Public Concern for the Use of Backyard to Maintain the Environment and Food Security of the COVID-19 Pandemic in the City of Padang

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Abstract. The Covid-19 pandemic has forced people to do activities from home. Activities from home make some people feel bored and will try new useful things. One way to reduce boredom is by farming around the house. In addition to filling spare time and the aesthetic added value of farming in the yard, being able to preserve the environment encourages programs to maintain food security. The purpose of this study was to identify knowledge and public awareness of the importance of protecting the environment and maintaining food security starting from small things, namely gardening around the yard. This research uses survey research methods, data collection through individuals or certain physical samples in order to generalize about what is being studied. The research data were obtained using a questionnaire. The results showed that there has been a change in people’s behavior in environmental concern in using the yard to encourage food security during the Covid-19 pandemic.

Keywords: Covid-19, environmental, food security, home garden

1. Introduction

At the end of 2019, the world was shocked by the discovery of a new virus originally from Wuhan, Hubei province, China. It’s called Corona Virus, also called Covid-19 (Coronavirus Disease - 2019). On January 30, 2020, WHO declaring plague Covid-19 as an international public health emergency [1][2]. Every country in the world has been plagued by this virus. In Indonesia per October 31, 2020, has recorded 410,088 positive cases of Covid-19, 337,801 patients declared cured and 13,869 deceased. Anticipating and reducing the number of corona virus sufferers in Indonesia already done all over the area. Some have suggested limiting home activity, homing school activities, working from home, even worship activities were laid off. This is a government policy based on well-thought-out considerations of course [3].

The Covid-19 pandemic has caused a global health crisis, there has been massive behavioral changes and has placed a significant psychological burden[4]. Survey results reveal that many of the population are concerned about well-being, increased anxiety, stress, depression and difficulty finances [5]. Activities from home would be boring if it weren't interspersed with different activities. Usually to relieve boredom people would go to tourist resorts, malls or other leisure areas. As most sights were
closed and the fear of meeting many people made some turned to leisure time by farming around the house.

Gardening in the backyard has many benefits of including nutrition and food security, increased environmental quality, reduced spending on foodstuffs, even opening new employment opportunities and establishing new ecosystems [6]. Planting in the yard of the house does not only serve to fulfill physical and aesthetic health. More than that, the existence of these plants can be a process of healing or therapy for mental health (psychological) [7]. Starting meditating in the morning getting yourself into good thinking, some people have spend more time in the backyard and more gardening than before [8].

Farming in the yard of the house is not limited to improving aesthetics and maintaining food security but can also increase income. There is an increase in family income by utilizing the house yard land [9]. Based on what has been described above, researchers are interested in conducting research related to the effect of activities from home on community awareness in the context of utilizing house yards in protecting the environment and food security in the Covid-19 pandemic.

2. Materials and Methods
This research uses survey research methods, data collected through individuals or specific physical samples in order to be able to generalize about what is being studied. The research data were obtained using a questionnaire. This study uses a quantitative approach. This research has been carried out in the city of Padang. The sample or respondents in this study were people who usually did their activities outside the home during the pandemic, mostly working from home with an age range of 15 to 60 years as many as 358 people. Research instrument using a Likert scale. Before running the questionnaire, the reliability and validity of the instrument were tested.

3. Results and Discussion
Respondents in this study were people who usually worked and carried out activities from home, due to the Covid-19 pandemic with professions ranging from students, civil servants, company employee and others. age level is dominated by 25 - 50 years of 49.50 % and 17 – 25 years of 44.55 %. This is in accordance with the age of higher education students and the productive age in general. Most respondents education level is bachelor degree 52.84 %.

![Figure 1. Age-based percentage of respondents](image1)

![Figure 2. Percentage of respondents by professions](image2)
Figure 3. Percentage of respondents by educations

The questionnaire was measured through 3 variables including aspects of environmental awareness, utilization of the home yard and food security. The results of descriptive statistics can be seen in table 1.

Table 1. Descriptive statistic analysis of research

|                              | N  | Std. Deviation | Mean |
|------------------------------|----|----------------|------|
| Environmental awareness      | 358| 0.72           | 4.45 |
| Utilization of the home yard | 358| 0.89           | 3.93 |
| Food security                | 358| 0.90           | 3.81 |

3.1. Environmental awareness
The Covid 19 pandemic has had a negative impact on various sectors, one of the factors that has benefited is the environment, especially due to regional quarantine activities. There is a direct effect on humidity, temperature and a reduction in the level of air pollution [10]. Humans are forced to reduce activities outside the home to reduce the spread of the virus. As is well known, one of the environmental problems is the existence of air pollution caused by motorized vehicles. During activities from home, everyone can pay attention to the environment around the place of residence to feel more comfortable. Every individual should understand that an environmental care attitude should start from the environment in which he lives. Gardening is one of the activities that have a positive impact on the environment, a small amount of land use can increase the biodiversity available.

3.2. Utilization of the home yard
The use of house yards for gardening activities is commonly referred to as home gardens. Where to use narrow land for farming. Not only is it beneficial in terms of food at home, it also has an impact on the family's economic income. A safe level of nutrition can reduce the effects of excessive contamination of pesticides by purchasing vegetables in the market. As we know most foodstuffs especially vegetables contain very high pesticides. As many as 45.54% of respondents (163 people) became beginners in gardening at home to fill their spare time during their activities from home. Gardening can reduce anxiety and can eliminate boredom from a person. About 63.36% of respondents (228 people) have used their house yards to grow vegetables, rhizomes and other foodstuffs. There is a significant increase in the communities that make use of their own backyard to grow crops.

3.3. Food security
One of the impacts of Covid-19 is on the agricultural sector and food production [11]. This has changed the behavior of 62.37% of respondents who were not used to food stocks at first, are now forced to increase food supplies for 1 to 2 weeks. This is also to reduce the spread of Covid-19 by not interacting too often outside the home. Nearly all vegetable supply chains and agricultural production have been heavily impacted and there is a significant increase in risk resulting in mismatching of food prices in the
There has been a change in people's behavior in terms of food supplies. Most people prefer to cook by themselves rather than buy food from outside. Based on the results of data processing, 80.19% of respondents chose to cook their own food at home to ensure better quality, maturity level and the nutrition provided. Balanced nutrition intake has a big impact in managing Covid-19, providing optimal nutrition and food starting from changes in individual, community to global behavior [13], [14]. Through farming activities around the house, food security can be maintained and nutrition can be fulfilled.

4. Conclusions
There has been a change in people's behavior in environmental concern in using the yard to encourage food security during the Covid-19 pandemic.

Acknowledgements
The author would like to thank the Institutions for Research and Community Service (LPPM), Andalas University under the Research Work Implementation Agreement Letter No: T/61/UN.16.17/PT.01.03/Pangan-RDP/2020 which has funded this research. The author also expressed gratitude to all who had helped to accomplish the research.

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