



# Analysis of Sales of Contraceptive Devices Before Covid-19 During the Pandemic and New Normal at PT. Bintang Semesta Farma Bandung

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## ABSTRACT

In March 2020 covid-19 was found in Indonesia, one of the government's covid-19 countermeasures was PPKM (enforcement of restrictions on community activities) which caused most of the sales to decline from various sectors, one of which was the sale of contraceptives, PT. Bintang Semesta Farma Bandung which has decreased from 2019 to 2020 and has increased in the new normal period in 2020 to 2021. The research method used is a quantitative method, namely processing and manipulating raw data regarding useful information. In 2019 or before the Pandemic, total sales reached Rp. 6,883,809,682. During the Pandemic or in 2020, the total sales value decreased to Rp. 5,774,344,378 or decreased by 16%. Meanwhile, in 2021 or in the New Normal period, resale has increased and touched the figure of Rp. 9,679,671,921 or an increase of 68%.<sup>3</sup> There is a strong and significant positive relationship between Sales of Contraceptive Devices and the Confirmed Number of Covid-19 ( $r=0.674$ ), sales of contraceptives increased in line with the increase in the number of confirmed Covid-19 in 2020.

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## INTRODUCTION

The beginning of emergence of the Novel Coronavirus or Covid-19 began with a case of pneumonia that appeared on December 1, 2019, in Wuhan China, the symptoms that appeared in people affected by this virus included fever, malaise, dry cough, and dyspnea which were initially diagnosed only as a pneumonia virus, this is due to the same symptoms as people who get pneumonia until it was finally named Wuhan pneumonia, but further checking of this disease through genome sequencing revealed that the cause was coronavirus. January 12, 2020, The World Health Organization (WHO) named this virus Novel Coronavirus (2019-nCov) this is because the initial discovery of this virus was in December 2019 which was then renamed coronavirus 2019 (COVID-19) on February 12, 2020. Indonesia recorded The first positive case of Covid-19 was on March 2, 2020, two people were contaminated Japanese citizens, from this incident the handling of the spread of this virus began to be circumvented from the use of personal protective equipment (PPE), taking vitamins, medicines,

using oxygen, to masks (Ariyanto, 2020). However, the effort was not enough, finally the government implemented Restrictions on Community Activities (PPKM) are as follows: 1. The operating hours that apply to supermarkets, grocery stores, traditional markets, and supermarkets that sell daily necessities can only operate until 08.00 pm with a 50% decrease in visitor capacity, 2. The operating hours of pharmacies and drug stores are fully open 24 hours, 3. Other trade centers/malls/shopping centers are temporarily closed.

This provision certainly causes most of the sales to decline from various sectors, one of which is the sale of contraceptives. However, as an economic recovery, the government through the Coordinating Ministry for the Economy issued a New Normal regulation starting on June 1, 2020 (Wahyuni, 2021). Quoting Dr. Hasto Wardoyo SpOG(K)m, Head of the National Population and Family Planning Agency (BKKBN), the government has thought about the Indonesian population (Wibawa, 2016) so that they can grow and develop, one of which is by re-invigorating the family planning program to implement a decrease in the birth rate but in fact, during the Covid-19 pandemic there was a fairly rapid decline in family planning participants in March 2020 compared to the previous month in the same year (Voa Indonesia, 2020). This was also felt by PT. Bintang Semesta Farma Bandung which has decreased from 2019 to 2020 and has increased in the new normal period in 2020 to 2021. The influence of Covid-19 also has an impact on the community's economy, so that for family planning, people prefer to go to the Puskesmas using facilities from BPJS so that there is a decrease in the number of family planning acceptors to independent clinics that are paid. The decline in the number of acceptors before the pandemic era in certain clinics is not yet known as a payment system. In sales are a common thing in the company and are the gross amount charged to customers for goods and services (Simamora, 2014). Sales means the sale of goods as the company's main business which is usually carried out regularly. Trading company accounting system (Marom, 2010).. Selling is a process in which the needs of buyers and sellers are met, through exchanges and interests (Winardi, 1998). Sales are not only seen from product problems, product distribution, and product prices but there are many cooking variables that need to be considered (Sunyoto, 2017). Based on the reasons above, the author decided to take the research theme "Analysis of sales of contraceptives before Covid-19 during the pandemic and new normal at PT. Bintang Semesta Farma Bandung".

## RESEARCH METHOD

The research method used is quantitative, namely processing and manipulating raw data about useful information (Sugiono, 2016). The hypothesis test in this study is determined based on the results of the normality test of the data, the normality test is a test obtained from the distribution of data which has the aim of knowing whether the data in the study has a normal distribution, close to normal or abnormal, one of the tests that can be used is chi-square, p-plot, lilliefors or Kolmogorov, which then based on the results of the data normality test will be able to determine which test equipment is suitable. Fusion is used. If the data is normally distributed, paired parametric t-sampling is used. Meanwhile, if the data is not normally distributed, a non-parametric test is used, namely, the Wilcoxon marked rank test. Two different experimental designs were used to analyze the pre-study or pre-study and post-study samples. Different tests evaluate specific treatments on the same sample at two different follow-up periods (Pramana, 2012)

### 1. Data and sample collection

In this study, two samples were tested in pairs (Fadli, 2021). The t-test difference test is used to get an idea of whether or not there is a significant difference in average sales of contraceptives that occurred before, during Covid-19 and during new normal conditions, through this test it can be seen if  $P - \text{value} > 0,05$  means  $H_a$  is rejected and vice versa if  $P - \text{value} < 0.05$  means  $H_a$  is accepted (Zahroh, 2020). Comparative Analysis of CHC Research Journals in Islamic Perspectives and Realities Before and During the Pandemic.

This study uses primary data, namely the purchase of contraceptives from January 2019 to December in the same year as data collected before the pandemic. Covid-19, data during the Covid pandemic from January 2020 to December 2020 and sales data collected from January 2021 to December in 2021 as data during the new normal. The data collection method uses purposive sampling, this is done to be able to make comparisons of sales that occurred in different years and conditions, namely before, during and during new normal conditions, the comparison uses the same month in the hope of producing a balanced difference test, This means that tests carried out with the same month and the same season will be tested for differences known as "apple to apple" which makes comparisons more proportional because they have the same type.

## 2. Test Different T-Tests with Paired Samples

### A) Growth Ratio

The growth ratio is a ratio used to make a comparison between a current value and a previous level as an example of a comparison of the values obtained in 2022 and 2021, in this study the growth ratio calculation is used to find out how the government's performance is in achieving targets in the form of Indonesian population growth. which has been achieved from the current period to the next period to make it easier to imagine and calculate, here is the formula for the growth ratio (Horne, 2012):

$$\text{Growth Ratio} = \frac{\text{PSales } t - \text{Sales } t - 1}{\text{PSales } t - 1}$$

Information : (1)

Sales t = current period sales

Sales t-1 = sales of the previous period (Kasmir, 2014)

B) T-test Difference According to (D. P. Sari, 2019) the t-test difference test was carried out in a different test of the average of two related samples. Paired samples are the same research material but receive two different values or treatments (Lupiyoadi, 2015).

## RESULTS AND DISCUSSIONS

### 1. Sales Data Analysis

The following is an analysis of the growth of contraceptive sales between before the Pandemic (in 2019), during Covid-19 (in 2020) and during the New Normal (in 2021) at PT. Bintang Semesta Farma Bandung.

Table 1. Sales Growth of Contraceptive Devices Between Before, During Covid-19 and New Normal at PT. Bintang Semesta Farma Bandung (in Rupiah)

Month	2019 (Pra Covid-19)	2020 (Covid-19)	2021 (New Normal)
Jan	757.571.770	405.588.503	530.569.943
Feb	420.153.180	389.466.877	473.997.135
Mar	421.225.828	452.578.691	672.733.506
Apr	351.776.700	522.470.306	711.048.535
May	774.100.848	198.640.952	517.785.935
Jun	866.031.069	453.904.735	915.002.017
Jul	594.170.613	574.313.608	1.019.752.463
Aug	957.472.232	477.216.054	745.133.861
Sep	376.934.487	540.739.865	1.081.328.644
Oct	535.506.659	505.933.757	721.485.457
Nov	470.557.321	556.377.879	1.003.324.008
Dec	358.308.975	697.113.151	1.287.510.417

Total	6.883.809.682	5.774.344.378	9.679.671.921
Growth		-16%	68%

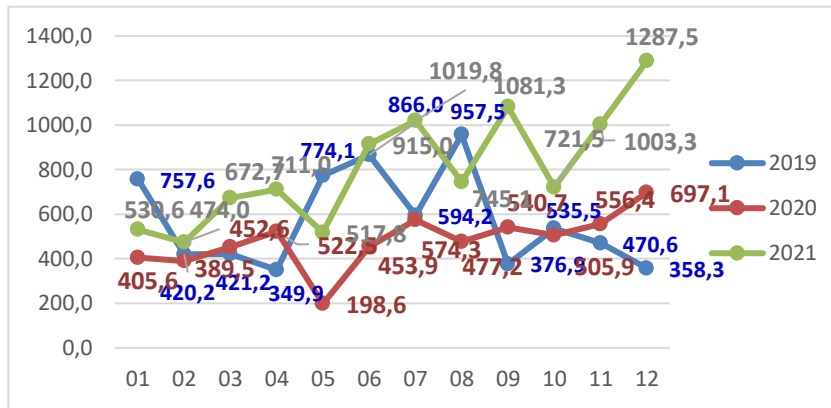


Figure 1. Monthly Sales Growth of Contraceptive Devices Between Before, During Covid-19 and New Normal at PT. Bintang Semesta Farma Bandung (in Rupiah)

Based on Table 1 and Figure 1 above, it is known that sales of contraceptives fluctuated. In 2019, the highest sales were achieved in August, which amounted to Rp. 957,472,232, while the lowest sales were achieved in April, which was Rp. 351,776,700. The year 2020 experienced a decline, where the highest sales were achieved in December of Rp. 697,113,151, while the lowest sales were achieved in May, which was Rp. 198,640,952. In 2021, the resale trend has increased, where the highest sales were achieved in December of Rp. 1,287,510,417, while the lowest sales were achieved in February, which was Rp. 473,997,135.

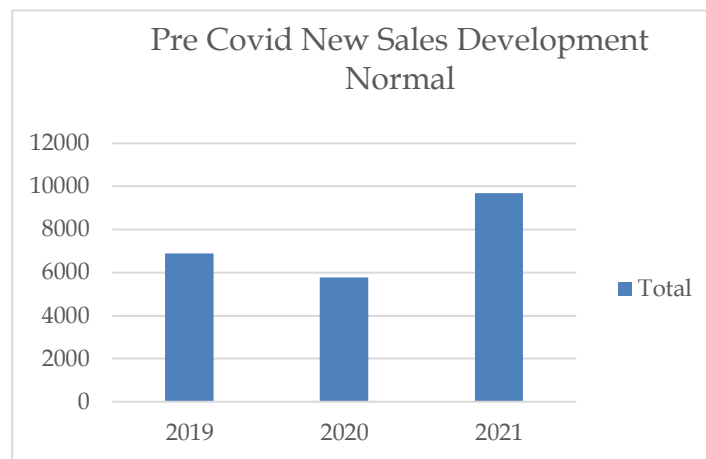


Figure 2. Comparison of Sales Per Year of Contraceptive Devices Between Before, During Covid-19 and New Normal at PT. Bintang Semesta Farma Bandung (in Rupiah)

Based on Table 1 and Figure 2 above, it is known the development of total sales value for each year of the 3 years studied. In 2019 or before the Pandemic, total sales reached Rp. 6,883,809,682. During the Pandemic or in 2020, the total sales value decreased to Rp. 5,774,344,378 or decreased by 16%. Meanwhile, in 2021 or the New Normal period, resale has increased and touched the figure of Rp. 9,679,671,921 or an increase of 68%.

2. Analysis of Sales Data Per Product

The following is presented data on sales of contraceptives by-product (7 products) described per month during the period from 2019 to 2021.

Table 2. Sales Growth of Contraceptive Devices Per Product Between Before, During Covid-19 and New Normal at PT. Bintang Semesta Farma Bandung (in Rupiah)

PERIO DE	IMPLAN	IUD	PIL	INJECT MONTH	1	INJECT MONTH	2	INJECT MONTH	3	KOND OM
Jan-19		23.620.000	70.173.770	330.029.000				333.749.000		
Feb-19		14.350.000	36.166.180	176.158.000				193.479.000		
Mar-19		21.254.000	54.483.920	173.276.908				172.211.000		
Apr-19		24.065.000	33.760.700	133.820.000				158.301.000		
May-19		76.540.240	174.435.012	239.595.596				283.530.000		
Jun-19		75.485.606	157.146.584	334.528.879				298.870.000		
Jul-19		57.286.723	113.048.086	188.925.804				234.910.000		
Aug-19		70.491.434	27.827.262	366.973.536				492.180.000		
Sep-19		23.940.915	34.535.520	156.478.052				161.980.000		
Oct-19		18.709.087	77.695.632	216.931.940				222.170.000		
Nov-19	1.266.000	64.959.583	38.073.738	182.503.000				183.755.000		
Dec-19	2.532.000	49.336.791	27.957.184	139.630.000				138.853.000		
Jan-20	2.532.000	47.591.159	40.760.344	149.254.000				165.451.000		
Feb-20	1.946.000	12.831.805	52.226.592	166.239.612				156.222.868		
Mar-20	3.400.000	15.778.300	35.566.941	193.335.034				204.498.416		
Apr-20	680.000	16.869.100	55.398.170	192.285.054				256.250.260	987.722	
May-20	680.000	22.946.800	22.654.690	67.186.230				85.173.232		
Jun-20	2.720.000	9.162.590	49.179.478	129.047.259				263.795.408		
Jul-20	5.780.000	27.765.050	104.483.474	199.075.974				237.209.110		
Aug-20	1.360.000	20.208.050	83.843.943	163.858.770				207.945.291		
Sep-20	2.720.000	26.188.650	98.678.211	174.714.196				238.438.808		
Oct-20	3.400.000	19.325.700	57.416.850	151.785.154				274.006.053		

PERIODE	IMPLAN	IUD	PIL	INJECT MONTH 1	INJECT MONTH 2	INJECT MONTH 3	KONDOM
Nov-20	2.040.000	26.474.550	86.324.937	213.690.485		227.847.907	
Dec-20	2.040.000	56.976.450	104.468.840	241.950.431		291.677.430	
Jan-21		20.364.350	41.227.274	190.603.254		278.375.065	
Feb-21	2.040.000	2.631.300	35.750.611	173.845.105		259.730.119	
Mar-21	7.480.000	6.749.700	74.727.214	236.609.531	52.248.000	294.919.061	
Apr-21	2.040.000	42.954.600	83.501.400	227.043.178	51.072.000	304.437.357	
May-21	680.000			150.834.282	49.728.000		
Jun-21	4.080.000			328.118.489	43.848.000		
Jul-21	95.200.000	32.714.900	126.908.563	307.375.000	73.416.000	384.138.000	
Aug-21	37.400.000	19.104.800	86.701.061	249.007.000	77.448.000	275.473.000	
Sep-21		27.374.000	164.740.144	337.303.000	163.800.000	388.111.500	
Oct-21		28.842.400	178.828.057	164.128.000	64.176.000	285.511.000	
Nov-21	2.040.000	29.905.500	174.625.508	280.318.000	80.472.000	435.963.000	
Dec-21	1.360.000	42.968.700	261.777.717	320.476.000	116.760.000	544.168.000	
2019	3.798.000	520.039.379	845.303.588	2.638.850.715	-	2.873.988.000	-
2020	29.298.000	302.118.204	791.002.470	2.042.422.199	-	2.608.515.783	987.722
2021	152.320.000	307.722.450	1.348.780.8	2.965.660.839	772.968.000	4.132.219.816	-
TOTAL					772.968.000	9.614.723.599	

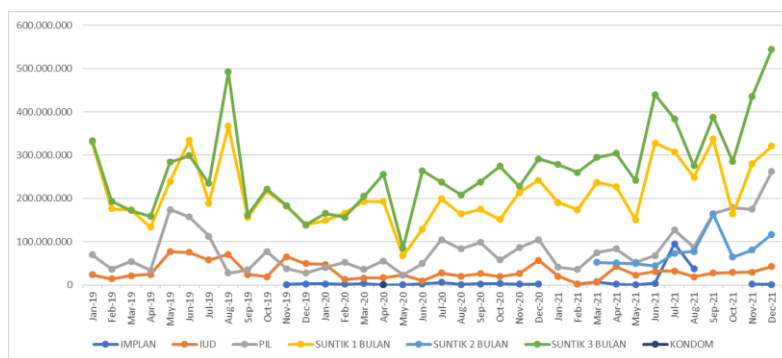


Figure 3. Sales Growth Per Month Per Product

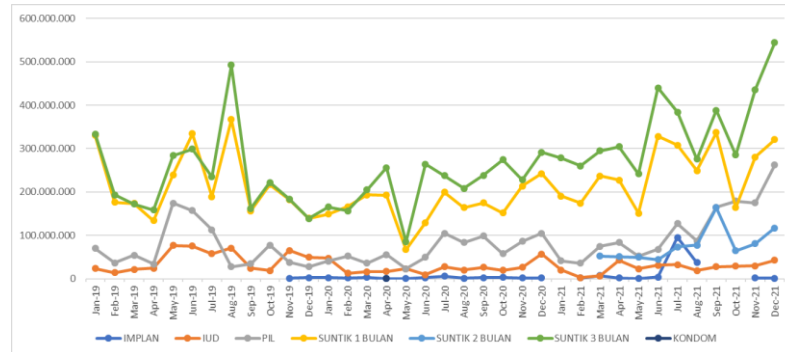


Figure 4. Monthly Sales Growth Per Contraceptive Device Product Between Before, During Covid-19 and New Normal at PT. Bintang Semesta Farma Bandung (in Rupiah)

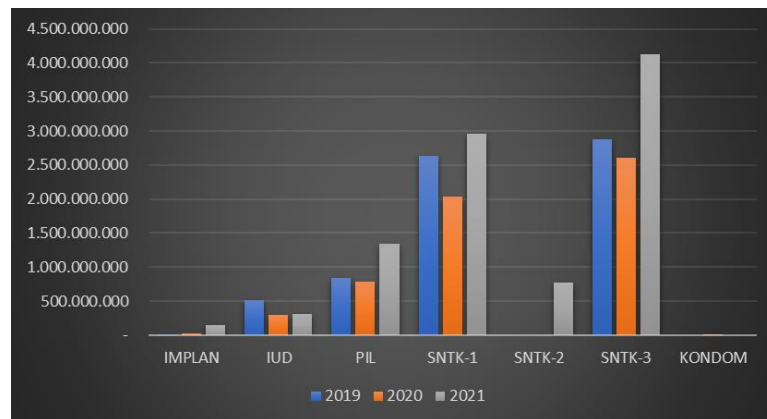


Figure 5. Annual Sales Growth Per Product of Contraceptive Devices Between Before, During Covid-19 and New Normal at PT. Bintang Semesta Farma Bandung (in Rupiah)

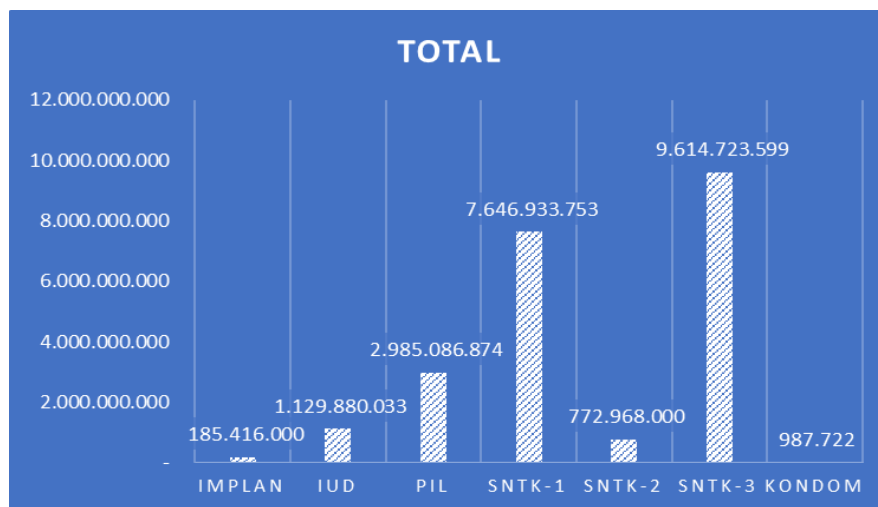


Figure 6. Total Sales of 3 Years Per Product of Contraceptive Devices at PT. Bintang Semesta Farma Bandung (in Rupiah)

Based on Table 2, Figure 3, Figure 4, Figure 5 and Figure 6 above, it is known that sales of contraceptives per product fluctuated. In general, the highest sales trend was achieved by 3 MONTH SUNTIK products with total sales of Rp. 9,614,723,599, followed by the second highest achieved by 1 MONTH SUNTIK products with total sales of Rp. 7,646,933,753. The third highest trend was achieved by PIL products with total sales of Rp.2,985,086,874, followed later in fourth by IUD products with total sales of Rp. 1,129,880,033. In the fifth position is occupied by 2 MONTH SUNTIK products with total sales of Rp.772,968,000, followed by IMPLAN products with total sales of Rp.185,416,000, and in the last position is CONDOM with total sales of 987,772, where this product is recorded only recorded sales in April 2020.

### 3. Analysis of Sales Relationship with Covid-19 Confirmed Numbers in 2020

The following is an analysis of the relationship between sales of contraceptives at PT. Bintang Semesta Farma Bandung with the number of confirmed Covid-19 patients in Indonesia. In the first part, it will be presented in tabular form, followed by a linear estimation graph, and then a correlation analysis will be carried out along with a significance test.

Table 3. Analysis of the Relationship between Sales of Contraceptive Devices with the Number of Confirmed Covid-19 Patients at PT. Bintang Semesta Farma Bandung

Month	Sales	Confirmed Covid-19
Jan	405.588.503	0
Feb	389.466.877	0
Mar	452.578.691	1.354
Apr	522.470.306	17.694
May	198.640.952	52.155
Jun	453.904.735	80.528
Jul	574.313.608	158.167
Aug	477.216.054	264.045
Sep	540.739.865	476.797
Oct	505.933.757	918.319
Nov	556.377.879	1.335.475
Dec	697.113.151	2.141.234
Total	5.774.344.378	5.445.768

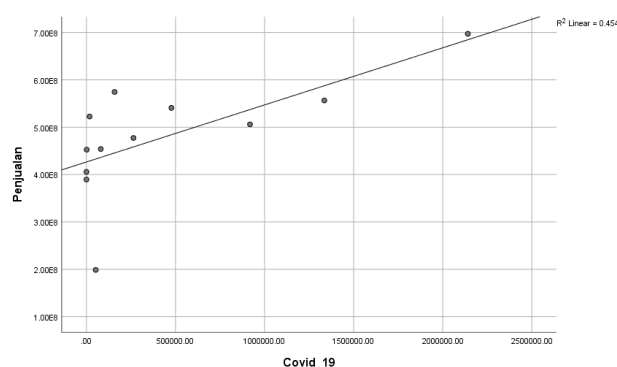


Figure 7. Scatterplot Analysis of the Relationship between Sales of Contraceptive Devices with the Number of Confirmed Covid-19 Patients at PT. Bintang Semesta Farma Bandung

Based on Table 4 and Figure 7 above, it is known that in 2020, the sales trend of Contraceptive Devices is in line with the confirmed number of Covid-19, whereas the Covid-19 number increases from January to December, so does sales data. This can be seen more clearly from the Scatterplot graph in Figure 7, where the resulting estimation line shows a positive linear pattern. The following

is an analysis of the correlation between the two variables (sales and confirmed numbers of Covid-19) along with the hypothesis test.

Table 4. Pearson Correlation Analysis Between Sales of Contraceptive Devices with the Number of Confirmed Covid-19 Patients at PT. Bintang Semesta Farma Bandung

**Correlations**

		Penjualan	Covid19
Penjualan	Pearson Correlation	1	.674 <sup>*</sup>
	Sig. (2-tailed)		.016
	N	12	12
Covid19	Pearson Correlation	.674 <sup>*</sup>	1
	Sig. (2-tailed)	.016	
	N	12	12

\*. Correlation is significant at the 0.05 level (2-tailed).

H0 : = 0 ; There is no significant relationship between Sales of Contraceptive Devices with Covid-19 Confirmed Numbers

H1 : 0 ; There is a significant relationship between sales of contraceptives and the number of confirmed Covid-19

= 0.05

Test Criteria:

Reject H0 (there is a significant relationship between 2 variables) if the significance value is <0.05

Based on the table above, the Pearson correlation value is 0.674 and a significance value is 0.016. This value is in the interval 0.600 – 0.799 which indicates the level of a strong relationship. While the significance value obtained is 0.016 where the value is less than 0.05. Thus, it can be concluded that there is a strong and significant positive relationship between sales of contraceptives and the confirmed number of Covid-19, where the increase in sales of contraceptives is in line with the increase in the number of confirmed cases of Covid-19.

## CONCLUSION

The sales value of contraceptives in 2019 (before the Pandemic) reached Rp. 6,883,809,682. In 2020 (Covid-19 Pandemic) decreased by 16% to Rp. 5,774,344,378 and in 2021 (New Normal) it will increase again by 68% to Rp. 9,679,671,921. Based on sales of contraceptives per product, the highest sales were achieved by 3 Month Injects with total sales of Rp. 9,614,723,599, followed by the second highest achieved by 1 Month Injecting products with total sales of Rp. 7,646,933,753. The third highest trend was achieved by PIL products with total sales of Rp.2,985,086,874, followed later in fourth place by IUD products with total sales of Rp. 1,129,880,033. In the fifth position is occupied by 2 Month Injects products with total sales of Rp.772,968,000, followed by Implan products with total sales of Rp.185,416,000, and in the last position is Condom with total sales of 987,772, where this product is recorded only recorded sales in April 2020. There is a strong and significant positive relationship between Sales of Contraceptive Devices and the Confirmed Number of Covid-19 ( $r=0.674$ ), where sales of contraceptives increased in line with the increase in the number of confirmed Covid-19 cases in 2020.

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