

## The importance and effect of floral scent on spa interior design

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ARTICLE INFO	ABSTRACT
<p><i>Article history:</i> Received July 09, 2024 Received in revised form Sept. 12, 2024 Accepted August 17, 2025 Available online December 01, 2025</p> <p><i>Keywords:</i> Effects Flowers Importance Interior design Scent Spa</p> <p><b>*Corresponding author:</b> Hakimi Ahmad BSc Hons of Interior Architecture, School of Housing, Building and Planning, Universiti Sains Malaysia, 11800 USM, Penang Email: <a href="mailto:kimi@usm.my">kimi@usm.my</a> ORCID: <a href="https://orcid.org/0000-0003-1954-0878">https://orcid.org/0000-0003-1954-0878</a></p>	<p><i>Floral are one of the elements that leads to therapy, healing, and aromatic vibes in the spa design. One of the floral specialties is its scent. Scent and interior design combine to create a complex and nuanced pattern of sensory elements that maximizes any space's potential. The emphasis of floral elements towards space will trigger human's senses and be able to impact their mood and emotions. Spa has become one of the most important healing spaces for humans to improve their well-being and reduce stress. However, some of the spa interiors are unable to produce positive atmosphere and customers are unable to experience the therapeutic vibe into the space. Interior smell is frequently overlooked in spa interior design, yet it can significantly impact the overall atmosphere of the area. This is because the sense of smell is an unseen or an invisible component when it comes to interior design. This paper aims to develop people's knowledge regarding to the importance and effect of the floral fragrance towards spa interior design that will help to improve human's well-being. Next focus is to find out how floral fragrance in spa designs act to create a healing environment which means how to use this element in an effective way. The method that will be used in this study is qualitative and quantitative method. All information will be collected by finding some of the case studies or articles that relate to the purpose. Furthermore, this research will be strengthened by distributing a questionnaire form to 30 respondents regarding the importance and effect of floral scent on spa interior design and human well-being. This research report reveals that most respondents strongly believe that floral scents surely have a lot of beneficial impact towards spa interior design and human mood and emotions. Thus, scent is also considered as an essential sense when it comes to spa interior design.</i></p>

### Introduction

In general, flowers can be defined as the element of nature that represents power and purity. Flowers can encourage people on this planet to pursue morality. Fresh flowers have a calming and uplifting effect on the recipient, which is why they have been associated with specializes throughout human history.

Moreover, according to Cambridge Dictionary, scent can be defined as a pleasant

natural smell. There are some types of scent that can be smelled such as floral fragrance, spicy scent, woody scent, fruity scent and many more.

According to Merriam Webster Dictionary, spa can be understood as a commercial establishment (like a resort) offering activities and equipment dedicated specifically to health, fitness, weight loss, beauty, or relaxation. Spa also can be defined as a location where people can work out and participate in health-promoting activities, including massages. Spa is also a place



where people can come for healing and therapy. The intention of the spa is to release stress, improve the body's health and as a place where people can relax.

#### Problem statement

Interior scent is frequently overlooked as a crucial element of spa interior design, yet it may have an enormous effect on the overall atmosphere of a space. This is because scent is an invisible element of interior design. However, it is scientifically proven that the sense of scent is inextricably linked to emotions and memories, and a meticulously selected scent can elicit a specific mood or recollection. Some fragrances can create therapeutic and restorative odors in the interior area. For instance, floral, woody, and fruity scents.



**Figure 1.** Michael Edwards Fragrance Wheel  
Source: <https://www.perfumedirect.com/pages/a-guide-to-perfume-strengths-and-types>

Floral scents are one of among the most popular and diverse categories. This group of scents includes fragrances with a sweet and floral scent, such as roses, jasmine, magnolia, and lavender. Floral smells range from light and delicate to complex and powerful.

Some spa interior designs lack aromatic features such as floral fragrance, which might reduce the freshness and calm experience for the space and the consumer. This means that the spa environment does not properly promote well-being and therapeutic energy in the space, employer, or clients. At the same time, individuals place a greater emphasis on the sight sense, which refers to how the spa interior looks, than the smell sense.

#### Research objectives

This study intends to develop people's knowledge regarding the benefits and impact of floral aroma on spa interior design as well as human well-being. The next goal is to understand how flower aroma in spa designs may generate a healing environment and how to apply it effectively.

This research paper tends to prove that the sense of smell also is a very essential element as are the other senses which are sight, hearing, taste, and touch. By examining empirical studies and practical applications, this paper aims to demonstrate how integrating floral scents into spa environments can create a holistic sensory experience that promotes relaxation, reduces stress, and enhances emotional well-being.

#### Theoretical framework

Floral aroma can be an excellent accent to enhance the spa interior design

Incorporating floral scents into spa interior design is crucial for several compelling reasons that enhance both the physical environment and the emotional experience of clients.

The application of floral scent can create a pleasant atmosphere into spa interior design. The sense of smell is linked to our emotions and memories. Floral scents evoke positive associations with nature, beauty, and freshness. By filling the spa with these natural aromas, it can elevate the overall ambiance and make clients feel more comfortable and at ease.

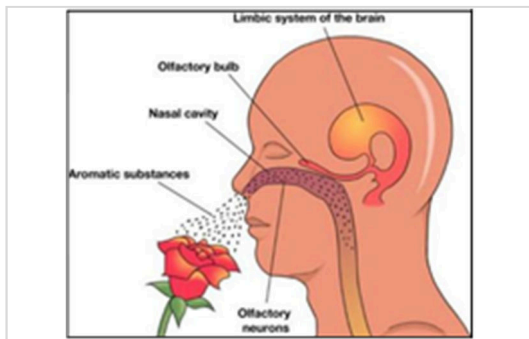
The other benefit of using a floral scent helps to differentiate the spa. In a competitive spa industry, offering a distinctive experience is essential. The smart selection and application of floral scents can set a spa apart from others. It creates a unique identity and helps build brand recognition based on the sensory experience its offer.

Finally, even though smell is an invisible element, it also can make the interior have its own aesthetic and can be very appealing. Beyond their olfactory benefits, floral scents can also enhance the visual appeal of the spa. Fresh flowers or botanical-inspired decor elements complement the theme of relaxation and natural beauty, contributing to a cohesive and aesthetically pleasing interior design.

### Conceptual framework

The power of floral fragrance towards our brain's memory

Our sense of smell is the first to develop among all our senses. Even before birth, our sense of smell is fully established and functional. It is our most primal sense, which is why we have such a strong reaction to the way spas smell. Floral scents can often trigger memories of times, events, places, or feelings (Haas and McCartney, 1996).



**Figure 2.** The circulation of scent towards limbic system of the brain

Source: <https://www.maison21g.com/articles/how-fragrances-affect-your-mood-understanding-the-power-of-scents>

Furthermore, the mechanisms of floral fragrance can incredibly impact our brains. Scientifically proven that the sense of smell is linked to the olfactory system, which connects to the brain's limbic system. This system includes the hippocampus (crucial for memory) and the amygdala (involved in emotion). Meanwhile, it also relates to neurotransmitters which means, there are certain scents that can trigger the release of neurotransmitters like serotonin and dopamine, which affect mood and cognitive functions.

The sense of smell based on flowers fragrance for spa interior design

Flowers are like humans which also consist of five senses that have their own charms and attraction towards their surroundings. However, among these senses, the smell of flowers is one of the most appealing and outstanding. Researchers have proved that flowers or other blooming plants in spa interior design can improve performance and foster more creative thinking. A floral fragrance of the lovely flowers can lift people's

spirits and increase their oxygen intake, which can cheer up even the melancholiest person.

Choosing the right fragrance for a space requires consideration of not only personal preferences but also the intended atmosphere and purpose of the spa room. There are some of floral scent that has become top pick for interior space by an interior designer worldwide in 2024:

a. Lavender

is known for its calming properties; lavender can help reduce stress and promote relaxation. Scientific study and research have just recently begun to assess the wide range of advantages connected with lavender oil.

b. Jasmine

smell has long been revered for its therapeutic effects in aromatherapy. Jasmine smell provides many health benefits, including mood enhancement and relaxation, aiding in sleep, and working as an effective aromatherapy tool.

c. Rose

is the classic scent of roses that can evoke feelings of love and serenity, promoting a soothing atmosphere. Rose aromatherapy relaxes the muscles, making us feel like the majestic creature we are. The romantic scent of roses adds a touch of luxury and elegance to the spa environment.

Practical implementation of floral scent on spa interior design:

Essential oils

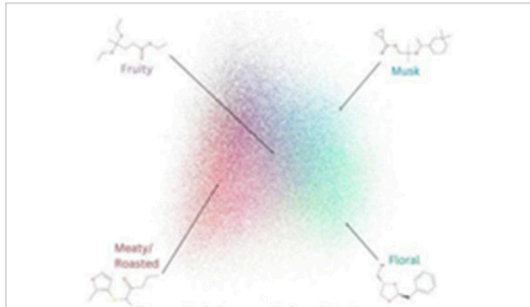
Essential oils are one of the methods for incorporating aromatherapy into a spa. For instance, scented candles or wax melts can also be utilized, however they can become overwhelming if lit for an extended length of time. Essential oils can be used to smell steaming face cloths, added to massage oils, or diffused. In communal spaces, setting up an essential oil diffuser creates a peaceful atmosphere for visitors. The growing popularity of essential oils can be attributed to their health advantages. Use ultrasonic diffusers in key areas like reception, treatment rooms, and relaxation lounges. Choose high-quality essential oils to ensure a pure and lasting fragrance.

Fresh floral arrangements

Place fresh flower arrangements at strategic locations such as entrances, treatment rooms, and relaxation areas. Regularly replace them to maintain their freshness and potency.

### Scented candles

Use natural, high-quality candles made from soy or beeswax with essential oils for a gentle and ambient fragrance.



**Figure 3.** A newly created map of smells could be key to developing new scents and technologies.

Source: <https://spectrum.ieee.org/digital-smell>

Use different floral scents in various zones of the spa to create distinct atmospheres. For example, lavender in relaxation areas, jasmine in energizing zones, and rose in luxurious treatment rooms.

### Scented towels and linens

Lightly mist towels, linens, and bathrobes with floral water sprays to give guests a refreshing and aromatic experience.

### Literature review

#### Integration between humans' sense and flower in spa design

Historically, fragrances have been utilized for their healing and mood-enhancing properties across cultures. Studies have shown that certain floral scents, such as lavender, have sedative effects on the central nervous system, promoting relaxation and reducing anxiety levels (Field et al., 2005; Lehrner et al., 2005). Furthermore, the limbic system, which processes emotions and memories, exhibits a strong response to olfactory stimuli, making scents a potent tool for emotional regulation and mood modulation (Herz, 2009).

In spa environments, where the goal is to create a sanctuary of relaxation and rejuvenation, the integration of floral scents can significantly enhance the therapeutic benefits of treatments. By engaging the olfactory senses, spas can create a multi-sensory experience that not only delights the senses but also fosters a deep sense of well-being and emotional balance among clients. There is an observation of a synergetic

relationship between perception, autobiographic memory, senses, and physical movement in our interactions with flowers, but most crucially, some studies discovered that the pleasurable effect of flowers was linked to the physically interactive and relational aspects of the experience. This indicates that the flower's perceptual features are employed as a projective element for a certain personal and cultural personality; nonetheless, the idea is that the flower's embodied and relational experience caused it to be described as 'happy'. The integration of flowers into spa design is holistic and cohesive. Align the selection of floral scents, visual aesthetics, tactile experiences, auditory ambiance, and complementary tastes to create a unified sensory journey for clients. This comprehensive approach enhances the overall effectiveness of the spa experience and fosters a deeper connection with nature and well-being.

#### Sensuality of flowers towards spa interior design

Flowers do have a magnificent power that can bring life and beauty not only in our homes but also in any other interior such as a spa and can completely make a huge change into the interior spaces. Flowers also consist of their own charms and senses which are in terms of smell, touch, hearing, sight, and taste. They enhance the interior by engaging multiple senses:

**Smell:** Their fragrance creates a soothing and calming environment.

**Touch:** The texture of petals can be part of tactile experiences or treatments.

**Sight:** The vibrant colors and elegant arrangements add visual appeal.

**Hearing:** While not directly related to flowers, the rustling of leaves or the gentle sound of water in floral arrangements can contribute to a serene auditory environment.

**Taste:** Edible flowers can be used in teas or other treatments, adding a unique flavor experience.

#### Past research

1. Scents in hotel interior design and influences on brand identity.
2. Physiological and psychological response to floral scent.

#### Research gap

There are numerous studies discussing and exploring the benefits of scent in general towards the interior design. However, there are very few

articles that specifically explore the importance and effect of floral scent on spa interior design. Regarding this matter, this research paper will explore and focus on floral scent on spa interior design in terms of its benefits and effect towards the environment and human well-being.

## Methods

The method that will be used in this study is a qualitative and quantitative method. In terms of qualitative method, the information regarding the aim of the studies will be collected by finding the research papers that are related to the issue. Information that has been collected will strengthen and support all the points of the thesis.

In terms of quantitative method, research questions will be distributed to 30 respondents to strengthen and support this research paper. The question is about people's opinion, if they think that the implementation of floral scent is an essential element into the spa interior design. Also, this question form focuses on the respondent thought on the effect of floral scent on spa interior design.

### Case study

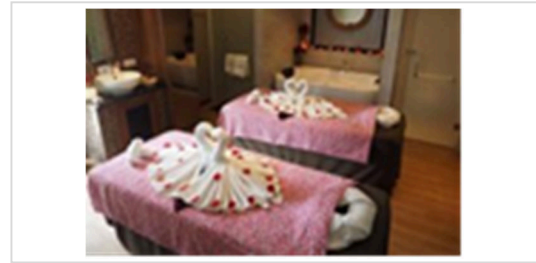
The site chosen is Danai Spa at Eastin Hotel, Penang. Danai Spa provides clients with a deep relaxation experience that allows them to attain serenity in the luxury isolation of the spa sanctuary. The interior of Danai Spa emphasizes a good ambience and provides great comfort for clients. This spa's vibe is calming and soothing, giving a great healing and therapy experience to their clients. Lastly, the interior also has a nice aroma and scents that will increase the client's mood and reduce their stress.



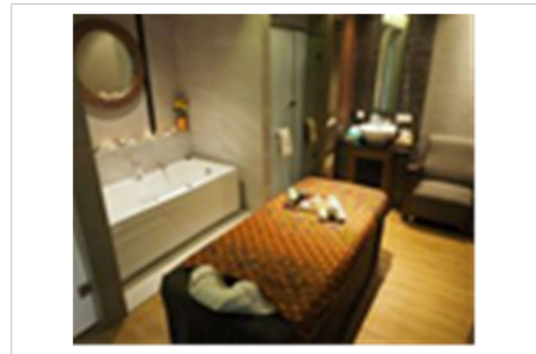
**Figure 7.** Danai Spa  
Source: <https://penang.eastin.com/facilities-services/danai-spa>



**Figure 4.** Danai Spa  
Source: <https://penang.eastin.com/facilities-services/danai-spa>



**Figure 5.** La Vie En Rose Romance Spa  
Source: <https://penang.eastin.com/facilities-services/danai-spa>



**Figure 6.** Straits Peranakan Heritage of Senses Spa  
Source: <https://penang.eastin.com/facilities-services/danai-spa>

## Results and discussion

The analysis and findings aim to obtain the opinion of respondents towards the importance and effect of floral scents towards spa interior design. Next focus is to collect respondents' views regarding the multi-sensory based on floral scents and their knowledge about how floral scent can be used in an effective way to enhance the healing, therapeutic as well as healing atmosphere towards spa interior and client's well-being. Finally, the data on respondents' choices about the best

floral aroma and product for spa interior design also will be collected.

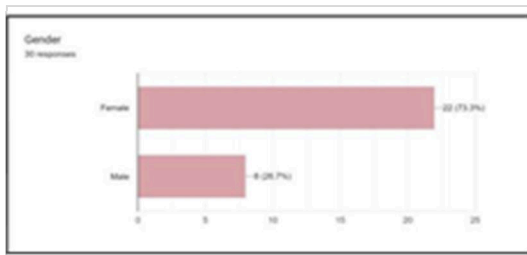


Figure 8. Demographic data of respondents by gender

Figure 8 shows that 22 female respondents answered the survey, representing 73.3% of the total. Meanwhile, the number of male respondents to this survey is as much as 8, accounting for 26.7%.

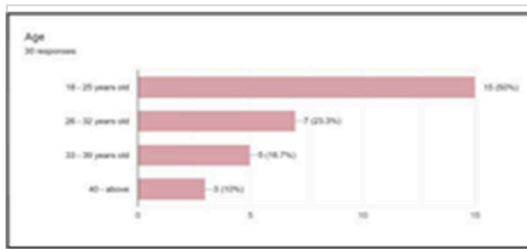


Figure 9. Demographic data of respondents by age

Figure 9 shows that there were 15 respondents aged 18-25, representing 50% of the total. The next group consists of 7 respondents aged 26 to 32, accounting for 16.7%. Followed by 5 responders (16.7%) between the ages of 33 and 39. Finally, there were just three respondents (10%) in the age range of 40 and above.

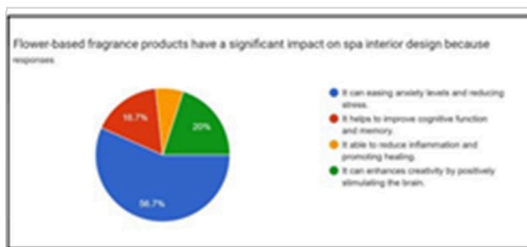


Figure 10. Respondent's perspective on the importance and effect of floral scent into spa interior design

Figure 10 illustrates that flower-based aroma items have a considerable impact on spa

interior design due to their ability to reduce anxiety and stress, as reported by 17 respondents (56.7%). Meanwhile, a minority of two respondents stated that the essential effect of flower-based aroma in spa interiors can reduce inflammation and promote healing, for a percentage value of 6.7%.

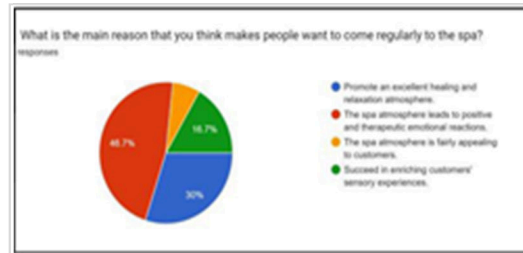


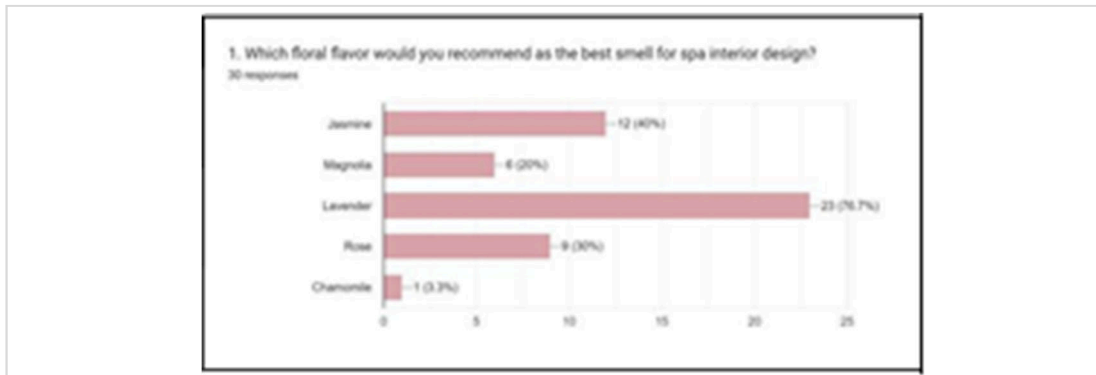
Figure 11. Respondent's perspective on the importance and effect of floral scent into spa interior design

According to figure 11, the majority of respondents believe that the spa atmosphere contributes to positive and therapeutic emotional reactions, with 14 respondents accounting for 46.7%. Whereas only two respondents (6.7%) stated that the main reason people routinely desire to come to the spa is because the spa atmosphere is fairly appealing.



Figure 12. Respondent's opinion on how the flowery scent on spa helps to enhance customers experiences and leave lasting impressions

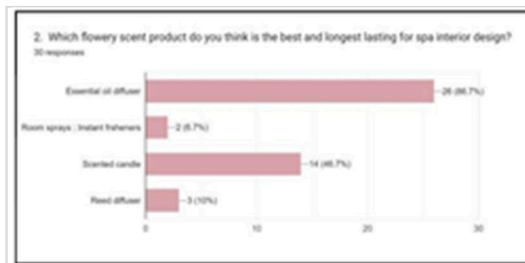
According to figure 12, the pie chart reveals that 20 respondents believe that using flower scents with a strong healing and therapeutic impact will assist to improve customer experiences and leave an impression, with a percentage value of 66.7%. Meanwhile, a minority of two respondents (6.7%) believe that to improve customers' experiences and leave an indelible memory, the spa should utilize high-quality flower-based aroma items.



**Figure 13.** Respondents' choices of the best scent of floral flavor for the spa environment

Figure 13 depicts respondents' choices for the best floral fragrance for spa. According to the results, lavender was chosen as the best flower aroma for spa interior design by 23 respondents, accounting for 76.7%. The second-best floral flavor chosen by respondents was jasmine, with 12 respondents and a proportion of 40%. Third, 9 respondents voted rose as the nicest smell for the spa interior, with a percentage value of 30%. Meanwhile, up to 6 respondents identified magnolia as the greatest smell for spa interiors, accounting for 20%.

In addition, respondents in this section can share their own opinion on the best floral smell for spa interior design. Based on the graph, one respondent recommends chamomile aroma as the best flower scent for spa interior design, with a percentage value of 3.3%.



**Figure 14.** Respondents' choices of the best flowery scent product for the spa environment

Figure 14 shows the respondents' choices for the flowery smell product that will have the greatest impact on spa interior design throughout time. Based on the results, the majority of respondents (26 in total) chose an essential oil diffuser as the best flower aroma product for spa interior design, accounting for 86.7%. The second-best flowery aroma product picked by respondents was scented candle, with 14

respondents and 46.7%. Third, three respondents selected reed diffusers as the most practical product for spa interiors, with a percentage value of 10%. Meanwhile, two respondents (6.7%) chose the least floral-scented product: room sprays: instant fresheners.

## Conclusions

To sum up, this research paper successfully indicates that floral scents significantly contribute to positive impacts on spa interior design and enhance human mood and emotions. By integrating floral elements into a multi-sensory approach, spas that implement this powerful element can create a more serene and immersive environment, promoting relaxation and overall well-being for clients. Most people usually will be attracted to the scent once they enter some space or buildings. Moreover, flower scent has a greater impact on the human's mind because it is connected to the limbic system of the brain, which governs emotions and sentiments. Finally, the analysis and findings also show that most respondents think floral scent is an essential and crucial element, not only for spa interior spaces but also other interior spaces which are hotels, hospital and many more.

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### Author(s) contribution

**Siti Khadijah Mohamad Noor** contributed to the research concepts preparation, methodologies, investigations, data analysis, visualization, articles drafting and revision.

**Hakimi Ahmad** contribute to the research concepts preparation and literature reviews, data analysis, of article drafts preparation and validation.