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## The Impact of Covid-19 Pandemic on Consumer's Interest in Purchasing Orchids (*Orchidaceae*)

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**Abstract:** Orchids (*Orchidaceae*) are considered one of the popular ornamental plants people are interested in because of its high aesthetic value. The covid-19 pandemic undoubtedly affected the trend of purchasing orchids by society. Hence, this study aims to determine the people's buying interest in orchids during the Covid-19 pandemic in 2020. This research uses quantitative descriptive analysis with data collection techniques throughout 78 respondents to fulfil the questionnaire form. As a result, the Kolmogorov-Smirnov method normality test showed normally distributed data. The independent T-test further test on the effect of the COVID-19 pandemic on people's buying interest in orchids showed a non-significant effect at the 95% level. This data indicates that pandemics did not affect the level of public interest in orchids. Surprisingly, the level of orchid-buying is slightly higher by 98.7% during the Covid-19 pandemic than before the pandemic 76.9% with dendrobium orchids became the most popular varieties in society.

**Keyword:** consumer, orchid, pandemic Covid-19.

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### INTRODUCTION

The outbreak of corona virus in Indonesia at the beginning of March resulted in a government policy to reduce social activities to reduce the number of virus infections. World Health Organization (2020) reveals that the corona virus can spread through sneezing, talking, coughing or even singing by people infected with corona within a radius of 1 meter. Therefore, it provokes the government to issue the policies on social distancing including rules for working from home to learning with an online system or online (in a network). As a result, many industries have suffered losses due to the lack of consumers, such as tourism, hospitality, and transportation to the culinary industry. As reported by CNN Indonesia on Thursday, April 24, 2020, there was a plunge in the income obtained from foreign tourists by 93.24% as of April 2020 in Bali.

On the other hand, in contrast to several industries that tend to experience a decline in sales, the opposite phenomenon is found in the horticultural industry, particularly ornamental plants. There is an increasing demand for this floriculture business. Balithi (2020) revealed increased demand for potted ornamental plants during the pandemic, especially leaf ornamental plants such as aglaonema, philodendron, and anthurium. The growing trend is estimated to be influenced by the community's high interest in gardening, as an activity carried out to relieve stress while staying at home. A survey conducted by Axiom (2020) explained that people enjoy gardening activities because it can be an alternative way for exercising and coping with stress while being stuck at home. Approximately 46.96% of respondents chose to cultivate houseplants, and 72.86% decided on growing flowers.

The orchid is considered one of the most popular ornamental plants globally. Taking an example, in the United States, the wholesale value of potted orchids (Orchidaceae) increased 80% in the last decade to \$ 126 million in 2007. Orchid is also popular in Hawaii. This country is listed as the third-largest consumer of orchids, with approximately \$ 16.8 million in 2007 (Palma, 2010). Following this, In 2019, Thailand exported orchids valued at USD 6.89 with a cultivated area of 22,576 rai (8926 acres) and 51,112 tonnes (DITP, 2020).

In Indonesia, the orchid is known to be the fourth most-produced ornamental plant nationally, with a harvest area of 176.77 hectares and managed to produce 24,717,840 stalks in 2018 (Data Statistik Indonesia, 2018). The export volume of orchids increased by 27.92 per cent, from 40.56 tons in 2017 to 51.89 tons in 2018. The FOB value of orchid exports also inclined by 15.95 per cent, from US\$ 292,963 in 2017 to US\$ 339,686 in 2018 (Data Statistik Indonesia, 2018). Indonesia could develop the orchid industry, with Banten Province being the largest producer, having a production capacity of 7.40 million stems or around 37.53 per cent, followed by West Java and East Java. As one of the ornamental plants with the largest production in Indonesia, Orchids are commodities with relatively stable and high demand (Balithi, 2020). The characteristics of orchids influence the stability of demand in the community, such as a high level of diversity. Therefore, Consumers have numerous choices according to their preferences. Orchids have the most extensive taxonomy listed in CITES, where there are 26,000 species of orchids (CITES, 2013). The beauty of orchids also becomes a consumer preference for decoration, such as weddings, funerals, and hotel decorations. Orchid, specifically phalaenopsis, is a long-lasting blooms species and has a wide variety of colours such as pink, white, and yellow. (Sushanta et al., 2019). Considering that people's income has decreased due to the pandemic, this study aims to determine how covid-19 impacts people interested in purchasing orchids.

## RESEARCH METHOD

### Measurement Scale

The research was conducted using a quantitative approach which was carried out from December 2020 to February 2021. The sampling technique used a purposive sampling method, where respondents were selected when they met the characteristics set by the researcher. The respondents in the study were people who had bought orchids. Sugiyono (2018) explained that purposive sampling is a sampling technique that has certain or special considerations. The data used are primary and secondary data; primary data is obtained using questionnaire distribution techniques, while secondary data is acquired from literature studies. The measuring instrument apply Likert scale of 1-5, in which the explanation of each number is 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree.

### Data analysis

The data analysis method used is the descriptive analysis method. The questionnaire for each indicator of all dependent variables and independent variables will be tested for good and bad, as shown by validity and reliability tests followed by a comparative test (Pair T-test). The software used is the statistical social science program (SPSS) version 23.

## RESULTS AND DISCUSSION

Table 1 describes several parameters to determine respondents' characteristics regarding their interest in purchasing orchids before and during the Covid-19 pandemic. Those parameters are gender, age, occupation, and monthly allocation of buying orchids. The gender of the respondents was dominated by women, who accounted for 78.2% of the percentage, while men just stood at 21.8%. The dominant age parameters were older people over 40 years old, which accounted for 51.3%, then 30-40 years old, and less than 30-year-old were 33.3% and 15.4%, respectively. Furthermore, government employees dominated the type of occupations, valued by 30.8%. According to funding, there were three criteria: the nominal was less than IDR 200.000, IDR 200.000-500.000, and over IDR 500.000 were 52.6%, 39.7%, and 7.7%, subsequently.

Besides, 60 people bought orchids before the pandemic, while 18 people did not. Otherwise, the interest in buying orchids during the pandemic has increased to 77 people from 78 respondents in total.

The results of the data obtained that 47% of respondents bought orchids based on the shape of the flowers, 43% were influenced by the colour of the flowers, 35% bought the orchid based on price considerations, and 29% of orchid buyers have the intention to purchase based on the duration of flower in the bloom. These results are equal to the research of Nurmalinda et al. (2011) which reported that a flower's colour and ideal shape are important considerations for consumers when purchasing flowers. In contrast, the research of Palma (2010) whose reports that price is the highest factor affecting purchasing decisions, representing 30.90% of the influence, followed by size (26.28%) and species (25.58%), while colour (17, 23%) is the least important attribute of orchids.

Table 1.Characteristics of Respondents in Research of Consumer's Interest in Purchasing Orchids

| Description   | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|-----------|---------|---------------|--------------------|
| <b>Gender</b>   |           |         |               |                    |
| Male  | 17        | 21.8    | 21.8          | 21.8               |
| Female  | 61        | 78.2    | 78.2          | 100                |
| <b>Age</b>  |           |         |               |                    |
| <30   | 12        | 15.4    | 15.4          | 15.4               |
| 30-40   | 26        | 33.3    | 33.3          | 48.7               |
| >40   | 40        | 51.3    | 51.3          | 100                |
| <b>Occupation</b>                                     |           |         |               |                    |
| Private employees                                     | 21        | 26.9    | 26.9          | 26.9               |
| Government employees                                  | 24        | 30.8    | 30.8          | 57.7               |
| Entrepreneur  | 6         | 7.7     | 7.7           | 65.4               |
| Housewife   | 16        | 20.5    | 20.5          | 85.9               |
| Others  | 11        | 14.1    | 14.1          | 100                |
| <b>Monthly Fund Allocation for Purchasing Orchids</b> |           |         |               |                    |
| <Rp 200.000   | 41        | 52.6    | 52.6          | 52.6               |
| Rp 200.000-Rp 500.000                                 | 31        | 39.7    | 39.7          | 92.3               |
| >Rp 500.000   | 6         | 7.7     | 7.7           | 100                |
| <b>Purchasing Orchids Before the Pandemic</b>         |           |         |               |                    |
| Purchasing  | 60        | 76.9    | 76.9          | 76.9               |
| Not Purchasing  | 18        | 23.1    | 23.1          | 100                |
| <b>Purchasing Orchids During a Pandemic</b>           |           |         |               |                    |
| Purchasing  | 77        | 98.7    | 98.7          | 98.7               |
| Not Purchasing  | 1         | 1.3     | 1.3           | 100                |

Based on the figure 1, respondents prefer to buy the Dendrobium with a percentage of 40%, followed by other types of orchids, Phalaenopsis (20%), Vanda (12%), Rhynchostylis (11%), Cattleya (7%), Oncidium (7%), and other types (3%). This result is similar to VanZile (2012) opinion, which stated that Dendrobium orchids are the most preferred because of their colour, length, and freshness. Moreover, Dendrobium is mostly used in many ceremonies and festivals. According to Nurmalinda et al. (2011), Dendrobium, which has green coloured-flower, is preferred to other varieties. Additionally, consumers prefer Phalaenopsis, which has white

flowers, because it radiates bright colours in terms of attractiveness. Moreover, Phalaenopsis is considered beautiful because it has flowers facing two directions.

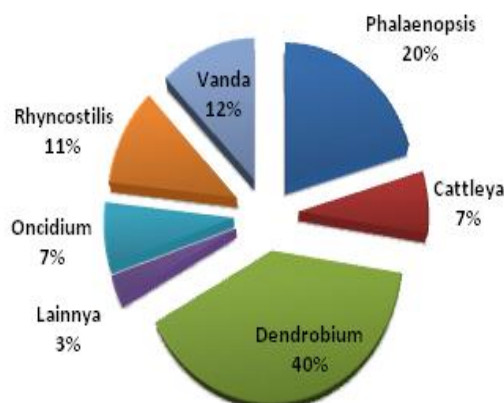


Figure 1. The proportion of the preferred orchid plant varieties

The normality test aims to examine whether, in the regression model, the dependent variable and the independent variable both have a normal distribution or not. A linear regression model that either has a normal or nearly normal distribution. The normality test results on the interest in buying orchids before and during the pandemic (Table 2) were carried out using the Kolmogorov-Smirnov significant value. The Kolmogorov-Smirnov test is used if the sample has a large size (greater than 50). In this study, the results obtained were  $sig > 0.05$ , namely the value of the interest in buying orchids before the pandemic with a  $sig$  of  $0.200 > 0.05$ . In contrast, the value of the interest in buying orchids during the pandemic is  $sig$   $0.200 > 0.05$ , and the decision was to accept  $H_0$ , which means that the data were normally distributed. The means of the normality data assumption are met. According to Singgih (2014: 191), in the Shapiro Wilk and Kolmogorov-Smirnov tests, the data is considered normal (symmetrical) if the value  $sig$  is greater than 0.05. Having been tested, the data then proceed to the non-parametric test using the Paired T-Test.

Table 2. Normality Test Results Before and During Pandemic on Purchase Intention for Orchids

| Variabel   | Kolmogorov-Smirnov |    |                 |
|--|--------------------|----|-----------------|
|  | Statistic          | Df | <i>P.values</i> |
| Interest in Purchasing Orchids Before the Pandemic | 0.066              | 78 | 0.200*          |
| Interest in Purchasing Orchids During the Pandemic | 0.065              | 78 | 0.200*          |

\*significant

Based on the paired statistical test results, Samples T-test (2-Tailed), interest in buying orchids before and during the Covid-19 pandemic that shown in Table 3 was  $0.864 > 0.05$ . So statistically, there was no difference in interest in buying orchids. Based on a test using the Likert scale technique, the results showed that before and during Covid-19, all respondents did not show a decrease in interest in ordering orchids. This result is influenced by consumer behaviour to find, collect, buy, and evaluate various types of orchid plants. This behaviour makes consumers study the decision-making to spend their resources to obtain orchids. Yatiman (2018) states that in analyzing consumer behaviour, it is not only about factors that influence consumer decision making in purchasing. In general, cultures, socials, personal (age, occupation, lifestyle), and psychological factors on motivation and perception.

Table 3. Results of Paired T-test Before and During the Pandemic on Purchase Intention

|        | Variable  | Mean     | Std. Deviation | Std. Error Mean | P.values |
|--------|---|----------|----------------|-----------------|----------|
| Pair 1 | Interests in Purchasing Orchids Before Pandemic - Interests in Purchasing Orchids During Pandemic | -0.08709 | 4.48324        | 0.50763         | 0.864    |

Customers' interest in purchasing orchids is also influenced by their income level. Based on the data, the pricing is considered as normal prices for this indicator. It is evidence that, in general, the consumers have met their primary and secondary necessities due to their high incomes from occupations as government and private employees. In addition, those buyers collect the orchid plants as their hobby. As a result, those types of people stay as the regular buyer for the seller. Rangkuti (2018) reported that the demand variable would result in a larger proportion of additional demand. The demand for orchids is elastic because orchids are luxury items or refer to tertiary needs, which means that the independent variable significantly affects the dependent variable.

In this study, it is known that in addition to consumer income factors, the enhancement of interest orchid-buying during Covid-19 is influenced by WFH (work from home) activities for the community. Especially women aged >40 years tend to buy orchids as collectors of various types of flowers and the needs of certain events. According to Triyono and Widodo (2004), the colour of flowers determines consumer interest in buying orchids. Also, income, education, and public attention to aesthetic functions cause the demand for orchids to grow from year to year. The need for orchids is expected to increase with the increasing demand for hobbies and the massive number of orchid collectors, florists, decorators, offices, conference halls, catering and hospitality, and the tourism industry (Puspitasari et al., 2018). The types of orchids common in the Indonesian market are Dendrobium, Phalaenopsis, Vanda, and several other types (Widiastoety, Solvia, and Soerdarjo, 2010). Even the price of orchids can increase if they are assembled as flower arrangements (Ahmad, Marwati, and Sulaeman, 2013).

## CONCLUSION

Based on the research, it can be inferred that there is no significant effect on the interest in buying orchids before and during the Covid-19 pandemic. Therefore, the Covid-19 outbreak did not affect the decrease of demand for orchids purchasing. However, the data shows that the interest of people to purchase orchids is increasing in minor proportions during the pandemic. All variables or factors that influence consumer decisions in purchasing orchids are cultures, social, personal, and psychological. suggestions for future research, it is better to increase the number of respondents (more than 100) so that the level of data validity is higher.

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