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Consumption of natural products and its effects on Covid-19, Barranca district

[Consumo de productos naturales y sus efectos en la Covid-19, distrito de Barranca]

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Resumen

El objetivo fue determinar el consumo de productos naturales y sus efectos en la Covid-19, en el distrito de Barranca. Se recopilaron datos en personas mayores de edad, quienes manifestaron haber tenido síntomas de Covid-19, que habiendo consumidos productos naturales. El proceso de recolección de información fue de setiembre del 2020 a enero del 2021, en un total de 200 personas por mes de ambos sexos, quienes aceptaron voluntariamente participar en la investigación. Para lo cual, se emplearon instrumentos como la encuesta sobre el consumo de productos naturales y cuantos aliviaron los síntomas. Obtenidos los datos se procesaron con estadística básica, análisis de correlación y análisis de varianza. Los resultados determinaron que en enero aumentaron el consumo de matico, eucalipto, escorzonera y huamanripa 16, 14 y 13 personas respectivamente, consumo de kion, ajo y tocosh 32, 45 y 36 personas respectivamente, consumo de miel de abeja 88 personas, en porcentaje de consumo de productos naturales incrementó a 77 % y porcentaje de personas que “aliviaron los síntomas” a 83 %. Respecto la correlación del consumo de productos naturales con personas que aliviaron los síntomas donde el promedio r = 0.98, que indica alta asociación. Se concluye que, el consumo de productos naturales tuvo significancia para aliviar los síntomas.

Palabras clave: Consumo, producto natural, aliviaron los síntomas, Covid-19.

Abstract

The objective was to determine the consumption of natural products and its effects on Covid-19, in the district of Barranca. Data was collected on people of legal age, who said they had had symptoms of Covid-19, than having consumed natural products. The information collection process was from September 2020 to January 2021, in a total of 200 people per month of both sexes, who voluntarily agreed to participate in the research. For which, instruments such as the survey on the consumption of natural products and how many alleviated the symptoms were used. Once the data were obtained, they were processed with basic statistics, correlation analysis and analysis of variance. The results determined that in January the consumption of matico, eucalyptus, scorzonera and huamanripa increased 16, 14 and 13 persons respectively, consumption of ginger, garlic and tocosh 32, 45 and 36 persons respectively, consumption of bee honey 88 persons, in percentage of natural products consumption increased to 77% and the percentage of persons who "alleviated symptoms" to 83%. Regarding the correlation of the consumption of natural products with people who alleviated symptoms where the average r = 0.98, which indicates a high association. It is concluded that the consumption of natural products had significance to alleviate the symptoms.

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Keywords: Consumption, natural product, alleviated symptoms, Covid-19.

1. Introduction

During the last months of 2020, the increase in contagion by Covid-19 was significant, since this disease has been harmful in people with chronic diseases and older adults who in many cases were hospitalized. This situation was reflected in the inadequate compliance with prevention measures and overcrowding in places such as markets, banks and streets in the Barranca district; according to Cruz et al. (2021), state that at the end of 2020 there was a relaxation in the use of the established protection measures, which influenced the increase in infections and deaths from Covid-19, either due to year-end vacations and labor informality. Likewise, MINSA (2021) reports that there were positive infections and deaths from Covid-19; showing that in September 2020 there were 260 positives and 9 deaths, and after a slight decrease they increased to 144 positives and 10 deaths in January 2021.

It is also stated that some infected people did not present symptoms, which is why it is known as asymptomatic and in others they showed a harmful clinical picture such as infections, respiratory problems, cardiac arrhythmia, headache, loss of taste, smell and other symptoms. in some situations, they were hospitalized. This statement is supported by Quiroz et. al. (2020), who state that it is extremely important to isolate infected people who may be symptomatic or asymptomatic. The typical clinical picture is characterized by fever, dry cough, respiratory distress, and general malaise.

According to the World Health Organization (2014), it defines traditional medicine as the set of knowledge, skills and practices based on theories, beliefs and experiences of different cultures, whether or not they are explicable, used to maintain health, as well as for the prevention, diagnosis, improvement or treatment of physical or mental illnesses. At the level of Latin America, including Peru, of the plant species existing on the planet, less than 10% have been scientifically evaluated for therapeutic purposes; However, studies carried out in Peru have shown that herbaceous medicinal plants are the most widely used by the population (70%), followed by shrubs (13.6%). The highest consumption occurs in species used to treat diseases of the digestive (124 spp), genitourinary (51 spp) and respiratory (51 spp) systems. (PAHO/WHO, 2018).

Therefore, as the M.D. Jesus Angulo (2020) mentions, a home remedy is a product or combination of natural products that are comforting for our body when ingested. These preparations contain products that we commonly consume such as garlic, oranges, ginger or bicarbonate combined with plants, flowers, etc. These homemade preparations do not have a proven effect in the case of the coronavirus. However, the effectiveness of home remedies is determined to the extent that it produces relief in the person at the time of consumption. Although many natural products could cause this effect in our body, there is still no scientific proof that associates the intake of home remedies with prevention or improvement.

Also Morales et al. (2020), aimed to identify the potential of the basic table of Natural Products as an alternative for the treatment of Covid-19. A study was carried out that applied the qualitative method, through a bibliographic and documentary review in digital data sources as: Google, Scielo, DOAJ, Latindex and SCOPUS. Quality and timeliness were taken into account. It was concluded that phytotherapy constitutes a valid alternative for the preventive and symptomatic treatment of Covid-19. According to the efficacy and the pharmacological actions demonstrated, Asmacan is the natural product with the best projection, although the selection of one or another product may depend on the preventive or curative objectives.

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Ruíz and Mejía (2020), mention that acute respiratory infections are a cause of morbidity in both the elderly and children; In this context, traditional pharmacotherapy is presented as an alternative for the prevention and treatment of viral diseases. The objective is to present the results of medicinal plants for therapeutic use for the prevention and treatment of viral respiratory diseases. A list of 122 medicinal plants was obtained; 96 of which present information on secondary metabolites and 26 species that are used without verification of their phytochemical content. Flavonoids were found in 59 species, terpenes in 29, tannins in 30, phenols in 32 and alkaloids in 26. In fact, we have promising antiviral species, which need to be validated.

In this context, the population of the Barranca district opted for the consumption of natural products such as medicinal herbs, vegetables and bee honey in order to reduce the symptoms of Covid-19. According to Fuel and Cangui (2020), they state that plant-derived compounds have a great chemical diversity that includes antiviral activity, so they can be useful as therapeutic agents against coronavirus infections. In most studies, the protective effect of extracts and their derivatives was described, highlighting the compounds: caffeic acid, xanthoangelol B, isobavachalcone, psoralidine, hirsutenone, hirsutanonol, 3β-friedelanol, silvestrol, amentoflavone, ferruginol, savinin, betulinic acid, urtica dioica, griffithsia, taraxerol, chlorogenic acid for their properties to inhibit structural and binding proteins to host receptors, as well as the inhibition of important proteases in the division and replication of the virus.

On the other hand, the consumption of vegetables contains vitamins that favors the recovery of the symptoms of Covid-19; either in reducing the respiratory effects and strengthening the immune system. Mentioned, this statement is supported by Bonvecchio et al. (2019), who recommend the consumption of vitamin A in food sources: dairy, fish oil, eggs, liver and beta carotene sources contained in fruits and vegetables of yellow and orange colors. They also state that there is no evidence on the effectiveness of high-dose vitamin A for treating Covid-19 or for reducing the severity of the specific disease in any of the vulnerable groups. However, the WHO (2011), states that infants and young children have an increased need for vitamin A to cope with their rapid growth and to help fight infections.

Another nutrient that is essential to improve cold problems is vitamin C, which is found in foods such as oranges, tangerines, lemons, vegetables or vegetables (Bonvecchio et al., 2019). The consumption of fruits and vegetables for their vitamin C content improves respiratory diseases, according to Ran et al. (2018), conclude that additional doses of vitamin C could benefit some patients who contract the common cold despite taking daily vitamin C supplements.

Vitamin B9 (Folate), which contains foods rich in folate are: vegetables or green leafy vegetables, legumes and fruits (Bonvecchio et al., 2019). The consumption of vegetables contains nutrients such as B9, which favors the immune system against the damage of diseases. This is held with Gombart et al. (2020), who state that the complex and integrated immune system needs specific micronutrients, including vitamins A, D, C, E, B6 and B12, folic acid, zinc, iron, copper and selenium, which often perform vital functions synergistic at every stage of the immune response. Additionally, supplementation with multiple micronutrients with immune support functions can modulate immune function and reduce the risk of infection.

Regarding the consumption of bee honey, it is considered very important to alleviate respiratory problems and increase the defense of our body to reduce infections, according to Sanclemente (2020), concludes that natural products made by bees such as bee honey and propolis , due to their anti-inflammatory, antioxidant, antibacterial and antiviral properties, are becoming an important therapeutic weapon, as an adjunct in the treatment of infection by the SARS-CoV-2 virus (COVID-19), especially in the population of high risk.

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2. Materials and methods

Population
The population of the Barranca district is comprised of 71,383 inhabitants in rural and urban areas according to the census (National Institute of Statistics and Informatics, 2017).

Sample
We worked with a sample of 200 selected people, between 25 and 60 years of age, male and female, with secondary and higher education levels. Likewise, they were asked about their state of mind in the relief of the symptoms of Covid -19. It is worth mentioning that out of 200 people said they had the symptoms of Covid -19 in September 76% October 79%, November with 84%, December with 87% and January with 90%.

Statistical analysis
Obtained data were processed with basic statistics in order to interpret and analyze the results. The correlation of the aforementioned evaluations was also carried out, in order to determine if there is a positive trend in the adjustment of these two variables; that is, if it favored alleviating symptoms. Analysis of variance was also carried out in order to determine whether or not the consumption of natural products had an influence on alleviating symptoms.

Procedures
The following steps were performed.

- A total of 200 people per month from the Barranca district were surveyed who stated they had mild symptoms of Covid-19, and had consumed medicinal herbs, vegetables, and bee honey from September 2020 to January 2021.
- The data were processed with basic statistics for their interpretation and analysis.
- The correlation analysis was also carried out with the representative's data of natural products consumption and those that alleviated the effects of Covid-19.
- Finally, the analysis of variance was carried out in order to determine if the consumption of natural products influenced to "alleviate" the symptoms of Covid-19.

3. Results

Medicinal herb consumption per month
According to the results of Table 1, the use of medicinal herbs gradually increased; January with the highest consumption of matico (16 persons), eucalyptus(14 persons), scorzonera (13 persons), and other herbs combinations, most of which consumed 3 to 5 days per week. This result is interpreted that the increase in the consumption of medicinal herbs is due to the increase in contagion, showing respiratory problems, fever and malaise and that they were probably infected during the celebration of Christmas and New Years parties. The consumption of medicinal herbs reduced the symptoms of nasal congestion and relaxation problems, which were evidenced by the patients' manifestation of their symptom relief. Mentioned, this analysis is based on Fuel and Cangui (2020), who state that compounds derived from plants have a great chemical diversity that includes antiviral activity, which is why they can be useful as therapeutic agents against coronavirus infections. Due to its properties to inhibit structural and binding proteins to host receptors, as well as the inhibition of important proteases in the division and replication of the virus.

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Table 1. Consumption of medicinal herb per month (september 2020 to january 2021)

Medicinal herbs (Packs)	2020				2021
	September	October	November	December	January
Matico	12	13	14	15	16
Eucalyptus	10	8	9	10	14
Scorzonera	9	12	13	14	13
Huamanripa	7	4	6	8	9
Matico and eucalyptus	4	5	6	7	8
Matico and Scorzonera	8	10	11	12	14
Matico and huamanripa	10	11	14	15	16
Scorzonera and huamanripa	11	12	13	14	16
Scorzonera and eucalyptus	9	11	12	13	14
Eucalyptus and huamanripa	7	9	7	8	11
Eucalyptus and scorzonera	5	5	7	8	9
Matico, eucalyptus and scorzonera	6	5	4	5	7
Eucalyptus, scorzonera and huamanripa	8	9	7	8	8
Matico, eucalyptus and huamanripa	11	12	13	13	14
Scorzonera, huamanripa and matico	7	8	7	8	7
Matico, eucalyptus, scorzonera and huamanripa	14	15	16	16	14
None	62	51	41	26	10
Total	200	200	200	200	200

Note: Sample to 200 people

Vegetable consumption per month

The results of the consumption of vegetables that are detailed in table 2, indicate the gradual increase of 32 persons consumed ginger, 45 persons consumed garlic and 36 persons consumed tocosh and others combined in the month of January frequently 4 to 5 days per week . This consumption is due to the fact that it favored the strengthening of the immune system, nasal congestion problems; either by its concentrations of Vitamin A, Vitamin B and Vitamin C., which alleviated the symptoms, which were evidenced by the manifestation of the people. This analysis is supported by Bonvecchio et al. (2019), recommend the consumption of vitamin A in vegetable food sources. They also state that there is no evidence on the effectiveness of vitamin A in high doses for the treatment of Covid-19 or for the reduction in severity; However, the WHO (2011) mentions that infants and young children have an increased need for vitamin A to cope with their rapid growth and to help fight infections. According to Ran et al. (2018), conclude that additional doses of vitamin C could benefit some patients who contract the common cold and Gombart et al. (2020), state that the immune system needs multiple specific micronutrients, including vitamins A, D, C, E, B6, and B12, folic acid, zinc, iron, copper, and selenium, which perform vital, often synergistic, roles in each stage of immune response.

Table 2. Vegetable consumption per month (september 2020 to january 2021)

Vegetables	2020				2021
	September	October	November	December	January
Ginger	30	34	37	35	32
Garlic	36	39	41	43	45
Tocosh	22	25	28	33	36
Ginger and garlic	19	22	24	26	28
Ginger and tocosh	15	13	17	15	17
Garlic and tocosh	12	10	8	12	9

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Ginger, garlic and tocosh	10	9	11	13	15
None	56	48	34	23	18
Total	200	200	200	200	200

Note: Sample to 200 people

Consumption of bee honey per month

Followed with the evaluation of the consumption of bee honey detailed in table 3, it indicates the gradual increase up to 88 people who consumed bee honey in the month of January frequently from 3 to 5 days a week. What is interpreted that as the consumption of bee honey increased was due to the increase in the contagion of Covid-19. This natural food helped to strengthen the immune system that improved the symptoms of nasal congestion, showing improvement, relief and encouragement of the people. Exposed this analysis is based on Sanclemente (2020), concludes that natural products made by bees such as honey and propolis, due to their anti-inflammatory, antioxidant, antibacterial and antiviral properties, are becoming an important therapeutic weapon, as an adjuvant in the treatment of SARS-CoV-2 (Covid-19) virus infection, especially in the high-risk population.

Table 3 Consumption of bee honey per month (september 2020 to january 2021)

	2020				2021
	September	October	November	December	January
Bee honey	63	69	74	83	88
Not Consumption	137	131	126	117	112
total	200	200	200	200	200

Note: Sample to 200 people

Percentage of consumption of natural products.

Regarding the percentage of the natural products consumption that are exposed in table 4, 5 and 6, it can be seen that in January 2021 the consumption of medicinal herb increased with 95%, vegetables with 91% and honey with 44%. These results are interpreted that they increased the consumption of natural products, to improve the immune system and congestion problems, which were evidenced in the manifestation of the person with the relief of the symptoms of Covid-19, according to the M.D. Jesús Angulo (2020), mentions that a bee home remedy is a product or combination of natural products that are comforting to our body when ingested. These preparations contain products that we commonly consume such as garlic, oranges, ginger or bicarbonate combined with plants, flowers, etc. These homemade preparations do not have a proven effect in the case of the coronavirus. However, the effectiveness of home remedies is determined to the extent that it produces relief in the person at the time of consumption.

Table 4. Percentage of people who consumed medicinal herbs per month (september 2020 to january 2021)

Medicinal herbs	2020				2021
	September	October	November	December	January
Consumed	69	75	80	87	95
Not Consumed	31	25	20	13	5
Total	100	100	100	100	100

Note: Sample to 200 people

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Table 5. Percentage of people who consumed vegetables per month (september 2020 to january 2021)

Vegetables	2020				2021
	September	October	November	December	January
Consumed	72	76	83	89	91
Not Consumed	28	24	17	11	9
Total	100	100	100	100	100

Note: Sample to 200 people

Table 6. Percentage of people who consumed honey bee per month (september 2020 to january 2021)

Bee honey	2020				2021
	September	October	November	December	January
Consumed	32	35	37	42	44
Did not Consumed	68	65	63	58	56
Total	100	100	100	100	100

Note: Sample to 200 people

Percentage who relieved Covid -19 symptoms by consuming natural products

Regarding the percentage that alleviated the symptoms of Covid -19, consuming natural products is detailed in table 7, which in December 2020 to January 2021 increased from 78% to 83%. These results are interpreted that the consumption of natural products for their content of vitamins and nutrients strengthened the immune system and relieved colds and respiratory problems, which were evidenced by people's statements about their mood and relief. Exposed, this analysis is based on Gombart et al. (2020), state that the immune system needs multiple specific micronutrients, including vitamins A, D, C, E, B6, and B12, folic acid, zinc, iron, copper, and selenium, which perform vital, often synergistic, roles in each stage of the immune response and Fuel and Cangui (2020), state that plant-derived compounds have a great chemical diversity that includes antiviral activity, which is why they can be useful as therapeutic agents against coronavirus infections.

Table 7. Percentage of people in whom Covid-19 symptoms were reduced by consuming natural products in the Barranca district. (september 2020 to january 2021)

	2020				2021
	September	October	November	December	January
Relieved symptoms	62	68	74	78	83
Did not relieve symptoms	14	11	10	9	7
Do not have Covid -19	24	21	16	13	10
Total	100	100	100	100	100

Note: Sample to 200 people

Percentage of natural products consumption in relation to those that alleviated the symptoms of Covid-19

In relation to the percentage of natural products consumption in relation to those that relieved the symptoms, it can be seen that as the consumption of natural products increased, the percentage of patients who relieved the Covid-19 increased. This result is interpreted as the consumption of

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natural products for their nutritional and antiviral composition strengthened the immune system, respiratory problems and alleviated symptoms, which people expressed their improvement and mood. The analyzed result is supported by Morales et al. (2020), concluded that phytotherapy constitutes a valid alternative for the preventive and symptomatic treatment of Covid-19. According to the efficacy and the pharmacological actions demonstrated, Asmacan is the natural product with the best projection, although the selection of one or another product may depend on the preventive or curative (See figure 1).

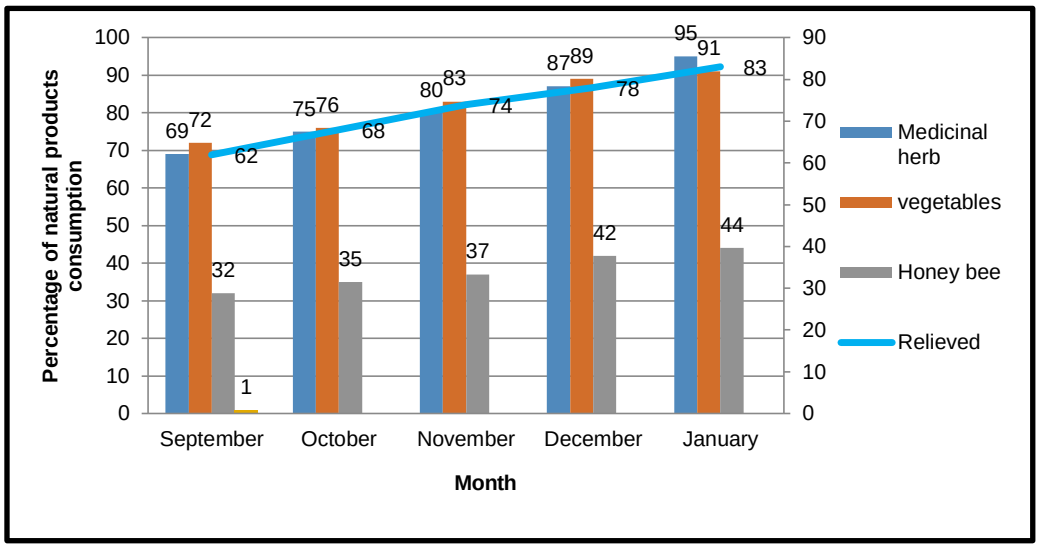

Figure 1: Percentage of natural products consumption in relation to the percentage of people who alleviated the symptoms of Covid-19.

Correlation of the percentage of natural products consumption with the percentage of patients who alleviated the symptoms of Covid-19.

The correlation analysis of medicinal herb consumption with the percentage of patients who alleviated the symptoms of Covid-19 indicated in figure 2, the trend is positive and the correlation coefficient (r), r = 0.9878, is observed. which means that there is a very high association between these two variables. By what it means, the consumption of medicinal herb for its chemical properties favored in alleviating the symptoms of Covid-19. Mentioned, the interpretation is based on the parameters of Rowntree (1984), it states that the correlation coefficient is r = 0 is null, r = 0.0 - 0.2 is very low, r = 0.2 - 0.4 Low, r = 0.4 - 0.6 Moderate, r = 0.6 - 0.8 high, r = 0.8 - <1 very high, and 1 is perfect.

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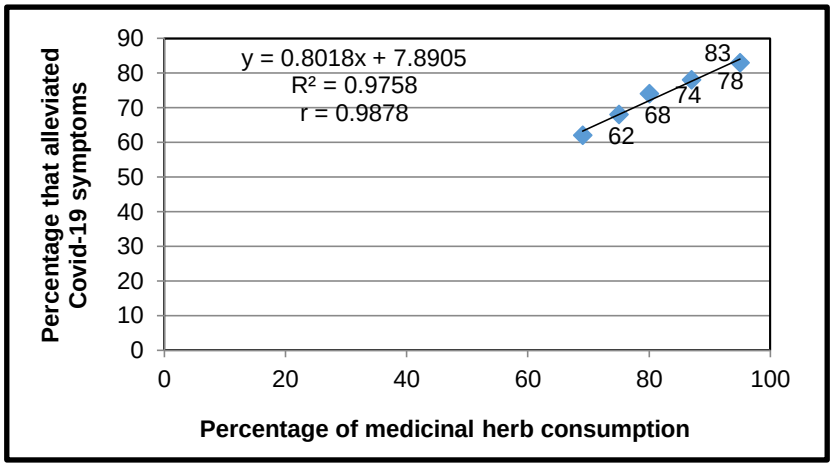

Figure 2: Correlation of the percentage of people who consumed medicinal herb.

The correlation of the percentage of vegetable consumption with the percentage of patients who "relieved" Covid -19, is shown in figure 3 that the projection is positive and the correlation coefficient r = 0.987; This result means that the association between these two variables is very high. Therefore, it is interpreted that by increasing the consumption of vegetables it favored in reducing the symptoms of Covid 19. Mentioning this result is corroborated with the values of Rowntree (1984), it states that the correlation coefficient is r = 0.8 - <1 very high and 1 is perfect.

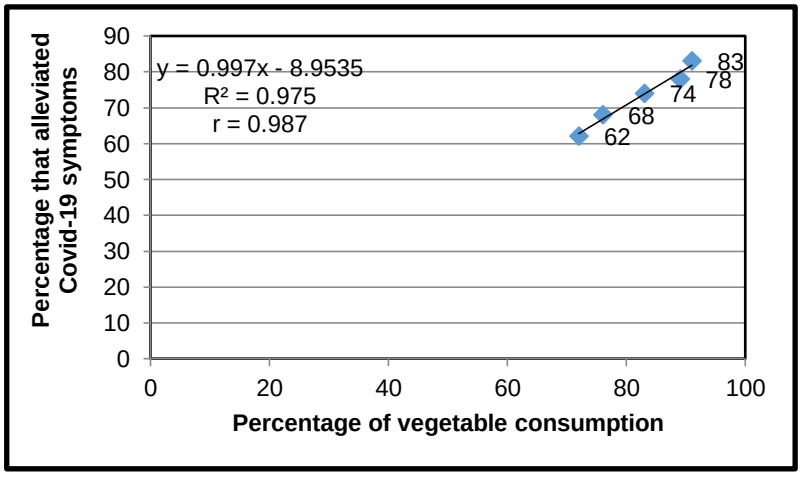

Figure 3: Correlation of the percentage of people who consumed vegetables to reduce the symptoms of Covid -19 in the district of Barranca

Processing the data with the correlation analysis of the percentage of bee honey consumption, with the percentage of patients who reduced the symptoms of Covid -19, it is indicated in figure 4 that the linear trend is positive and the correlation coefficient r = 0.98, which is interpreted that the correlation is very strong between these two variables. Therefore, when consuming bee honey, it helped to reduce the symptoms of Covid-19. These results are stated with the data from

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Rowntree (1984), which states that the correlation coefficient is r = 0.8 - <1 very high and 1 is perfect.

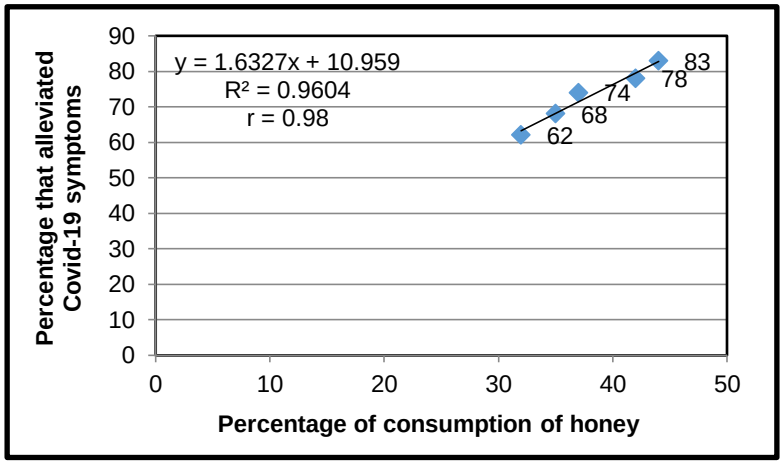

Figure 4: Correlation of the percentage of people who consumed bee honey to reduce the symptoms of Covid -19 in the district of Barranca.

Variance analysis of natural products consumption in relation to the percentage that alleviated the symptoms of Covid -19

Concerning the variance analysis of natural products consumption, in relation to the percentage that alleviated the symptoms, it was determined that there was relief; which means that the consumption of medicinal herbs, vegetables and bee honey had favorable effects to improve health. Which is interpreted that natural products strengthened the immune system, decreased respiratory problems, which were evidenced by the manifestations of people (See table 8).

Table 8. Variance analysis of natural products consumption in relation to the people percentage who reduced the symptoms of Covid -19 in the district of Barranca

Consumption	F calculated	F. Tabulated	Interpretation
Medicinal herbs	120.81	10.13	There was relief
Vegetables	117.04	10.13	There was relief
Bee honey	72.72	10.13	There was relief

Note: Tabulated F was obtained from degrees of freedom 1 and error 3, from the data of Fisher's table at 95% which is equal to 10.13.

4. Conclusions

It was determined that the natural products consumption such as medicinal herbs, vegetables and bee honey increased in January 2021 with 95%, 91% and 44% respectively, to strengthen the immune system, alleviate respiratory problems and others. This consumption is due to the increase in the contagion of Covid -19, at the population.

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The gradual increase in the relief of Covid -19 symptoms was also specified in December 2020 to January 2021 with 78% to 83%. These results are due to the increase in the natural products consumption that was favorable to strengthen his immune system.

Regarding the correlation of the medicinal herbs consumption, vegetables, and honey with the percentage that alleviated the symptoms of Covid -19, it was determined that the correlation coefficient on average was r = 0.98, which indicates a high association of the variables that means that the natural products consumption is favorable for better health.

References

Angulo J. Remedios caseros contra el covid-19 (coronavirus). 2020, https://www.especialidadesmedicas.org/blog/wordpress/index.php/2020/10/22/remedios-caseros-contra-el-covid-19-coronavirus/

Bonvecchio A., Bernal J., Herrera M., Flores M., Gutiérrez M., Irizarry L., Mendivil L. L., López F., López M., Mata C., Moliterno P., Moyano D., Murillo D., Pacheco S., Palacios C., Palomares L., Páramo K., Pérez A., Tijerina M., Trak-Fellermeier M., Venosa M. Recomendaciones de micronutrientes para grupos vulnerables en contexto de desnutrición, durante la pandemia de Covid-19 en Latinoamérica, Revista de la Sociedad Latinoamericana de Nutrición, Vol. 69 N° 4, 2019; pp. 259 - 273. Doi 10.37527.2019.69.4.006

Cruz D., Rodriguez R., Valderrama O., López J., Ramos R., Castañeda E., Yovera J., Meyhuey P., Effect of the protection measures established by the peruvian government to prevent the Coronavirus in the Barranca district during the second wave of infections, Journal of Global Education Sciences, vol. 3, no 1, 2021; pp. 1-8.

Fuel M.O., Cangui S. Potencial uso terapéutico de las plantas medicinales y sus derivados frente a los coronavirus. Revista Bases de la Ciencia, Volumen 5 (3), 2020; pp. 1 - 20. DOI: https://doi.org/10.33936/rev_bas_de_la_ciencia.v5i3.2507

Gombart A.F., Pierre A., Maggini S. A review of micronutrients and the immune system–working in harmony to reduce the risk of infection. Nutrients, 12(1), 2020; pp. 2 - 41. https://doi.org/10.3390/nu12010236

Instituto Nacional de Estadística e Informatica (INEI). Compendio Estadístico Lima Provincias 2016. Web Site - INEI. 2017; https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1521/Libro.pdf

MINSA, Ministerio de salud, Plataforma Nacional de datos abiertos. 2021; https://www.datosabiertos.gob.pe/search/type/dataset?sort_by=changed

Morales M., García M. T., Acosta L. L., Vega J., Céspedes I., Perdomo J. Una alternativa natural para el tratamiento de la COVID-19. Revista Cubana de Plantas Medicinales, volumen 25(1), 2020; pp. 1 -12. http://www.revplantasmedicinales.sld.cu/index.php/pla/article/view/1024/430

PAHO/WHO, Situación de las plantas medicinales en Perú. Informe de reunión de expertos en plantas medicinales. In Instituto Nacional De Salud (INS), 2018; 2-13 https://iris.paho.org/bitstream/handle/10665.2/50479/OPSPER19001_spa.pdf?sequence=1&isAllowed=y

Quiroz C. G., Pareja A., Valencia E., Enriquez Y. P., De Leon J., Aguilar P. Un nuevo crononavirus, una nueva enfermedad: Covid-19. Horizonte Médico (Lima), 20(1), 2020; e1208. https://doi.org/10.24265/horizmed.2020.v20n2.11

Ran L., Zhao W., Wang J., Wang H., Zhao Y., Tseng Y., Bu H. Dosis adicional de vitamina C basada en un suplemento diario que acorta el resfriado común: un metaanálisis de 9 ensayos controlados aleatorios. Investigación de BioMed Internacional , vol. 2018; pp 1-12. https://doi.org/10.1155/2018/1837634

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Rowntree D. Introducción a la estadística: un enfoque no matemático. 1984, 1, 2. http://academia.utp.edu.co/seminario-investigacion-II/files/2017/03/06a.AnálisisDeCorrelaciones.pdf

Ruíz M. P., Mejía F.R. Plantas Utilizadas En Medicina Tradicional Para Afecciones Respiratorias Virales. Revista de Investigación Científica REBIOL 2020, Número 40 (1), 2020; 109 – 130, Perú, DOI: http://dx.doi.org/10.17268/rebiol.2020.40.01.12

Sanclemente E. Productos naturales y el SARS-CoV-2 (Covid- 19) El propóleo y la miel de abejas como coadyuvantes en el tratamiento, ResearchGate, 2020; pp 1 – 22, https://www.researchgate.net/publication/345948115

WHO, World Health Organization, Estrategia de la OMS sobre medicina tradicional. 2014-2023. 2014, pp. 1–75. https://apps.who.int/iris/bitstream/handle/10665/95008/9789243506098_spa.pdf?sequence=1&isAllowed=y

WHO, World Health Organization, Directriz: Administración de suplementos de vitamina A a lactantes y niños de 6 a 59 meses de edad. In OMS. Directriz: Administración de suplementos de vitamina A a lactantes y niños 6–59 meses de edad. Libro , 2011; Pp 1-25. https://apps.who.int/iris/bitstream/handle/10665/44721/9789243501765_spa.pdf?sequence=1