Sociology of Designs: Middle-Class Housing Cluster, Pots Designs, and Gardening Activities During the Pandemic

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Abstract

Gardening is one of the popular activities during the COVID-19 pandemic situation to relieve boredom and psychological pressure. The phenomenon that occurs in people's behavior in responding to this trend, especially residents of middle-class housing clusters, is an interesting research subject. This qualitative research with a design sociology approach aims to determine the criteria for pot design that people are interested in, as well as to provide recommendations for suitable pot designs for home gardening activities. Residents of the middle-class housing cluster were chosen as the target for obtaining data, based on the limitation of yard that leads to pots usage for planting. The data was collected from 104 respondents through questionnaires, interviews, and field observations. Based on the results of data analysis, the following pot design criteria were obtained: using clay material, minimalist shape, easy to move, come in different sizes, natural color, easy to obtain, and affordable in price. The results of the study in the form of design recommendations were then implemented with reference to these criteria, involving pottery craftsmen from the pottery center of Pundong, Bantul Regency, Special Region of Yogyakarta.

Keywords

gardening; middle class housing cluster residents; pandemic; pot design

INTRODUCTION

During the Covid-19 pandemic, various efforts were made to prevent the virus from spreading. Unfortunately, the uncontrollable spread of the virus has practically immobilized people and forced them to stay at home. A survey from Kanta states that almost 80% of Indonesians spend time at home during the quarantine period (Yuswohady et al., 2020). Interestingly, this trend does not only occur in big cities, which on average are included in the red zone, but is also followed by small cities in Indonesia. People began to adapt to this limited social activity and began to look for new activities

at home. Gardening is one of the alternative activities during this period of social limitation. The pandemic has caused the active and productive lifestyle in urban areas experiencing a shift in objective, one of which is conducting a new stimulating hobby, namely gardening (Chalmin-Pui, et.al. 2021; Soga, et.al., 2017). This is emphasized again by Yuswohady (2020) who states that one of the new habits that will occur in urban communities in the new normal era is urban

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farming and gardening.

Gardening is an activity that is believed to reduce boredom. Interacting with plants by looking at the green leaves, colorful flowers or the ornamental plants after a long time facing the computer screen is one way to release tension. The positive relationship of gardening can be observed in various health outcomes, such as reduced depression and anxiety disorders, reduced stress, balanced mood disorders, increased body mass, and improved quality of life (Soga, 2017). In addition, gardening has a positive effect on happiness, life satisfaction, and feelings of loneliness (van den Berg, 2010). The positive impact of gardening at home is not only felt by adults, but also by children. The activity can be a diversion for children from gadgets, because as long as they have to stay at home, gadgets are an unavoidable choice of entertainment. Stuart-Smith (2020) in his presentation entitled "Pandemic related stress: the benefits of gardening and connecting with nature" states that gardening has an anti-stress effect, creates a sense of security due to trauma and loss, encourages attitudes to care more, and creates a sustainable community.

For middle class housing cluster residents, gardening can be carried out in their yard. However, for certain types of house such as types 36 and 45 with limited land, pots usage as containers for plants and mediums is more appropriate. According to Sadana (2016), a simple house is a livable place that is affordable for people with low and middle-class income. In SNI 03-6981-2004 a simple one-story house is planned as a suitable place to live for low or middle-income people. Therefore, the price must be affordable for people in that group. The definition of a cluster in this case is a housing group in one environment with a harmonious house shape where the walls of the houses are attached to each other, without a fence, and using a one-gate system with 1 x 24-hour security. Some people may have been doing gardening long before the pandemic, but some started this new hobby recently since the pandemic. They take advantage of the gardening concept not only as a farming activity, but also to maximize its aesthetic function for both indoors and outdoors decoration. In this case, the selection of gardening facilities such as an attractive pot design is a determining factor (Chalmin-Pui, et al. 2021; Stuart-Smith, 2020; van den Berg, et al. 2010).

Other than its attractive factor, public awareness of the green urban environment is also one of the considerations for consumers in choosing environmentally friendly products. To meet these needs, it is necessary to have gardening facilities that are suitable for living in urban areas with environmentally friendly concepts and have aesthetic value. In a previous study entitled: Having More Plants at Home During the Covid-19 Pandemic: Is It Just Following A Trend? by Afrianto dan Diannita (2022), it was stated that Indonesians, especially those living on the island of Java, intended to have more plants because they should self-isolation and social distance selama pandemi. They think that it can provide a more positive mood and feeling. Most of the them state that they preferred potted plants, horticulture, and trees with an average of 1-10 plants at home. This research will complement the previous research, which was about the choice of suitable pots for home gardening.

This study aims to determine the criteria for the design of pots that are of interest to the residents of middle-class housing clusters and to provide recommendations for suitable pot designs for home gardening activities and their implementation. The results showed that the pot design criteria that are the choice of the community are: using clay material, minimalist shapes, easy to move, there are several size variants, natural colors, easy to obtain, and affordable prices. These criteria were favored by the middle class because they were in accordance with the characteristics of the living environment, followed trends, and were in accordance with the purchasing power of the middle class. The results of the study in the form of pot design recommendations also involved pottery craftsmen from the Pundong pottery center, Bantul Regency, namely in the design implementation process.

The increase in the number of the middle class, in addition to encouraging the increase in middle class consumption, also contributes to the increase in household consumption and national economic growth (Nizar, 2015). With pot design recommendations made by craftsmen, it is hoped that it can meet the gardening needs of people living in cluster-type middle housing. In addition, this effort is expected to revive the small and medium industry (IKM), especially the craftsmen engaged in the pottery sector that produced plant pot products which had slumped due to the pandemic. This study gives nuances to the existing studies on sociology of design by looking at middle class preferences of pots during the pandemic (Jackson, M., & Cox, D. R.; 2013; Carvalho, L., Dong, A., & Maton, K., 2009). In this study, we argue that the need for pot designs that are in accordance with the criteria from the results of filling out the questionnaire needs to be accommodated, so that gardening activities for residents of middle-class housing clusters during the pandemic can still be carried out.

METHODS

This research is a descriptive qualitative research. The design sociology approach in this study is used to examine the phenomena that occur in people's behavior during the Covid-19 pandemic, especially in responding to the trend of home gardening. This social study is useful for social analysis as well as for input to design actors, as a basis for problem solving, or efforts to find solutions through new design approaches, or new social policies. Sociology of design is seen as a form of knowledge of design approach and society in solving their needs. By using this approach, the object of research, namely the pot design as the choice of the middle class in gardening activities during the pandemic, is studied and linked to existing social factors with comprehensive approach.

The analysis in this study was conducted based on data collected from questionnaires by 104 respondents. Target respondents are middle-class housing cluster

residents with gardening hobby. Middleclass housing cluster is chosen as target for data collection due to its limited land for gardening, therefore pots are used. Apart from the results of filling out the questionnaire, data were also obtained from the results of field observations and interviews with several sources. Pot design criteria are obtained from the analysis results and become a reference in making recommendations for the development of pot designs and their implementation.

RESULTS AND DISCUSSION

The discussion and analysis of the pot design as the choice of middle-class housing cluster residents is focused on matters relating to the characteristics of the residents, gardening activities during the pandemic, and pot design which that cannot be separated from product design elements, namely function, form, color, and material.

Characteristics of Cluster Type Housing Residents

Based on the results of the questionnaire, it is known that out of 104 respondents, 76 of them (73.1%) are female, while the remaining 28 (26.9%) are male. Although the number of women still dominates, it does not mean that there are no men who show interest in plants. The government's appeal for people to stay at home during the pandemic has made home the safest and most comfortable place. This then encourages people, especially those living in urban areas to carry out activities that can reduce boredom while staying at home. One of them is gardening. This applies not only to women, but also to men.

From the 104 respondents who filled out the questionnaire, 42 respondents (40.4%) are 36-45 years old, 34 respondents (32.7%) are 46-55 years old, 23 respondents (22.1%) are 26-35 years old, and the rest five respondents (8.8%) are under 26 years old and over 55 years old. The highest number of respondents who like decorative plants and gardening activities are those who are in the productive age group (36-45 years).

According to BPS (Central Statistics Agency, 2021), the productive age is 15-64 years, and the number of productive age in Indonesia is currently 70.72%. Respondents who filled out the questionnaire entirely filled out the choice of income range. This indicates that all respondents, including respondents of productive age, have permanent jobs.

The data obtained from the results of filling out the questionnaire related to the income of the respondents are as follows: 40 out of 104 respondents (38.5%) earn IDR 7,500,000 - IDR 14,999,999, 29 out of 104 respondents (27.9%) earn IDR 15,000,000 - IDR 29,999,999, and 24 of 104 respondents (23.1%) earned IDR 3,000,000 - IDR 7,499,999. The remaining 11 respondents (10.5%) earn between IDR 3 and 40 million per month. Data related to income in this study is needed to determine the classification of respondents referring to the income classification carried out by BPS. Based on the data, the people's buying power of pot products can also be assumed.

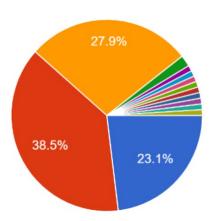


Figure 1. Income data chart

The results of data collection from questionnaires related to the residential area find that 37 respondents (35.6%) who filled out the questionnaire come from South Jakarta, 17 respondents (16.3%) from East Jakarta, 16 respondents (15.4%) from Bogor, 11 respondents (10.6%) from West Jakarta, nine respondents (8.7%) from Bekasi, nine respondents (8.7%) from Tangerang, and five respondents (4.8%) from Depok. The type of house that is most inhabited by respondents is type 45. Type 45 house is a

house that has a building area of 45 m^2 . The dimensions of the building area of type 45 houses are quite common, for example 6 x 7.5 and 8 x 5.6 m². Type 45 houses are built with varying plans, there are one-story and two-story house with room specifications generally having two bedrooms with a size of 3 x 3 m, one family room that is integrated with the kitchen, one bathroom and one carport. Type 45 houses are usually equipped with land for gardening activities.

Gardening Activities

Out of the 104 respondents who filled out the questionnaire, it is known that 53 respondents (51%) have been engaged in gardening activities for approximately one year, 13 respondents (12.5%) for approximately two years, and 38 respondents (36.5%) have been in this hobby for more than three years. Chalmin-Pui et al (2021) conducted a study using a questionnaire method on 6,914 respondents in the UK to analyze the reasons someone started gardening. Based on the results of this study, it is known that gardening activities at home is considered to provide benefits for mental and physical health. The same benefits are usually obtained when a person goes on a picnic or an excursion to a green environment outdoor. People who do gardening activities have decreased depression rates by 13%, reduce stress levels by 16% and increase energy level by 12%. However, the study also states that the reasons above are not the main motivation for gardening, but rather because of the pleasure from doing the activity. There is a certain satisfaction in nurturing plants and witnessing the growth.

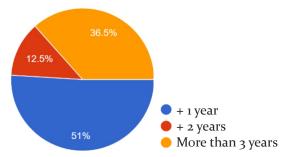


Figure 2. Chart of respondents pursuing gardening activities

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In a pandemic situation like today, gardening activities can reduce the feeling of boredom at home. People who cannot leave the house can opt to have fun and manage stress and anxiety due to the pandemic through gardening activities. If we look closely at the existing trends, as many as 66 respondents have started to pursue this hobby for the past one to two years. In other words, they have started to like the activity since the start of pandemic, which requires people to spend more time doing activities at home. For people who have limited land for gardening, the use of pots as a container for planting medium is the easiest solution.

The next question in the questionnaire is related to the reasons or motivations of the respondents to pursue gardening activities. Respondents can choose more than one answer, and the results are as follows: out of 104 respondents, 39 people state that they like plants, 65 people like plants and doing this activity in the free time during the pandemic. This means that this activity is carried out with motivation because they like plants and want to take care of plants by gardening while carrying out the staying-athome protocol during the pandemic. Thirty-eight respondents state that this activity was carried out in their free time during the pandemic, 60 respondents carry out this activity for three reasons, namely because they like plants, have a business of selling plants, and as a hobby during the Covid-19 pandemic. Eleven respondents choose the answer to own an ornamental plant business and at the same time like ornamental plants, and one person state that he pursued this activity because he had an ornamental plant business.

Out of 104 respondents, 77 respondents (74%) state that they had an interest in certain types of plants while the remaining 27 people (26%) answer no. Specifically, respondents have certain types of favorite plants. Among them are: *Aglaonema*, pothos (*Epipremnum aureum*), *Philodendron giganteum*, *Monstera adansonii*, *Anthurium*, orchids, cacti, *Caladium*, *Sansevieria*, roses, and many more. From those several types of plants, *Aglaonema* is one of the favorites.

In the question about pot material, 47 respondents (43.3%) choose plastic pots, 51 respondents (49.9%) choose clay pots, while the rest use plastic and clay materials and other materials such as wood and cans. The data shows that there is more public interest in pots made of clay than pots made of plastic and other materials. The reason they chose this material can be seen from the questionnaire results showing 71 respondents choose the material in the pot with the consideration that it is easy to obtain, accompanied by other reasons, namely environmental friendliness and low price. Other respondents choose it for several other reasons such as durability, varied designs, does not break easily, made from natural raw materials, has large pores, and so on.

Based on the results of the questionnaire, the main reason respondents choose pots was by considering 3 (three) criteria, namely: easy to obtain, cheap, and environmentally friendly. The criteria that are easy to obtain can be understood considering the pandemic conditions that have caused limited mobility to lead the consumers to choose products that are easy to get. Currently, various types of pots can be purchased through online applications with varied types and prices. Low prices are the second criteria to consider when choosing a pot. Price is one of the determining factors for consumers in choosing a product related to buying decisions. When choosing between products with existing brands, consumers will evaluate prices in absolute terms but also comparing several price standards as a reference for making purchases. Good quality product with a low price will certainly be an attraction for consumers, but quality is not the only consideration to purchase a product. The feasibility of the price also plays an important role (Sweeney, et.al, 1998).

The third criteria for the respondents in choosing the pot is the environmentally friendly materials. This choice shows that the public already has awareness, choosing products that can decompose naturally. Clay pots meet these criteria because they are made of natural materials that will

not pollute the environment. Clay pots are made through firing at temperatures below 1000°C and without glazing or coating. Through this process, natural colored pots or often called terracotta that have pores will be produced. The porosity in clay pots allows air and moisture to penetrate the sides of the pot. This moisture and air are utilized by the fine roots located at the edge of the soil. The use of clay pots outdoors also has an advantage, the thick walls that clay pots have can protect plant roots from rapid and damaging temperature changes. Terracotta pots are classic plant pots, with neutral and warm colors that make almost any plant look beautiful.

Pot Design

In the questions about the preferred design, several choices were given with the aim to provide respondents with extensive options, namely: geometric minimalist shapes (square, rectangular, cylinder), animal shapes (elephant, giraffe, etc.), stylized forms of plants (leaves, stems, etc.), stylized forms of the human body (head, hands, etc.), and other forms. From the choices mentioned above, 90 respondents or 86.5% state that they prefer the minimalist geometric shape design, seven respondents say they like the stylization of animal shapes, and seven other respondents like the stylized form of plants, human body, and other shapes.

The majority preference of the respondents indicates that a simple pot design remains an option. From the results of interviews with several sources, people who grow ornamental plants tend to prefer simple pot designs because they want their ornamental plants to be the main spotlight. However, the existence of aesthetic elements in the pot also plays an important role. Another source says that in carrying out gardening activities during the pandemic, he often moves pots around the house for a different ambiance. Therefore, he hopes that there will be a pot design that makes this activity easier. Another source, a pot entrepreneur, says that simple pot designs are more sought after by consumers to be placed in the house. The consideration is to blend with other home decorations in a unity, not creating the impression of being 'crowded'. This is mostly done by consumers from the millennial generation who want a simple but attractive home design.

The simple shape of pot is a classic design and is still popular even though it has been going on for tens or even hundreds of years. Designs adapted from stylized living things such as the shape of a human head, animal shape, and so on are designs that are currently trending, but the questionnaire result indicates that a minimalist design is highly preferred. This design is favored by almost all segments both in terms of social class and age. Here are some examples of pot designs that are popular with the wider community, both classic and trending designs.

Related to the size of the pot, 98 respondents or 94.2% give a response that they choose the size accordingly to the size of the plant. Their reason is the aesthetic factor, taking into account that the size of the pot and the size of the plant will create an impression of balance so that it looks more beautiful. In addition, the suitability of the size of the pot with the placement location also needs to be considered, reminding that the majority of respondents who fill out this questionnaire are middle class people who live in a cluster-type housing. Another reason is for maximum plant root growth, better plant growth, suitable with the size of the yard, the proportional size of pots and plants, and so on. The need to adjust the size of the pot with the size of the plant scientifically is a main factor for the plant growth. Thus, it is necessary to adjust the shape and size of the plant to the container. In the end, the suitability of the plant to its pot can improve the appearance of the plant.

Color is one of the factors that play a role in the appearance of a product. In this day and age, in choosing colors, people do not just follow personal tastes based on their feelings, but have chosen them with full awareness according to its functions. Therefore, the choice of color is one of the questions asked in the questionnaire. Based on the results, the following data were obtained: 71 respondents or 68.3% choose natural colors

(brown, beige, gray, etc.), 27 respondents or 26% choose monochrome (black, white), two respondents or 1.9 % choose fancy colors, and four respondents choose a specific color such as terracotta, white, and maroon. Natural color which in this case is defined as brown and its derivatives (beige) and gray has an association with a person who is warm, calm, friendly, natural, togetherness, humble (David, 1987).

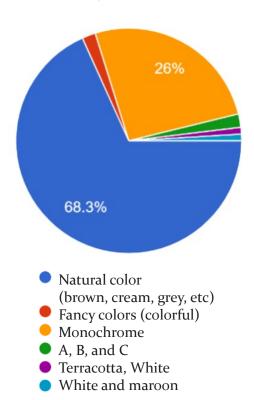


Figure 3. Respondent's choice of color chart

Design Recommendations and Implementation

As stated in the introduction, one of the objectives of this research is to provide recommendations for suitable pot designs for home gardening activities. The recommendations given in this study refer to the conclusions of the questionnaires results, interviews, and field observations in the form of design criteria as follows: 1) material made of clay, 2) minimalist, geometric shape (square, box, cylinder), 3) easy to move, 4) numerous size variants, 5) natural colors, 6) easy to obtain, and 7) affordable price. Based on these criteria, the research team consisting of lecturers

and students with a scientific background in product design then tried to realize several alternative designs in the form of sketches.

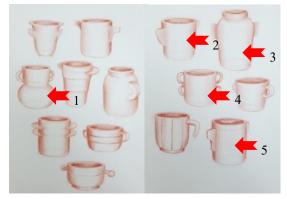


Figure 4. Selected design sketches



Figure 5. Design implementation from design sketch number 3



Figure 6. Design implementation from design sketch number 4

From several design alternatives, five were chosen and will be implemented into clay pots. Pottery craftsmen in Pundong District, Bantul Regency, Special Region of Yogyakarta were involved in the implementation phase of this design. At the beginning of the Covid-19 pandemic, the impact was quite felt by these craftsmen. Previously, the earthquake that shook Yogyakarta and

Central Java in May 2006 had stopped the activities of craftsmen in Pundong and its surroundings. However, they managed to overcome the vacuum period and revived the pottery craft center that had been going on for generations. Now, when the global pandemic hits all region, the craftsmen who initially had a slump started to take order from consumers once again. One of the most popular products during the pandemic is planting pots. The increasing public interest in the hobby of gardening has caused an increased demand for pot products. The implementation of the pot design goes through three stages, namely the kneading process, the forming process, and the firing process.

CONCLUSION

Residents of middle-class housing cluster engage in gardening activities because they like plants and want to take care of plants by gardening while carrying out the stay at home program during this pandemic. Limited land does not prevent them from continuing to do gardening activities using pots. Based on the results of filling out the questionnaire, the pot design that is in demand by middle-class housing residents is the cluster type, the type of pot made of clay. This shows that the middle-class people who live in this type of housing have the awareness to protect the environment by choosing environmentally friendly natural pots. They also consider minimalist shapes and natural colors so that the plants planted remain dominant, blend with the placement environment, and follow the trend of arranging a simple but attractive home. Ease of moving and varying pot sizes are an option because it adapts to the characteristics of the living environment, especially limited land. While the criteria for pots that are easy to obtain, and affordable prices are taken into consideration because they adjust to the purchasing power of the middle class. To realize a pot design that fits the needs of the middle-class community, the next step is to provide recommendations for pot designs and their implementation. In realizing the

recommended design, the research team involved pottery craftsmen from the Pundong pottery center, Bantul Regency, Special Region of Yogyakarta. The involvement of these craftsmen is expected to revive the small and medium industry (IKM), especially the craftsmen who are engaged in the pottery sector which produces plant pot products which had fallen due to the pandemic.

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