Color Trend of Residential Houses in Denpasar City as a Sociopsychological Reflection of the Covid-19 Pandemic

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Abstract
Purpose: This study aims to determine the psychological condition of the people in Denpasar City, seen from the phenomenon of the trend of choosing color paint for homes during the Covid-19 pandemic.
Research method: The survey was conducted in 12 paint shops and buildings spread across Denpasar City. The method used is structured interviews. The research method is qualitative with descriptive presentation. The results of data mining were studied using color psychology theory.
Results and discussion: Based on the results of the study, it shows that the choice of white and bright colors has implications for the desire of the community to create peaceful, calm, clean and pleasant conditions in their homes during the Covid-19 pandemic.
Implication: The color selection implicitly shows the expectations of the people of Denpasar City. Hopes for a better future, which had rocked many sectors of life during the Covid-19 pandemic.

Keywords: Interior design, Denpasar City, psychology of color, Covid-19 color trends
Social restrictions during the Covid-19 pandemic led to a massive migration of various activities into homes. The existence of this condition, causes the residence to become a place for many new activities. This phenomenon is known by the well-known furniture manufacturer IKEA, called the "big home reboot" (Milmo, 2020). According to IKEA, a residence will be a multifunctional place, because the space in a residence will be an office, a playground, a school and a social space. Thus, there is an urgency to create a home as a productive and comfortable “refuge” place.

One of the strategies for creating productive and comfortable conditions is through an atmosphere shaped by color. According to Kahn in (Birren, 2016), color can stimulate individual responses and act according to the type of color it sees. Color can be used as a "bridge" between visual, emotional, and action. Thus in the context of space, color is very important in building the desired emotional state to direct the action of the user of the space. In addition, color also has certain meanings as a person's psychological reflection (Birren, 2016). Through color selection, a person's psychological condition can be identified. This relates to associations with experience, cultural conditions, and education (Elliot et al., 2015).

In connection with the above, there are interesting things that have happened in the last five months, namely the sales of certain color paints for houses in Denpasar City have increased by 50-60% compared to other colors. Although some studies have been carried out in Bali concerning the Covid-19 (Corona) itself, as done by Juniartini et al (2020), dan Yasa (2020), this fact is very interesting to study and raises the question, are there any implications for choosing these colors with the psychological condition of the people in Denpasar City during the COVID-19 pandemic?

The above problems will be examined through a color psychology frame. The aim is to find the relevance of choosing colors and the psychological condition of the people in Denpasar City during the Covid-19 pandemic.

RESEARCH METHODS

This paper uses a qualitative method with a descriptive presentation. Data were collected using a structured interview method at 12 paint shops and buildings in the city of Denpasar. Structured interview techniques were used to obtain data on increased paint sales during the Covid-19 pandemic. The theory used is the color psychology theory. This theory is used to find the relevance of the dominant colors chosen during the pandemic, to the psychological conditions of the people in Denpasar City.

RESULTS AND DISCUSSION

Color Trends in the Covid-19 Pandemic
White and bright colors were chosen during the Covid-19 pandemic in the City of Denpasar. This data was obtained from a survey in paint shops in Denpasar City. From data analysis carried out through interviews and observations, the choice of white paint increased by 60% during the pandemic, while for bright colors it increased by 50%. White is still very popular and has dominated sales in the last five months. However, for bright colors, they have various color variations, the only thing that distinguishes them is the brightness level which is influenced by brightness, saturation and chroma.

Color is one of the characteristics of visual perception which can be described by the attributes of hue, brightness, and color density (saturation, choma) (Elliot et al., 2015, p. 47). Hue (hue) relates to the perception of a color area in the range of the light spectrum, such as green, red, blue and so on. Then brightness relates to the ability of the color area to appear capable of emitting or reflecting light. While saturation is related to the level of color density which is related to the level of brightness of the color itself which is related to photoreceptors or visual receptors. Finally, chroma is related to the brightness level of colors that appear to be mixed with white (2015, p. 49).

![Figure 1. Hue, Brightness, Saturation and Chroma](Source: Eliot et al., 2015)

During the Covid-19 pandemic, sales other than white paint, there were specific bright colors that experienced an increase in sales. For example, variations of yellow, blue, green, gray, and brown. However, in this paper, the bright colors will only be discussed based on the level of brightness which is influenced by brightness, saturation and chroma. The reason is, to limit the complexity of this paper, so that the general public is able to understand the contents of this paper easily and communicatively.
Color Theory and Psychological Conditions

Perception of color and emotion is in the realm of experience. In this level, there are feelings, intuition and sometimes not based on rational logical processes (Epstein, 1994). Other opinions that discuss the relationship between color and emotion, among others, were written by (D'Andrade & Egan, 1974; Kaya & Epps, 2004; Lang, 1979), their opinions related to color association from a semantic and connotative point of view, as well as the relationship between colors and certain types of emotions in humans. On the other hand, the colors associated with are not only unique to individuals but also affect culture and between cultures (Adams & Osgood, 1973; Palmer et al., 2013). In the context of using color in interior spaces, (Butterfield, 1990) states that color is an interpretation of the thoughts that shape the environment. This interpretation is an individual reaction to the color palette. Then, this reaction will cause the perception of meaning to form in the mind. But from these opinions, then the question arises, how do color associations become something that can be perceived? There are several opinions that have emerged, but all of them relate to the theory of "memory color effect". This theory is related to the view (Helmholtz, 1867), which states that most of the images of human perception are closely related to experience and memory. The memory color effect theory explains that human perception in defining objects is closely related to the color identity embedded in certain objects which is constant (Herring & Bryden, 1970). For example, bananas are yellow, leaves are green, the sky is blue, and others. These colors are constantly attached to these objects, but the range of possible color variations in similar objects is very relative. The key to embedding this identity is a repetitive experience. It is the same as the emotions associated with certain events involving color. The theory of memory color effect then develops in a psychological context that centers on the formation of emotional perceptions of color.

One of the developments in this theory states that colors are perceived metaphorically to certain events or objects (Lakoff & Johnson, 2010). However, this theory is still very biased, because metaphorical perceptions have a very relative and subjective value. Furthermore, there is a theory called ecological valency which states that emotional associations are considered to track the average valence (degrees) of objects that have a certain color (Palmer & Schloss, 2010). For example, the brown color should be disliked because it is associated with rotting objects or dirt. This theory is considered more stable because it associates colors objectively. Considered objective because the objects associated with the same natural color anywhere in the world. Like the blue color which is considered airy and depicts freedom, but if it is drawn valence it corresponds to its association with the wide sky. However, this theory
does not rule out connotative interpretation, but with a more objective nature. For example, in the United States, green is associated with wealth rather than with nature. This is because paper money in America is green. Likewise, a teacher checks assignments in red ink for easy viewing. But in a special way, the red color is associated with a warning siren. As a stimulus in a connotative context, the red ink can be perceived as a danger if it fails or is repeated in the test.

When it comes to color and emotion, there is a term about color affection. This affection is associated with emotional stimuli that arise from stimuli of certain colors. Affection is a thing that is connotative and arises from a stimulus to a particular object (Ou et al., 2004). However, to understand this relationship, a metaphorical approach is often used. Based on the theory of the concept of metaphors, linguistic metaphors are very commonly used to understand more deeply the way we understand the world (Lakoff & Johnson, 2010). Metaphors bring a philosophical and fundamental understanding of the phenomena around humans. For example, white with goodness and black with evil. This valency association can be seen from the influence of religious values in which there is a duality of good and bad, which is then associated with white and black. This example illustrates that the meaning of color when drawn in a valence, can be translated metaphorically and is connotative. Even though the meaning is very relative depending on experience, culture, and education (Sharpe, 1974), in valence, it can be objectively directed to find meaning that is more universal.

Based on the description above, color affects the psychological condition of humans, because color is associated with experiences and memories which are often connected with emotions. The existence of this condition forms an affection in a person when he sees a color, then an associative response appears to translate the color with certain emotional conditions. Then responsively, the emotions that arise will continue into certain actions or behaviors. However, it should be underlined that the association to color is very independent and relative because it has a connotative side. However, this association is directed as objectively as possible with the ecological valency theory.

**Color Trends during the Covid-19 Pandemic in Terms of Color Psychology**

Based on the previous description, data on color sales that jumped during the Covid-19 pandemic were obtained in the form of bright colors and white colors. However, the previous question is related to the psychological condition of the community behind the selection of these colors. For this reason, color theory will be used in dissecting the meaning of colors, which has implications for the psychological condition of society. The colors most chosen during this pandemic are whites and
colors with high brightness levels. Based on the results of the study, emotional perception of white is considered to have a positive value, while black has the opposite value (Adams & Osgood, 1973). Furthermore, according to (Mahnke, 1996), white has an association of emotional perceptions related to purity, cleanliness and peace. Similar research by (Holden, 1997) also states that the color white has connotations with life, kindness, purity, and hope. In his book entitled "Color Psychology and Color Therapy", (Birren, 2016) says that white is also associated with associations with honesty, enthusiasm and normality. Meanwhile, the level of brightness (brightness) has a perceptual association with how much a person's level of pleasure and comfort (Valdez & Mehrabian, 1994). Brightness is often correlated linearly with pleasantness, while saturation is aligned with levels of arousal. The brighter a color will tend to give a positive value to the emotions of the observer (Robinson & Fetterman, 2014). From this research, it is also explained that dark or faint colors (darkness) are identified with depressive conditions. Based on the research above, the meaning of white and bright colors can be arranged into the following table.

| Color        | Meaning                                                                                                                                 |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| White color  | Positive value (Adams & Osgood, 1973)                                                                                                    |
|              | Purity, cleanliness and peace (Mahnke, 1996)                                                                                              |
|              | Life, purity, kindness and hope (Holden, 1997)                                                                                           |
|              | Honesty, passion, and normality (Birren, 2016)                                                                                                |
| Bright colors| Have associative meanings with positive values and pleasant feelings. The brighter, the more pleasant and positive the observer's emotions will be (Robinson & Fetterman, 2014) |
| Overall Meaning| Positive values in the form of peace, purity, passion and emotions.                                                                 |
a role in illuminating human life for activities. Without light, humans will find it difficult to carry out their daily activities. In the context of human life, common light symbols are also found in religious symbols. The symbol of light in a religious context has the meaning of explaining the path, hope, holiness, divine power, cleanliness, and peace. In addition, the color white can be associated with a sense of space and the beginning of life. This connotation is drawn from the human perception of a sheet of white paper. White paper describes a sense of space because of its clean and blank visuals, as well as depicting a beginning with its practical side to write something. Writing implies a process of "not being" on a piece of white paper, which can be seen as a start.

From the description above, the choice of colors during the Covid-19 pandemic, based on white and bright colors, relates to affection for positive values in the form of peace, purity, enthusiasm and emotions. From another point of view in a connotative way, the color white can be connoted with a beginning. Commencement or reboot of existing conditions, associated with multi-activity migration into residential homes. Through the residence, the individual begins his life again in a different way, which can be metaphorized as a sheet of white paper ready to be written. Meanwhile, white and bright / bright colors can also be connoted as a hope for the future. These colors can be traced in a valence relationship with light, which connotes a light for human life, which in turn can illuminate hopes in the future. Through homes, residents hope that they will face a brighter and better future.

**The Psychology of Denpasar City Society in terms of Color**

Based on the description of the meaning of colors above, when compared with the psychological conditions of the people of Denpasar City, it is illustrated that the choice of colors above is related to the conditions for creating a residence that reflects purity, initiation, peace and hope. Consciously or unconsciously, it seems that people are trying to create purity, peace and hope, from the pandemic polemic to various segments of life recently through their shelter. The initial meaning appears in the form of a large-scale migration of all activities shifting to housing. Through housing, people "start" their life in a new way. This new life, during the pandemic, is centered around homes. Then the meaning of purity is described as a form of self-protection against the Covid-19 pandemic outbreak. The existence of social restrictions causes many people to choose to carry out activities from inside the home. This means that in perception, there is a "distance" between Covid-19 and home as a place of refuge. Through the house, people think to purify themselves from outside conditions that have been contaminated with the virus. Meanwhile, for the meaning of peace, it appears in the role of the house which is now changing its function to accommodate various kinds of
activities. In order for residents to feel at home, the house should be a place that is able to reconcile themselves and reduce emotional levels. A good house in a pandemic condition is like being able to embrace and reconcile the psychological condition of its residents, most of whom have activities in it, as well as trying to deal with various life polemics that cause stress during a pandemic. Likewise with the meaning of hope built through color, which indirectly gives the impression that there is still a glimmer of hope in the future if this pandemic can be passed. In the stimulus response to choosing colors to action, these colors can provide positive passion for residents to act, especially in responding to the conditions of the Covid-19 pandemic, so that they can carry out activities optimistically and remain productive.

CONCLUSION

The choice of color paint in a house in the city of Denpasar has implications for the psychological condition of building a house with the meaning of beginning, purity, peace, and hope. This condition appears as a form of anticipation and adjustment for residents to the Covid-19 outbreak, which is in the form of a large-scale migration of various activities into homes. In the context of the stimulus response to the action of choosing colors, these colors provide positive enthusiasm for residents to respond to the conditions of the Covid-19 pandemic, so that they can carry out activities optimistically and productively.

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