infected with covid-19 (Yanti et al, 2020). Good and healthy lifestyle is one of the efforts to maintain health and increase a person's immunity. Indicators of a healthy lifestyle consist of a healthy and balanced diet, physical activity, and non-smoking behavior (Hartono, 2017). The implementation of a balanced and safe daily diet aims to achieve and maintain an optimal nutritional and health status (Amaliyah et al, 2021).

This research study is based on a study with the title "Identification of Healthy Lifestyles in the Elderly in Rahandouna Village, Kediri City" which was conducted before the covid-19 pandemic (Hartono, 2017). The study found that as many as 72.5% of the elderly had carried out a healthy lifestyle. During the author's search, research on diet and lifestyle during the covid-19 pandemic was still widely carried out in adolescence. As a study with the title "Overview of Adolescent Diet Before and During the Covid-19 Pandemic" with the results, namely in the adolescent age group tends to improve their diet during the covid-19 pandemic compared to before the covid-19 pandemic (Fillantri et al, 2020). According to the author, in addition to adolescents, it is also necessary to identify the diet and lifestyle of the elderly during the covid-19 pandemic so that the elderly have a good quality of life and health degrees during the covid-19 pandemic. This study aims to determine the differences in the diet and lifestyle of the elderly with comorbidities before and during the covid-19 pandemic.

METHODS

This study used a descriptive cross-sectional study design to determine whether there were differences in diet and lifestyle of the elderly with comorbidities before and during the covid-19 pandemic. The sample used was 40 subjects with determination using the purposive sampling

method. The sample inclusion criteria are the elderly aged ≥ 60 years, have comorbid diseases, have registered and active posyandu, are willing to be research respondents, and have family members who live in the same house and have smartphones to make it easier to fill out questionnaires. The research took place from November 29, 2021 to December 10, 2021 in one of the working areas of the Gondang Health Center, namely the elderly posyandu of Ngrendeng Village, Gondang District, Tulungagung Regency, and East Java.

Data collection is carried out by filling out a questionnaire in the form of a google form with the filling assisted by family members. The questionnaire contains data on the identity of respondents, comorbid diseases, nutritional screening, and statements related to the diet and lifestyle of the elderly with comorbidities before and during the covid-19 pandemic. Before use, the questionnaire has passed the validity test (Pearson Product moment Correlation test) and reliability (Cronbach Alpha Coefficient test) so that the questionnaire is declared valid and reliable. This research has passed the ethical test from the Health Research Ethics Commission of the Malang State Health Polytechnic with Reg No. 254/KEPK-POLKESMA/2021.

This study used IBM SPSS Statistics 25 Software. Univariate analysis is carried out to determine the frequency distribution of the studied variables. Data normality analysis using the Shapiro-Wilk test obtained abnormal data, so it was continued with a bivariate analysis, namely the Wilcoxon Signed Rank Test. A significant difference was determined $p < 0.05$ with 95 percent CI. Then continued with a multivariate analysis which is used to find relationships between variables. Multivariate analysis using the Linear Log Regression test.

RESULTS

Participants

This study involved 40 elderly people with comorbid diseases who were registered and active in the elderly posyandu of Ngrendeng Village, Gondang District, Tulungagung Regency, East Java.

Table 1. Participants' Characteristics (n = 40)

Characteristics		n	%
Gender	Age (years) (mean $\pm$ SD)	68.1 $\pm$ 5.5	
Male	60-65	4	10
	66-70	7	17.5
	71-75	6	15
	76-80	1	2.5
Female	60-65	11	27.5
	66-70	8	20
	71-75	1	2.5
	76-80	1	2.5
	81-85	1	2.5

Characteristics	n	%
<i>Ethnic</i>		
Java	40	100
<i>Education</i>		
Primary school	20	50
Junior high school	2	5
Senior high school	11	27.5
Bachelor degree	7	17.5
<i>Job experiences</i>		
Housewife	6	15
Farmer	5	12.5
Entrepreneur	11	27.5
Self employed	9	22.5
Government employees	9	22.5
<i>Income</i>		
No income	17	42.5
< regional minimum wage	10	25
≥ regional minimum wage	13	32.5
<i>History of Exposure Covid-19</i>		
Yes	1	2.5
No	39	97.5
<i>Covid-19 Vaccination Status</i>		
Not at all	6	15
Not complete	4	10
Complete	30	75
<i>Nutrition Screening</i>		
Normal nutritional status	20	50
At risk of malnutrition	17	42.5
Malnourished	3	7.5

Table 1 shows the general characteristics of respondents, where the sample of this study tended to be dominated by the female with the age of 60-65 years as many as 11 people (27.5%). In general, 39 respondents (97.5%) had never been exposed to covid-19. One of the efforts to break the chain of spread of covid-19 is by administering vaccines (Mayasari et al, 2021). This study was conducted before the existence of a third vaccination or booster vaccine. The status of covid-19 vaccination in 40 respondents shows that as many as 30 respondents (75%) have been vaccinated against covid-19 completely or as many as 2 times. Vaccination in the elderly group aged >60 years was given as many as 2 doses with a range of administration for 28 days (Kemenkes, 2021). Comorbid groups that are not allowed to vaccinate include hypertension with blood pressure above 180/110 mmHg and diabetes mellitus with acute complications (Kemenkes, 2021). Based on the results of nutritional screening, as many as 3 elderly (7.5%) are included in the malnutrition category and 17 elderly (42.5%) are included in the risk category of malnutrition.

Table 2. Comorbid Disease (n = 40)

Comorbid	Number of responses	Percent of Responses (%)	Percent of Cases (%)
Hypertension	11	15.7	27.5
Diabetes Mellitus	5	7.1	12.5
Cholesterol	23	32.9	57.5
Gout	25	35.7	62.5
Heart disease	3	4.3	7.5
Stroke	1	1.4	2.5
Gastritis	2	2.9	5

Note: using multiple responses test

Table 2 shows comorbid diseases suffered by the elderly. The results of multiple responses found that gout is the most common disease suffered with a total response of 25 people or 35.7%. Based on the percent of cases, it shows that cholesterol and gout have a percentage above 50% which means that more than half of respondents have comorbid diseases of cholesterol and uric acid.

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Table 3. Differences in Eating Frequency, Types of Foodstuffs Consumed, Activity Patterns, Cleanliness of the Living Environment, and Personal Hygiene of the Elderly with Comorbidities Before and During the Covid-19 Pandemic (n = 40)

Variable	p
The frequency of eating before and during the covid-19 pandemic	>0.05
Types of foodstuffs consumed before and during the covid-19 pandemic	<0.05*
Activity patterns before and during the covid-19 pandemic	<0.05*
Cleanliness of the living environment before and during the covid-19 pandemic	<0.05*
Personal hygiene before and during the covid-19 pandemic	<0.05*

Note: using Wilcoxon Signed Rank Test, $\alpha = 0.05$

Table 3 shows the results of the calculation of the different test using the Wilcoxon Signed Rank Test, where the p value (Asymp. Sig. 2-tailed) variable frequency of eating the elderly before and during the covid-19 pandemic of 0.156. This means that the p value of >0.05 which means that H1 is rejected or there is no significant difference between the frequency of eating the elderly before and during the covid-19 pandemic. While the p value (Asymp. Sig. 2-tailed) variable types of foodstuffs consumed by the elderly, activity patterns of the elderly, cleanliness of the environment where the elderly live, personal hygiene (personal hygiene) of the elderly, as well as the overall diet and lifestyle of the elderly with comorbidities before and

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during the covid-19 pandemic of 0.000. This means that the p value <0.05 which means that H1 is accepted or there is a significant difference between before and during the covid-19 pandemic.

Table 4. The Relationship between the Types of Foodstuffs Consumed, Activity Patterns, Cleanliness of the Living Environment, and Personal Hygiene of the Elderly with Comorbidities Before the Covid-19 Pandemic (n = 40)

Effect	df	Partial Chi-Square	p
A*B*C	4	0.000	>0.05
A*B*D	4	0.000	>0.05
A*C*D	2	0.315	>0.05
B*C*D	2	0.001	>0.05
A*B	4	1.525	>0.05
A*C	2	2.039	>0.05
B*C	2	3.087	>0.05
A*D	2	3.480	>0.05
B*D	2	4.018	>0.05
C*D	1	17.051	$<0.05^*$
A	2	45.049	$<0.05^*$
B	2	11.976	$<0.05^*$
C	1	5.005	$<0.05^*$
D	1	25.310	$<0.05^*$

Note: using Linear Log Regression K-way Effects Test

Description:

A = Types of foodstuffs consumed before covid-19 pandemic

B = Activity patterns before covid-19 pandemic

C = Cleanliness of the living environment before covid-19 pandemic

D = Personal hygiene before covid-19 pandemic

Table 4 shows the results of the Liniear Log test before the covid-19 pandemic, it was found that the best models were C*D, A, B with a chi square value of 16.197, df 28, and $p=0.963$. This can be interpreted to mean that there is a relationship that affects the diet and lifestyle of the elderly with comorbidities before the covid-19 pandemic, namely the type of food consumed, activity patterns, and there was an interaction of environmental hygiene and personal hygiene before the covid-19 pandemic.

Table 5. The Relationship between the Types of Foodstuffs Consumed, Activity Patterns, Cleanliness of the Living Environment, and Personal Hygiene of the Elderly with Comorbidities During the Covid-19 Pandemic (n = 40)

Effect	df	Partial Chi-Square	p
E*F*G	4	2.297	>0.05
E*F*H	4	0.000	>0.05
E*G*H	2	0.000	>0.05
F*G*H	2	1.784	>0.05
E*F	4	3.853	>0.05
E*G	2	4.799	>0.05
F*G	2	2.442	>0.05

Effect	df	Partial Chi-Square	p
E*H	2	1.355	>0.05
F*H	2	3.938	>0.05
G*H	1	0.428	>0.05
E	2	35.701	$<0.05^*$
F	2	7.885	$<0.05^*$
G	1	8.398	$<0.05^*$
H	1	39.571	$<0.05^*$

Note: using Linear Log Regression K-way Effects Test, $\alpha = 0.05$

Description:

E = Types of foodstuffs consumed during covid-19 pandemic

F = Activity patterns during covid-19 pandemic

G = Cleanliness of the living environment during covid-19 pandemic

H = Personal hygiene during covid-19 pandemic

While Table 5. shows the results of the Log Liniear test during the covid-19 pandemic, the best models are E, F, G, H with a chi square value of 20.257, df 29, and $p=0.885$. This can be interpreted to mean that there is a relationship that affects the diet and lifestyle of the elderly with comorbidities during the covid-19 pandemic, namely the type of food ingredients, activity patterns, environmental cleanliness, and personal hygiene during the covid-19 pandemic.

DISCUSSION

Diet Before and During the Covid-19 Pandemic

The diet of the elderly affects the degree of health, where a poor diet of the elderly can cause degenerative diseases or can aggravate comorbidities suffered by the elderly (Susilowati and Kuspriyanto, 2016). This is due to improper selection of food types or there are foodstuffs that are harmful to the body, disproportionate amounts of food, and irregular eating frequency.

In this study, the frequency of eating elderly with comorbidities before and during the covid-19 pandemic in the area still falls into the category of irregular. The frequency of eating is said to be good or regular if a person consumes 3 main meals and 2 snacks or snacks in a day (Rusyadi, 2017). Changes in the elderly's body such as decreased memory, decreased taste buds, and tooth loss can cause the elderly's appetite to decrease (Kemenkes, 2016). This can lead to irregular eating frequency.

The breakfast habits of respondents before the covid-19 pandemic were the most in the category of always or consuming breakfast every day with a result of 77.5%. However, during the covid-19 pandemic, respondents' breakfast habits in the category always decreased to 65%. Respondents' lunch habits before the covid-19 pandemic were the most in the category of always or consuming lunch every day with a result of 72.5% and during the covid-19 pandemic lunch habits in the category always increased to

82.5%. Likewise, the dinner habits of respondents who experienced an increase in the always category. Where, before the covid-19 pandemic as much as 65% and during the covid-19 pandemic as much as 67.5%. This is in line with research on the food consumption patterns of the productive age population during the covid-19 pandemic with the results of 37.6% of respondents experiencing an increase in the consumption of the main meal with the amount of 1 – 3 servings / day (Mustakim et al, 2021). However, respondents' breakfast habits have decreased during the covid-19 pandemic (Mustakim et al, 2021). Skipping breakfast can be at risk of getting sick and make the body's immunity decrease, especially during the covid-19 pandemic. An increased risk of type 2 diabetes mellitus, heart disease, and increased deaths from cardiovascular disease can be caused by skipping breakfast (Dieny et al, 2021).

The habit of consuming morning snacks and afternoon snacks respondents were the most in the category of sometimes or consuming morning snacks and afternoon snacks 1 – 2 times / week. Before the covid-19 pandemic, morning snack consumption in the sometimes category was 57.5% and increased during the covid-19 pandemic to 60%. As for afternoon snacks, before the covid-19 pandemic in the category of sometimes as much as 62.5% and during the covid-19 pandemic it increased to 67.5%. This is in line with research on the food consumption patterns of the productive age population during the covid-19 pandemic with the results that as many as 49.6% of respondents experienced an increase in snack consumption or interlude food (Kemenkes, 2020). The increase in the consumption of snacks or interlude foods during the covid-19 pandemic can be caused by feelings of boredom and low physical activity so that individuals divert boredom by eating snacks. During the covid-19 pandemic, there were restrictions on activities and reduced mobility, causing boredom, this is related to decreased dopamine levels in the body so that individuals will divert boredom by eating food (Amaliyah et al, 2021).

In this study, the types of foodstuffs consumed before the covid-19 pandemic showed that out of a total of 40 respondents, as many as 33 respondents (82.5%) still consumed the wrong type of food ingredients. Meanwhile, the types of foodstuffs consumed during the covid-19 pandemic with improper categories decreased to 31 respondents (77.5%). In addition, the types of foodstuffs consumed by the elderly with comorbidities that are included in the right category, before the covid-19 pandemic as many as 6 respondents (15%) and during the covid-19 pandemic increased to 8 respondents (20%). The results of the test of different variable types of foodstuffs consumed by the elderly with comorbidities before and during the covid-19 pandemic, found that the p value (Asymp. Sig. 2-tailed) by 0.000. This means that the p

value of <0.05 which means that H1 is accepted or there is a significant difference between the types of foodstuffs consumed by the elderly before and during the covid-19 pandemic. This is in line with research on respondents in the elderly group, where the type of food consumed in the new adaptation era or during the covid-19 pandemic is included in the category of meeting the recommendations of the Ministry of Health's balanced nutrition guidelines in 2014 (Thania and Thio, 2021).

Basically, nutritional needs in the elderly refer to the principle of balanced nutrition. To prevent and reduce the risk of degenerative diseases, the elderly are recommended to consume a sufficient and nutritionally balanced diet. The message of balanced nutrition for the elderly is to consume a variety of foods, consume foods to meet energy adequacy, limit the consumption of fats and oils, consume iron source foods, get used to breakfast, consume enough mineral water as needed, and do regular physical activity and exercise (Kemenkes, 2012).

The type of food consumed is said to be appropriate if it includes staple foods, animal side dishes, vegetable side dishes, vegetables, and fruits that are consumed every day every meal (Kemenkes, 2012). The types of foodstuffs consumed by the elderly consist of statements on the consumption of staple foods, animal side dishes, vegetable side dishes, vegetables, fruit, mineral water 8 glasses / day, consumption of sugary foods / drinks with a dose of sugar 4 tsp / day, consumption of oily foods or coconut milk with a dose of 3 tsp / day, consuming herbal drinks, and consuming supplements.

The consumption of staple food before the covid-19 pandemic was the most in the category of always or consuming staple food every day, which was 62.5% and during the covid-19 pandemic it increased in the category of always being 72.5%. The consumption of animal side dishes is most in the category of often or respondents consume animal side dishes 3 – 5x / week. Before the covid-19 pandemic, the consumption of animal side dishes in the frequent category was 42.5% and during the covid-19 pandemic it increased in the frequent category to 57.5%. In contrast to the consumption of animal side dishes, respondents' consumption of vegetable side dishes was the most in the category of always or consuming vegetable side dishes every day. During the covid-19 pandemic, the consumption of vegetable side dishes in the category was always 52.5% and increased during the covid-19 pandemic to 57.5%.

The most vegetable consumption in the category is always or respondents consume vegetables every day. Before the covid-19 pandemic, vegetable consumption in the category was always 42.5% and during the covid-19 pandemic it increased to 55%. Meanwhile, fruit consumption before the covid-19 pandemic was at most included in the category of sometimes or respondents

consumed fruit 1 – 2x / week as much as 62.5%. During the covid-19 pandemic, fruit consumption has increased with the most categories, namely sometimes (consumption 1 – 2x / week) and often (3 – 5x / week) with 42.5% each.

The consumption of mineral water as much as 8 glasses / day before the covid-19 pandemic was the most in the category of sometimes or respondents consumed mineral water 1 – 4 glasses / day as much as 45% and during the covid-19 pandemic it increased to the category of frequent (5 – 7 glasses / day) as much as 45%. Consumption of sugary foods/drinks with a sugar dose of 4 tbs/day and consumption of oily or nutritious foods is the most in the sometimes category (consumption 1 – 2x / week). Before the covid-19 pandemic, the consumption of sugary foods/drinks in the category was sometimes as much as 55% and during the covid-19 pandemic it decreased to 52.5%. Meanwhile, the consumption of oily or nutritious food in the category sometimes before the covid-19 pandemic was 70% and decreased during the covid-19 pandemic to 55%.

The consumption of herbal drinks and supplements is most in the category of never. Before the covid-19 pandemic, the consumption of herbal drinks with the never category was 62.5% and decreased during the covid-19 pandemic to 45%. Meanwhile, the consumption of supplements with the category never before the covid-19 pandemic was 40% and decreased during the covid-19 pandemic to 30%.

Based on the results of the study, several respondents mentioned that the consumption of types of food ingredients that have increased during the covid-19 pandemic is the consumption of animal side dishes, vegetable side dishes, vegetables, and fruits. Animal side dishes and vegetable side dishes are high in protein needed by the elderly. The benefits of protein for the elderly to prevent aging, hormone formation, maintain muscle mass and bone density, and increase endurance during a pandemic to avoid covid-19 (Mustakim et al, 2021). Eating vegetables and fruits provides benefits for the elderly. Vegetables and fruits contain fiber that serves to facilitate defecation and help the movement of the colon. In addition, fiber also serves to lower blood cholesterol (Susilowati and Kuspriyanto, 2016). The increase in vegetable and fruit consumption during the covid-19 pandemic is in line with research conducted on samples aged 15-64 years with the results of 32.3% of respondents experiencing an increase in vegetable and fruit consumption during the covid-19 pandemic (Mustakim, 2021). Another study conducted in China also showed that as many as 40% of respondents aged >18 years experienced an increase in vegetable and fruit consumption during the covid-19 pandemic (Wang et al, 2020).

Based on the results of the study, some respondents mentioned that the consumption of types of drinks or

supplements that have increased, namely water, herbs, honey, and supplements or multivitamins. Group of men and women aged >18 years there was an increase in fluid consumption during the covid-19 pandemic (Wang et al, 2020). Drinking enough water for the elderly has several benefits, namely to keep the esophagus from drying out and avoid dehydration (Susilowati and Kuspriyanto, 2016). During the covid-19 pandemic, some respondents experienced an increase in taking supplements/multivitamins, especially vitamin C. In the elderly, vitamin C serves to increase immunity to protect themselves from infection. This is in line with research on respondents aged 15 – 64 years, where as many as 64.7% of respondents experienced an increase in taking supplements or multivitamins with a frequency of consumption of 1 time / day (Mustakim et al, 2021). In addition, it is known that some elderly people have also experienced an increase in terms of consuming herbs and honey. The consumption of herbs has been consumed for a long time by the people of Indonesia with the aim of treatment (Dieny et al, 2021). Eating herbs is also believed to increase immunity, especially during the covid-19 pandemic to avoid the virus. This is in line with research on respondents aged 15 – 64 years, where there was an increase in spice consumption by 34.6% during the covid-19 pandemic which was believed to increase immunity (Mustakim et al, 2021).

Activity Patterns Before and During the Covid-19 Pandemic

In this study, the activity patterns of the elderly with comorbidities before the covid-19 pandemic showed that out of a total of 40 respondents, as many as 1 respondent (2.5%) did activities regularly and increased during the covid-19 pandemic to 8 respondents (20%) who carried out activity patterns regularly. While the rest are still in the category of less regular and irregular. Exercise or physical activity for the elderly is adapted to the abilities and conditions of the elderly. During the pandemic, there are limited movements for the elderly, but the elderly are still encouraged to do physical activity by implementing existing health protocols (Kinasih, 2021). The increase in the physical activity patterns of the elderly during the covid-19 pandemic has a good impact on the health of the elderly and can increase the body's immunity to prevent contracting covid-19. On the contrary, irregular or irregular physical activity patterns of the elderly can reduce the body's immunity which can increase the risk of contracting covid-19. Physical activity is important for the elderly because it can maintain muscle strength, prevent and reduce the risk of disease (Kinasih, 2021).

The frequency of exercise that respondents do is the most in the category of always or respondents do sports every day. Before the covid-19 pandemic, the frequency of

exercise in the category was always 35% and increased during the covid-19 pandemic to 37.5%. Meanwhile, the duration of exercise carried out by respondents was the most in the category of sometimes or <30 minutes. Before the covid-19 pandemic, respondents' exercise duration in the occasional category was 47.5% and increased to 55%. The criteria for physical activity for the elderly are for moderate physical activity, the duration of which is used for at least 30 minutes for 2 – 3 times per week or every day (Kemenkes, 2018). The types of moderate-intensity physical activity that the elderly can do are short-distance walking, cleaning the house, climbing stairs, leisurely cycling, gardening, and so on. While the heavy intensity physical activity that the elderly can do is swimming, yoga, jogging, brisk walking, badminton, and et cetera.

In addition to exercise or physical activity, the elderly also need adequate rest. The results of the study found that the duration of sleep for the elderly at night was most widely carried out, namely in the category of frequent or sleeping for >6 – 7 hours. Before the covid-19 pandemic, the duration of sleep in the frequent category was 60% and during the covid-19 pandemic it decreased to 57.5%. In the elderly it is recommended to rest and get enough sleep at least 6 – 8 hours a day (Kemenkes, 2020).

Basking in the sun is one of the activity patterns that the elderly can do because it has many benefits. Based on the results of the study, before the covid-19 pandemic, basking in the sun was still included in the never category as much as 42.5% and during the covid-19 pandemic it increased to the categories of sometimes (1 – 2x / week) and often (3 – 5x / week) with a percentage of 32.5% each. The benefits of basking in the sun for health include helping the production of vitamin D, especially vitamin D3 which functions to increase immunity and increase the response or ability of white blood cells to fight harmful microorganisms, one of which is the covid-19 virus (Syafriani, 2020).

Environmental Cleanliness Before and During the Covid-19 Pandemic

In this study, the cleanliness of the elderly's residences with comorbidities before the covid-19 pandemic showed that out of a total of 40 respondents, as many as 27 respondents (67.5%) were still included in the category of not good. Meanwhile, the cleanliness of the environment where the elderly live during the covid-19 pandemic out of a total of 40 respondents, as many as 29 respondents (72.5%) are already included in the good category. Environmental cleanliness is said to be good if you throw garbage in its place and during the covid-19 pandemic it is necessary to spray disinfectants regularly in the home environment (Kemendagri, 2020). Efforts to achieve a healthy life, it is necessary to have clean and healthy environmental conditions (Haryanto, 2020). If realize the

meaning of environmental health, then a person can avoid a disease.

During the covid-19 pandemic, the cleanliness of the environment where respondents live has been improved, especially in terms of routinely spraying disinfectants to sterilize and reduce the transmission of covid-19. Routine disinfectant spraying before the covid-19 pandemic was still at most in the category of never as much as 67.5% and during the covid-19 pandemic it increased to the sometimes category (1 – 2x / week) as much as 62.5%. While the indicator of disposing of garbage in its place is at most included in the category of always. Before the covid-19 pandemic, throwing garbage in its place in the category was always 77.5% and experienced an increase during the covid-19 pandemic to 85%. However, there are still omissions made such as littering that can pollute the environment.

Personal Hygiene Before and During the Covid-19 Pandemic

In this study, the personal hygiene of the elderly before the covid-19 pandemic showed that in general it was still in the category of not good, namely as many as 35 respondents (87.5%). Meanwhile, the distribution of personal hygiene (personal hygiene) of the elderly during the covid-19 pandemic in general showed an increase, namely as many as 38 respondents (95%) were included in the good category. Personal hygiene during the covid-19 pandemic is said to be good if you do several things, namely doing personal hygiene such as taking a shower, changing clothes after activities outside the home, nail, dental, and oral care, as well as implementing health protocols (Kemenkes, 2020).

Personal hygiene is a basic need that must be done by all age groups to prevent a disease. An elderly person must maintain good personal hygiene. The need for personal hygiene is a top priority for the elderly because if personal hygiene is implemented properly, it can be accepted by the community and can have a low risk of developing infectious diseases (Yulaikhah et al, 2017). Based on the results of the study, the indicators of bathing are most in the category of frequent or bathing 2 times / day. Before the covid-19 pandemic, the bathing indicator was 80% and during the covid-19 pandemic it decreased to 72.5%. Before the covid-19 pandemic, the indicators of changing clothes after activities outside the home were at most included in the sometimes category as much as 42.5% and during the covid-19 pandemic it increased to the always category by 40%. The indicator of cutting nails before the covid-19 pandemic was included in the category of sometimes (>2 – 4 weeks) as much as 50% and during the covid-19 pandemic it increased to the frequent category (>1 – 2 weeks) by 42.5%. Toothbrush indicators before and during the covid-19 pandemic are most in the category of

frequent or 2 times /day and have the same percentage of 80%.

The implementation of health protocols during the covid-19 pandemic is one of the efforts to protect yourself from contracting the covid-19 virus. The implementation of health protocols consists of washing hands with soap, wearing masks when leaving the house, maintaining distance, staying away from crowds, and reducing mobility. Based on the results of the study, washing hands is the most in the category of always. Before the covid-19 pandemic, handwashing in the category was always 47.5% and increased during the covid-19 pandemic to 70%. Washing hands with soap is one of the efforts to prevent or protect the body from various kinds of infectious diseases (Tulak et al., 2020). Washing hands with soap regularly can also prevent contracting the covid-19 virus. If when traveling there is no soap and running water, alternatively, you can use a handsanitizer. Handsanitizer can be used after shaking hands or touching objects or items in public places.

In addition, the use of masks is an effective way to limit the spread of viruses, one of which is the covid-19 virus. Based on the results of the study, before the covid-19 pandemic, wearing a mask was still in the never category, namely 85% and increased during the covid-19 pandemic to always be as much as 80%. Masks are suggested as one of the methods to limit the transmission of the virus by sufferers or perhaps infected but clinically undetected people (Atmojo et al, 2020).

Social distancing by maintaining distance or physical distancing is carried out in areas suspected of being infected with diseases or viruses. Based on the results of the study, before the covid-19 pandemic, keeping the most distance was still in the never category, namely 75% and during the covid-19 pandemic it increased to an always category of 60%. Before the covid-19 pandemic stayed away from the crowds at most still in the never category at 77.5% and during the covid-19 pandemic it increased to an always category of 57.5%. Likewise, indicators of reducing mobility, before the covid-19 pandemic, the most were still in the never category, namely as much as 65% and during the covid-19 pandemic it increased to an always category of 62.5%. Social restrictions are very effective in preventing the transmission of viruses, one of which is the covid-19 virus which is currently spreading (Kandari and Ohorella, 2020). In addition, staying away from crowds is one of the efforts to prevent contracting covid-19. This has to do with maintaining one's distance and mobility. During the covid-19 pandemic, it is better to stay away from the crowd and stay at home. When outside the house it is better to stay away from crowds because the more and more people meet, the higher the chances of being infected with covid-19 (Alfarizi, 2020). Health protocols that are no less important to implement are reducing mobility. Mobility can also transmit the virus to others if they are infected with

covid-19. This is especially risky for vulnerable people, especially the elderly or people with certain health conditions.

Having a better diet and lifestyle during the covid-19 pandemic is very necessary to increase the body's immune system or immunity to avoid covid-19 (Abbas and Kamel, 2020). Maintaining a healthy lifestyle and maintaining health is a must (Abbas and Kamel, 2020). Some of the efforts to carry out a healthy lifestyle include eating a nutritionally balanced diet, consuming enough fluids so that the body is properly hydrated, implementing health protocols that have been recommended by the government to avoid covid-19, doing physical activity or exercise regularly according to the abilities of the elderly and managing regular sleep schedules to minimize stress, and minimizing watching news that causes excessive anxiety that can affects mental health.

At the time of the study, there were some limitations that researchers experienced. Research limitations can be a reference for further research to be better. Some of the limitations in this study are that the number of respondents, which is only 40 people, is certainly still insufficient to describe the real situation. As well as in the process of data collection, the information provided by respondents through questionnaires (googleform) there is a possibility of not showing the respondent's actual opinion. This can happen because of several things, such as differences in thoughts, different assumptions and understandings for each respondent, as well as the factor of respondents' honesty in filling out the questionnaire.

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CONCLUSION

During the covid-19 pandemic, it has been seen that there are significant changes in the diet and lifestyle of the elderly. There are significant differences between the type of consumption of foodstuffs, activity patterns, environmental hygiene, and personal hygiene of the elderly before and during the covid-19 pandemic. However, there have been no significant difference between eating frequency of the elderly before and during the covid-19 pandemic.

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