



RESEARCH ARTICLE

The Development of the Aesthetic and Ergonomic Value of Aromatherapy Candles as a Relaxation Medium and Space Decoration

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ARTICLE INFO

ABSTRACT

Received: Jan 21, 2025

Accepted: March 3, 2025

Keywords

Aesthetic

Aromatherapy Candles

Decoration

Ergonomic

Relaxation

This study aimed to enhance aromatherapy candles' aesthetic and ergonomic value as a relaxation medium and space decoration. The research and development (R&D) with ADDIE model and descriptive quantitative were used as the research method and approach. The study involved 60 participants divided into two groups: five validators and 55 samples. The results showed that the three aromatherapy candles with rose, jasmine, and lavender scents obtained an average score with a high category on aesthetic value and an average score with a high category on ergonomic value. Therefore, the aesthetic and ergonomic value of aromatherapy candles could increase relaxation and space decoration.

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INTRODUCTION

Various daily activities can lead to conditions of boredom, fatigue, anxiety, emotional imbalance, and stress. If these conditions occur over the long term, it can lead to disharmony, poor communication, or decision-making errors. Productivity in work requires a comfortable and calm atmosphere. An effort must be made to create this atmosphere and conditions at home or work. One alternative way out that does not require enormous costs, among others, is using aromatherapy candles.

Commonly, people use candles during power outages as a substitute source of lighting that is easily purchased at shops near the house. In addition, candles can be used for decoration or on special occasions, including birthdays, Christmas, and New Year. Candles are even used as part of ritual events in places of worship, such as churches and monasteries, and areas requiring tranquility, such as spas and beauty salons.

Yousefi (2014) stated that candles, generally a decoration item at home, can create an atmosphere and relieve stress with various colors, shapes, and types of candles. Therefore, using candles as an alternative medium with aromatherapy emerges as a significant avenue for exploration. This approach involves the extraction of essential oils from floral plants, yielding a refreshing aroma. Implementing candles with aromatherapy offers a multifaceted approach, encompassing the room's scent, promoting calm and relaxation, and enhancing health.

Aromatherapy in scented candles provides a calming effect that is well received by the sense of smell, so it can be therapeutic and reflective. As the candle burns, the aroma produced has a therapeutic effect on those who inhale it. The therapeutic effect can be felt after inhaling the smell of candles for a while, which gives a calm and relaxing effect. The scent that fills the room can help create the desired atmosphere, which can affect mood. The "scent" in aromatherapy is a bridge to a highly

physiological effect. When you breathe in a scent, your olfactory nerve cells send messages to your brain. Then, the limbic system processes these signals, “an area of the brain that influences mood and memory formation.” (Yousefi, 2014).

Aromatherapy is “the art and science of utilizing naturally extracted aromatic essences from plants to balance, harmonize, and promote the health of the body, mind, and spirit.”. Essential or aromatic oils are also used for spiritual, therapeutic, hygienic, and ritualistic purposes (Halligudi & Ojaili, 2013). This practice aligns with the information from the Embassy of the Republic of Indonesia in Bern (2021), Switzerland, which stated that essential oils in Europe are utilized for various purposes believed to restore health through aromatherapy. These purposes include the alleviation of stress, indigestion, insomnia, depression, and skin allergies. The belief in the medical properties of essential oils and their positive effects on the human body is also prevalent (Kedutaan Besar Republik Indonesia Bern Switzerland, 2021).

Aromatherapy has been demonstrated to underpin the production of various products that utilize essential oils. These products encompass foodstuffs, perfume raw materials, cosmetics for skincare, hair, beauty, toiletries and more. The natural properties of essential oils have led to their incorporation into various products, including room fresheners, due to their capacity to function as fresheners, skin moisturizers, and air purifiers. In the Swiss and European markets, cosmetic products containing essential oils are marketed with a perceived added value, attributed to their ability to enhance mood and promote relaxation (Kedutaan Besar Republik Indonesia Bern Switzerland, 2021).

This study’s product development of aroma therapy candles integrates aesthetics and ergonomics. Aesthetics consists of: appearance and attractiveness found in color, shape, size, and texture (Poon, 2022). It is related to its function as a spatial decoration because the product’s appearance is one of the crucial factors influencing the decision to purchase the product. The attractiveness of a product’s appearance is primarily determined by the aesthetics inherent in the design composition associated with the arrangement of design elements. Commonly recognized design elements are line, shape, color, and texture (Adorno, 2004). In addition, the widely applied aesthetic design principles are balance, proportion, simplicity, unity, symmetry, contrast, and harmony (Hu et al., 2022).

Meanwhile, the application of ergonomics to aromatherapy candle products is intended to increase work productivity, with the overarching goal of ergonomics being to achieve comfortable, safe, peaceful conditions and to provide tranquility or reduce stress on aromatherapy candle users (Zhou et al., 2023). Therefore, it is essential to pay close attention to ergonomic elements, namely comfort, safety, ease of use, performance, and technological consistency in commercial design (ELsayed et al., 2019).

This study developed the aromatherapy candle design in three variations, each containing essential oils derived from jasmine, rose, and lavender. The candle formula was created using a wax base ratio of stearin: paraffin at a proportion of 20:20 (40 grams) (Isma et al., 2023). The purpose of this research is twofold: firstly, to increase the aesthetic value of aromatherapy candles as room decoration, and secondly, to determine the effectiveness of aromatherapy candle products ergonomically as a medium of relaxation.

METHOD

The descriptive quantitative approach articulates the characteristics of variables following empirical evidence and numerical data derived from authentic contexts that are methodically designed and structured, exhibiting a coherent arrangement from the preliminary phases to the culminating stages of the research.

This research is classified as development research, which involves systematically designing, producing, and assessing products to ascertain their effectiveness. The research process entails a sequence of steps: product development, product analysis, and product evaluation (Sugiyono, 2016). The ADDIE model, a procedural framework, is the foundation for this research and development. This model encompasses five stages: analysis, design, development, implementation, and evaluation. The subject of this study is aromatherapy candles, which are available in three variations of design or shape, each featuring a different aromatherapy flower (jasmine, rose, or lavender) essential oil. The study’s participants included 60 individuals divided into two groups. The first group comprised three

spa and beauty salon entrepreneurs who were product validation experts. The second group consisted of two lecturers from the beauty system who served as material experts. Five participants were selected for small-group trials, while 50 participants were chosen for large-group trials. The study employed a questionnaire as the primary research instrument.

RESULT

The development results are the aromatherapy candles in three design and shape variations. These candles feature three aromatherapy flowers: jasmine, rose, and lavender essential oils. This developmental initiative was executed employing the ADDIE model. The subsequent section provides a detailed explanation of each stage of this process.

1. Analysis

The analysis stage entails examining occupational activities and the surrounding environment, intending to identify products that necessitate development (Sugiyono, 2015: 38). This analysis is also designed to ascertain the nature of the problem, determining whether it is a problem that requires resolution. In this stage, researchers conduct interviews and observations in the workplace, as well as beauty salons and spas. Researchers used unstructured interviews with salon owners, several beauty salon visitors, and coworkers to gather information about the expected comfort to relieve fatigue or relaxation. Additionally, researchers reviewed existing literature in reference books and journals to analyze the feasibility and requirements of development.

2. Design

At this stage, the process commences with the compilation of an observation sheet, which is structured as a questionnaire and is divided into two subjects: aesthetic value, comprising 16 items with indicators such as aroma therapy candle design, color, arrangement, and creativity; and ergonomic value, comprising 16 items with indicators such as design, color choice, use of aroma therapy candles, and effectiveness across five levels (5, 4, 3, 2, and 1). The creation of aromatherapy candle designs involves several components, including the shape, which is adapted to the plan, with options such as flowers, color choices, and aromas to be used, including rose, jasmine, and lavender, and the design of the arrangement.

3. Development

In the development of the instrument, the evaluation or approval of the instrument is carried out by the reviewer and continued with the validation of aromatherapy candle products by five validators consisting of 4 beauty salon and spa owners and one beauty educator. While the small group test of 5 respondents was done randomly, namely consumers of beauty salons and spas.

4. Implementation

The results of the product validation process were enhanced by the input obtained from the validators and small groups. Subsequently, the instrument was implemented by involving various groups of people who became consumers at four beauty salons and spas, as well as a random sample of working people for 50 people. The implementation mechanism entailed the administration of a questionnaire related to aromatherapy candle products to consumers receiving body care services. The questionnaire focused on aesthetic and ergonomic values, and it was administered in the consumer treatment room, which contained three different flower scents. In addition, some colleagues who were also aromatherapy candle users were selected to participate in a home-based testing program.

5. Evaluation

The implementation results were analyzed based on the responses to consumer questionnaires. The detailed values of the questionnaire results are presented in the following table:

Table 1: Aromatherapy candle aesthetic assessment results

No	Indicator	Results			Criteria		
		Rose	Jasmine	Lavender	Rose	Jasmine	Lavender
1	Design or shape	96.63	97.25	96.88	High	High	High
2	Candle's color	96	96.75	96	High	High	High
3	Styling techniques	91.75	95	93.5	High	High	High

4	Styling creativity	93.13	96.5	94.63	High	High	High
	Average	94,38	96,38	95,25	High	High	High

Table 1: Aromatherapy candle ergonomic assessment results

No	Indicator	Hasil			Criteria		
		Rose	Jasmine	Lavender	Rose	Jasmine	Lavender
1	Design or shape	94,88	94,88	94,88	High	High	High
2	Colors	95	95,88	95	High	High	High
3	Usage	90	95,25	90,13	High	High	High
4	Effectivity	87,75	94,63	87,75	High	High	High
	Average	91,91	95,16	91,94	High	High	High

The following table describes the percentage criteria:

Table 2: Interval percentage

Interval	Category
76%-100%	High
56%-75%	Medium
<50%	Low

DISCUSSION

This research employs the ADDIE development model, a five-stage research framework comprising analysis, design, development, implementation, and evaluation. The analysis stage involves interviewing salon visitors to ascertain their relaxation and fatigue relief preferences. The findings from this stage inform the subsequent candle design, which is developed into an aromatherapy candle with three floral scents: rose, jasmine, and lavender. The subsequent development stage entailed the fabrication of candle products through a trial-and-error process, followed by a validation study with a small group of five participants and a product evaluation by three salon entrepreneurs and two beauty lecturers. The implementation stage ensued upon the declaration of feasibility, wherein the aromatherapy candles produced were subjected to a large-scale evaluation study involving 50 participants. The final stage of this development research is the evaluation stage.

The findings of this evaluation stage are based on the results of the data obtained, including the outcome of the evaluation and the results of aesthetic and ergonomic assessments. The aesthetic assessment found that aromatherapy candles with three flower scents- rose, jasmine, and lavender- received a high average score. Notably, among the three aromas, jasmine-scented candles received the highest average aesthetic value, a finding that aligns with the research by Alchalidi (2022). It is attributed to the relaxing effect of jasmine, which has been shown to increase alpha waves in the brain. In addition to their aroma, the shape and color design of the candles also garnered interest among aromatherapy candle enthusiasts.

Furthermore, the results of the ergonomic assessment demonstrate that aromatherapy candles with three flower scents, rose, jasmine, and lavender, obtained a high ergonomic value. Among the three aromas, jasmine demonstrates the highest value. This finding is corroborated by four assessment indicators: candle shape, color selection, use, and effectiveness. This observation aligns with the findings of research conducted by Made Eka & Ketut (2020), which underscores the significance of ergonomic studies, particularly the assessment of user comfort. Incorporating ease, comfort, and effectiveness into the design of this aromatherapy candle contributes to its high use value.

CONCLUSION

The results and discussion related to enhancing the aesthetic and ergonomic value of candles as a medium for relaxation and room decoration were considered in the development that was carried out according to the ADDIE research and development stage, namely Analysis, Design, Development, Implementation, and Evaluation. The average score results obtained demonstrate that aromatherapy candles with three flower scents, namely rose, jasmine, and lavender, obtained high aesthetic value as well as ergonomic value. Among the three scents, the jasmine-scented candle demonstrated the highest level of value.

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