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How Colour in A Built Environment Has an Impact on Emotions

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Abstract

Colors play an essential role in shaping emotions and behavior in architectural design.This project explores the relationship between colors and emotional states in various types of architectural spaces,such as residential buildings,workplaces,hospitals,and public places.Based on qualitative and quantitative information,the investigation aims to identify the influence of particular colors like blue,red,green,and yellow on emotional states,such as calmness,relaxation,excitement,or stress.

By means of surveys and interviews,the subjects were required to describe the emotions that they had felt while seeing particular color combinations.The analysis reveals that colors have a significant impact on people's emotions and well-being.For example,red can cause anger and rage in some individuals;therefore,it is important to avoid using this color at work.In turn,green can help employees feel relaxed and comfortable during the working hours.Finally,yellow may cause joy and happiness;hence,it is appropriate for use in residential architecture.

Keywords: Color Psychology, Emotional Impact, Built Environment

1. Introduction

The impact that color has on a space's experience in terms of aesthetics,emotion,behavior and perception is critically important throughout the built environment.Color evokes certain emotional responses in humans and therefore,the architectural and interior design professions have traditionally utilized color for specific purposes(e.g.,inspiring people to be more creative;providing a relaxing environment;increasing productivity).The psychological effects of color can be greatly influenced by the type of atmosphere being created in a particular environment(e.g.,the psychological effects of color in your home versus at your workplace versus the hospital versus in public spaces).The use of color to provide positive emotional support to occupants has been an ongoing concern by the design world for years.

Research in environmental psychology has examined the connection between color and emotion,with studies indicating that blue and green are calming colours while red and yellow create energy and alertness.However,most research findings to date have focused on limited contexts and have not evaluated the relationship between colour and emotional response across different built environments.As such,it is critical for designers to ascertain how their clients emotionally respond to colours in each type of environment so they may create spaces that are both visually appealing and provide ongoing emotional support to the individuals who occupy those spaces.

The objective of this study is to investigate emotional responses associated with color in the built environment.The purpose of this research is to identify how various colors and color schemes can create

different emotional reactions to the built environment. Additionally, this study will explore how color affects emotion(e.g.,stress, happiness, comfort, focus)in a range of environments(home, workplace, healthcare, and public spaces)providing insight into how we can design environments to improve emotional well-being.

It is anticipated that the results of this study will generate new evidence-based knowledge and design guidelines for colour in creating built environments that are conducive to experiencing positive emotions.Ultimately,the study will contribute to the understanding of the importance of colour as a component of the built environment in relation to emotional experience.

2. Literature Review

{The study examines how different colors will affect emotional responses and work productivity.The research by Elliot and Maier(2007)indicated that the use of colors such as blue and green promotes calmness and reduces stress whilst improving concentration.Therefore,using these colors in environments that require focus can improve mental clarity.Additionally,because blue and green are associated with positive emotions,a workspace with these colors will produce higher levels of performance and productivity.In contrast,although red is often used to stimulate or energize a person,overuse of this color may create feelings of stress or anxiety despite increasing the level of alertness.The study suggests that selecting colors carefully for an office space can assist in regulating employees'emotions during the workday by stabilizing the energy level with relaxation.Thus,the findings demonstrate the importance of choosing colors thoughtfully when creating an office space that will positively influence employee wellness and,therefore,the productivity of employees.}1

{This study is a review of existing research regarding how colour affects psychological functioning.McGovern and Baker explore the various emotional/psychological responses that colours elicit.For example,warm colours like red&yellow are noted to create feelings of excitement,arousal and energy,thus are more appropriate for high-energy environments;while cool colours like blue&green create relaxation,calmness and better mental clarity–and are therefore preferred in low-energy environments,where focus is needed for example,or to reduce stress.The authors discuss that the psychological effects of colour are greatly influenced by a variety of factors(culture&cultural norms for example)that will influence a person's emotional response to a particular colour.Finally,the authors maintain that it is critical to know how to apply colour psychology in different environments(work, healthcare, education, etc)given that colour has complex interactions with psychological functioning.}2

{Linda L.Day's study of psychological effects of colors in hospitals shows that soft colors such as light blue and light green create a calming effect which can help patients relax and decrease their anxiety and be critical in decreasing patients'stress levels during hospital stay.Soft colors help create an environment conducive to healing as opposed to harsh/complementing colors,such as bright yellow and orange,which can overstimulate if used excessively and are likely to increase patients'stress and/or agitation.Therefore,selection of a color for healthcare facilities should be considered very seriously as the impact is substantial for emotional wellbeing,recovery and provides a therapeutic environment in healthcare facilities.Also through the results of the research,the use of soft colors in patient areas with limited use of bright colors provides for a more positive emotional response from patients in healthcare facilities,also illustrating the potential use of colors in the above manner as a method of providing a positive emotional response from patients in healthcare settings.It is important to understand the

advantage of selecting the appropriate color as a tool towards supporting the patients in healthcare environments.}3

{The Effect of Colour on Emotional Reactions to Architectural Spaces by Renée L.Becker.

Renée Becker researched how colours affect people's emotions in different types of buildings like homes,offices,and public spaces.Becker discovered that white or beige colours caused people to feel clean,open and neutral.Therefore,white and beige are appropriate for places where calm,uncluttered space is needed.Darker colours like brown and grey make people feel alone,heavy and sad,which is not good in places where there is a need for warmth and connection.Becker states that colour should be selected carefully in architectural design to correspond with the intended emotional function of the space.For instance,warm colours may be used in living rooms to promote comfort and sociability;whereas,cool colours might be used in work areas(offices)to enhance concentration and/or relaxation.Becker concludes that colour plays an important role in determining the emotional experience of a building.}4

{This research study looks at how colour impacts cognitive functioning and effects feelings/emotions in different educational environments.According to Welham&Fitzpatrick,blue and green colours assist with concentration,thus improving focus and mental clarity,making them good for environments where students are expected to concentrate over a long time(e.g.,classrooms,study areas).Yellow on the other hand helps foster creativity and a more positive and energetic atmosphere and is therefore useful for tasks that require innovative and/or brainstorming ideas.However,the researchers noted that the intense or bright colour yellow will often cause stress and anxiety,which can decrease cognitive performance and productivity in completing schoolwork.The researchers recommend that colour selections in educational environments be made according to the cognitive requirements of that environment,or that calming colours assist students in being able to concentrate and vibrant colours stimulate creativity.}5

{Felicia G.Chapman conducted research on the impact of colour on the ambience and emotional experience of public spaces(malls,airports,restaurants).Neutral colours(beige,grey,and light whites)create a calm and restful ambience in an area that promotes relaxation and comfort;therefore,they would be best suited for use in places where patrons are likely to wait(such as waiting rooms or lounges).Vibrant colours(e.g.,red and orange)create a stimulating energy level and promote interaction and socialisation.As such,they would be appropriate for use in areas where activity is focused on either individual or group activities(such as dining areas and shopping centres).

The research highlights the significance of using colours that have been carefully selected to create emotionally engaging spaces that are appropriate for the intended uses of those spaces.The conclusions drawn from Chapman’s study indicate that colour selection has a strong impact on the way patrons behave socially,how comfortable they are in the environment,and overall satisfaction with a public space.Colour also enhances the aesthetics of the environment and the emotional experience associated with that environment.}6

{Diane K.Winters has conducted research on how color affects our mood when we are at home.There are specific colors that create a positive impact upon your mood.For example,the use of cool colors(blues and greens)has been shown to help create a peaceful environment that promotes relaxation.Therefore,it is suggested using cool colors in the bedroom and living room since these areas are typically used for sleeping or reducing stress. Similarly,there are also other types of colors(such as reds and yellows)that interact with people to create an energized and inviting environment. Therefore,

these warmer colors are typically used in areas that promote social interaction and energy such as kitchens and dining areas.

Winter emphasizes that the selection of color when designing your home can greatly impact your moods,and that selecting the appropriate colors for different types of rooms within your house can help manage your overall mood,therefore supporting your emotional well-being.Based on her research;color schemes can be used as resources to elevate your emotional experience in your home.}7

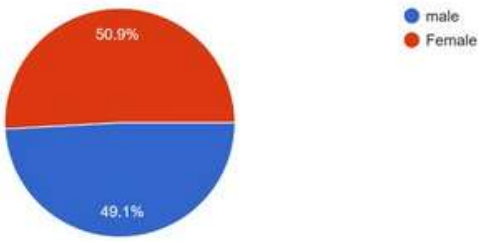
{Laura B.Thomas conducted a study to explore colour's emotional effects on the home environment,looking at how colour affects people's wellbeing in their homes.According to her findings,soft neutrals(grays,whites,and beiges)create a calm and tranquil atmosphere,which provides peaceful,soothing environments for relaxation or sleep.These soft neutral tones are especially good in areas like bedrooms and living rooms,where people want a quiet environment.In contrast,warm colours(like red,yellow and orange)promote socialising and activity,making them better suited for kitchens,dining rooms,and family rooms,where there is an emphasis on interaction and energy.The study also encourages individuals to select colours based on their emotional needs to create a home environment that nurtures them.Thomas recommends that people choose their colour schemes with care so that they can adjust the colour of their home to enhance their emotional wellbeing and overall comfort in their living environments.}8

{Maria L.Vasquez has looked into the effect of colors on emotions and behaviors of consumers in retail/in-store areas and showrooms and has found that using cool colors(e.g.,blues and greens)helps create a relaxing place for consumers to shop(i.e.,the types of places where you want to create a relaxed environment).These colors help create a calm,welcoming environment,which allows consumers to feel comfortable while they are browsing.In contrast,the use of warm colors(i.e.,reds and yellows)creates a feeling of excitement and a sense of urgency,which encourages consumers to make their purchasing decisions faster(e.g.,impulse purchases)and benefits retailers when they use warm colors in locations such as sales areas and areas that are intended to attract attention.Vasquez asserts that the use of color in retail design should be used strategically,since the right colors can significantly improve the experience of customers in a store by influencing both the purchase decision and emotion of customers.The research findings indicate that retailers can utilize color to help them meet their marketing and sales objectives by enhancing the emotional connection between customers and the products they sell;in addition,this enhances the overall shopping experience for customers.}9

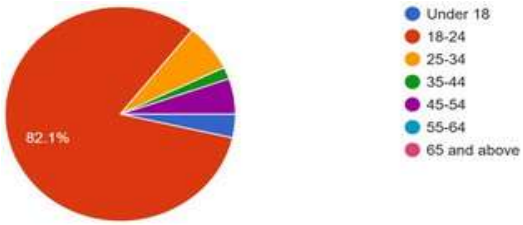
3. Primary Case Study

1. The pie chart shows the gender distribution of 57 survey respondents.The results are almost perfectly balanced:

- Female:50.9%of respondents identified as female.
- Male:49.1%of respondents identified as male.

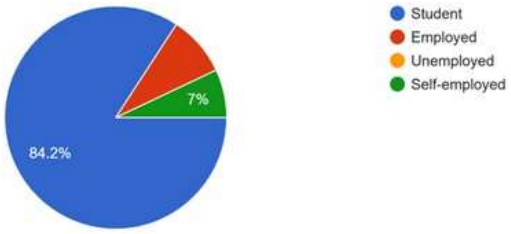


2. The pie chart displays the age distribution of 56 survey respondents.The vast majority fall into a single age group:



- 18-24:This age range constitutes the largest segment,representing 82.1%of all respondents.This indicates a significant skew towards younger participants in the survey.
- Other Age Groups:The remaining age groups(Under 18,25-34,35-44,45-54,55-64,and 65 and above)make up the remaining 17.9%combined.The chart does not provide a specific percentage for each of these smaller groups,making individual comparisons difficult.However,it's clear that their representation in the survey is substantially smaller than the 18-24 age group.

3. This pie chart illustrates the occupational status of 57 survey respondents.The data shows a significant dominance of one category:



- Student:This group makes up the vast majority(84.2%)of the respondents,indicating a strong student-based sample.
- Other Occupations:The remaining categories—employed,unemployed,and self-employed
- —comprise the remaining15.8%of the sample.The chart doesn't provide the exact percentage for each of these,preventing a precise comparison of their relative proportions.However,it's evident that they are significantly underrepresented compared to the"Student"category.

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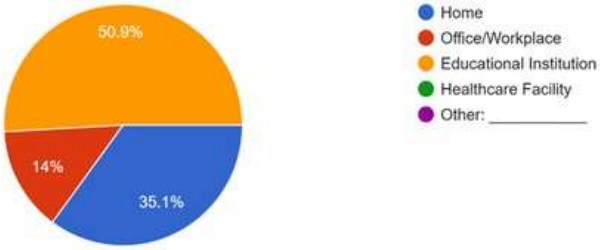

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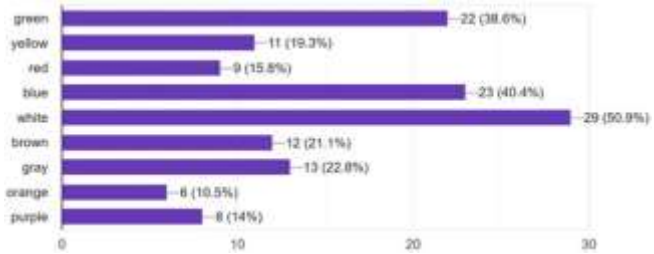
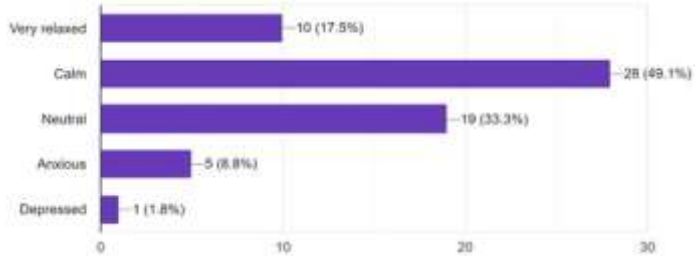
5. This horizontal bar chart shows the results of a survey question asking respondents to select all colors they most commonly encounter in built environments.The data is based on 57 responses,and respondents could choose multiple colors.Therefore,the percentages represent the proportion of respondents who selected each color,and they do not add up to 100%.



- White:This is the most frequently cited color,mentioned by 29 out of 57 respondents(50.9%).This suggests that white is a highly prevalent color in the built environments where respondents spend their time.
- Blue:A significant number of respondents(23 out of 57 or 40.4%)selected blue as a commonly encountered color.
- Green:Green is the third most common color,reported by 22 respondents(38.6%).
- Gray:Gray is the next most common,with 13 responses(22.8%).Gray:Gray is the next most common,with 13 responses(22.8%).
- Brown:Brown follows with 12 responses(21.1%).
- Yellow:Yellow is less prevalent than the top five,with 11 responses(19.3%).
- Red:Red was selected by 9 respondents(15.8%).
- Orange:Orange was a less common response,with 6 mentions(10.5%).
- Purple:Purple was the least common response among the provided options,chosen by only 8 respondents(14%)

6. This horizontal bar chart presents the results of a survey question asking,"How do you feel when surrounded by the color red in a room?"The data is based on 57 responses.Here's a detailed analysis:



- Irritated:This is the most frequent response,with 26 out of 57 respondents(45.6%)reporting feeling irritated when surrounded by the color red.This suggests a strong negative association for many with red in this context.
- Excited/Neutral:These two feelings are tied for second place,with 14 respondents each(24.6%each).This indicates that about a quarter of the respondents had either a neutral or excited reaction to being surrounded by red.The equal representation is interesting

Stressed:A smaller number of respondents(6 out of 57,or 10.5%)reported feeling stressed.This is considerably fewer than those who felt irritated.

- Very Energized:The least frequent response was"Very energized,"with only 4 respondents(7%)selecting this option.

In conclusion,the survey shows that the most common feeling associated with being surrounded by red in a room is irritation,significantly outweighing other responses.While a portion of respondents experienced excitement or a neutral reaction,the negative feelings(irritation and stress)are more prevalent.The relatively small number of"Very Energized"responses is notable.

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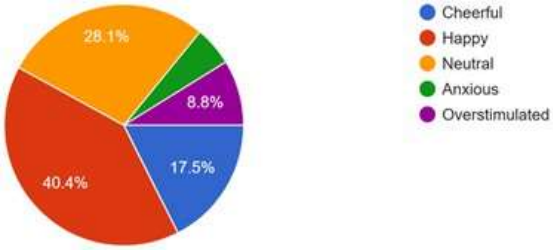

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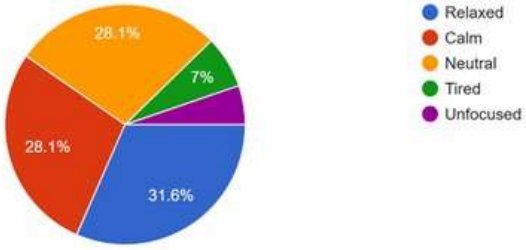
In conclusion,the survey shows that the most common feeling associated with being surrounded by red in a room is irritation,significantly outweighing other responses.While a portion of respondents experienced excitement or a neutral reaction,the negative feelings(irritation and stress)are more prevalent.The relatively small number of"Very Energized"responses is notable.

8. This pie chart illustrates how 57 respondents felt when surrounded by the color yellow in a room.The results are as follows:

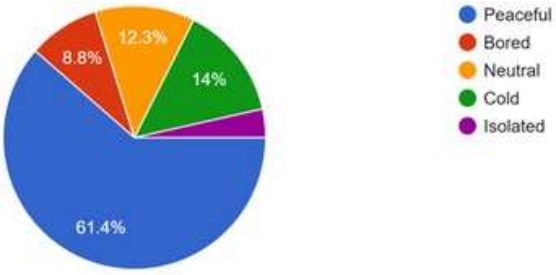


- Happy:The most common feeling was happiness,with 40.4%of respondents reporting this emotion.This suggests a strong positive association for many with the color yellow in this setting.
- Neutral:A significant portion of respondents(28.1%)felt neutral about being surrounded by yellow.This represents a considerable number of individuals who did not have a particularly strong emotional response,positive or negative.

- Cheerful:The next largest group(17.5%)felt cheerful when surrounded by yellow.This further adds to the generally positive emotional response to the color.
- Anxious/Overstimulated:The remaining responses,anxious(unspecified percentage but visibly a small portion)and overstimulated(8.8%),represent negative emotional responses.These are considerably smaller than the positive and neutral responses.

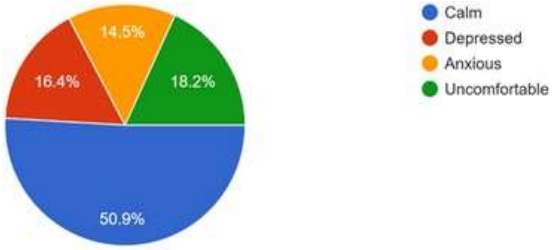
In summary,the survey demonstrates that the color yellow evokes mostly positive feelings(happy and cheerful)among respondents,with a substantial portion experiencing neutral feelings.The negative emotions of anxiety and overstimulation are less prevalent,representing a smaller percentage of the overall responses.The majority sentiment is one of happiness or at least neutrality.

9. This pie chart shows the responses of 57 individuals to the question:"How do you feel when surrounded by the color green in a room?



- Relaxed:This feeling is the most prevalent,representing 31.6%of the responses.This indicates that a significant number of people associate green with a feeling of relaxation.

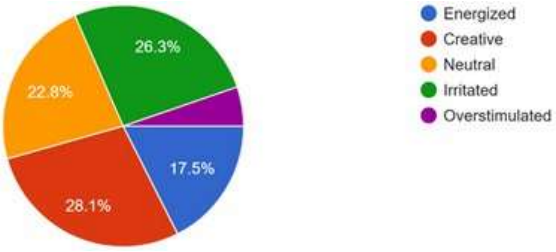
10. This pie chart shows the responses of 57 individuals to the question:"How do you feel when surrounded by the color green in a room?



- Relaxed:This feeling is the most prevalent,representing 31.6%of the responses.This indicates that a significant number of people associate green with a feeling of relaxation.
- Calm:The next most common feeling is calmness,also representing a substantial portion of the responses(28.1%).This further strengthens the idea of a generally positive and peaceful association with the color green.
- Neutral:A sizable portion of respondents(28.1%)reported a neutral feeling,suggesting that some individuals do not have a strong emotional reaction(positive or negative)to being in a green room.
- Tired/Unfocused:The remaining categories,tired(7%)and unfocused(unspecified percentage,but visibly small),represent negative emotional responses.The percentages are comparatively small,suggesting that negative feelings associated with green are less common than positive and neutral ones.

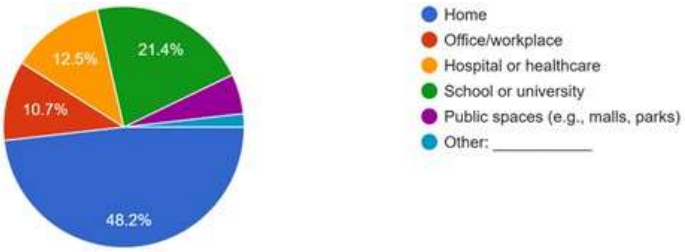
11. This pie chart displays the results of a survey asking 57 people how they feel when surrounded by the color white in a room.Here's a detailed analysis:

- Peaceful:The overwhelming majority(61.4%)of respondents reported feeling peaceful when surrounded by white.This suggests a strong positive association between the color white and feelings of peace or tranquility.
- Cold:A noticeable minority(14%)felt cold.This indicates that a segment of the population associates white with a feeling of coldness,either literally or metaphorically.
- Neutral:A smaller group(12.3%)reported a neutral feeling,suggesting that some individuals do not experience a strong emotional response,either positive or negative,to being in a white room.
- Bored:A small percentage(8.8%)of respondents reported feeling bored.
- Isolated:The smallest group(unspecified percentage,but visibly less than other categories)reported feeling isolated.
- In summary,the data strongly suggests that the color white evokes primarily positive feelings(peaceful)in this sample.While a portion of respondents reported feeling cold or neutral,these represent considerably smaller percentages than the overwhelming majority who associated white with a feeling of peace.The feelings of boredom and isolation were reported by even smaller segments of the respondents.



12. This pie chart presents the results of a survey asking 55 people how they feel when surrounded by the color gray in a room.

- Calm:The most frequent response,with 50.9%of respondents indicating they feel calm in a gray room.This suggests a significant positive or at least neutral association with the color gray for many.
- Uncomfortable:The next largest group(18.2%)felt uncomfortable.This shows that a notable percentage of people have a negative association with gray in this context.
- Depressed:A smaller percentage(16.4%)reported feeling depressed in a gray room,representing a less frequent but still considerable negative response.
- Anxious:The least frequent response was anxious,at 14.5%.
- In summary,while a substantial majority(over half)felt calm in a gray room,a significant minority experienced negative feelings such as discomfort and depression.The presence of these negative responses indicates that the emotional reaction to gray is not universally positive,with a notable portion of respondents having a less favorable experience.



13. This pie chart presents the feelings of 57 people when surrounded by the color orange in a room.Here's a detailed breakdown:

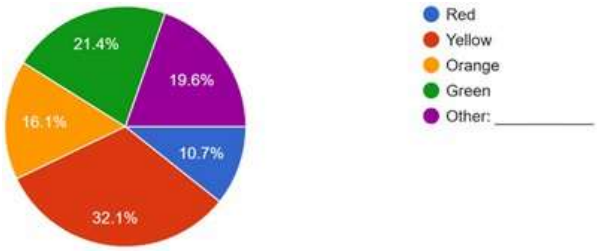
- Creative:The largest segment(28.1%)shows that the most common feeling associated with being surrounded by orange is creativity.This suggests a significant positive association between the color and creative thinking for many.
- Irritated:The second largest segment(26.3%)shows a considerable number felt irritated.This indicates that a substantial portion of respondents experienced a negative reaction to being surrounded by the color orange.The closeness of this percentage to the"Creative"segment highlights a significant split in responses.
- Neutral:A noticeable proportion(22.8%)reported a neutral feeling,suggesting a lack of strong positive or negative emotional response for many.
- Energized:A smaller group(17.5%)reported feeling energized by the orange surroundings.
- Overstimulated:The smallest segment(unspecified percentage,but visually small)reported feeling overstimulated.
- In short,the data reveals a mixed response to the color orange.While many experienced creative inspiration,a nearly equal number felt irritated.A sizable segment reported neutral feelings,highlighting a diversity of responses.The presence of both strong positive("Creative")and negative("Irritated")responses in nearly equal measure makes it difficult to assign a single definitive emotional association to the color orange based on this data alone.

14. This pie chart shows the results of a survey asking 56 people where they feel color has the greatest emotional impact.Here is a detailed analysis:

- Home:The largest portion(48.2%)of respondents indicated that color has the greatest emotional impact on them at home.This suggests that the home environment is particularly significant in terms of the emotional influence of color.
- School or university:The second largest segment(21.4%)reported that color's emotional impact is strongest in school or university settings.
- Hospital or healthcare:A smaller group(12.5%)identified hospitals or healthcare environments.
- Office/workplace:Another smaller segment(10.7%)indicated the office or workplace.
- Public spaces(e.g.,malls,parks):A small percentage(unspecified,but visually small)indicated public spaces.
- Other:A very small percentage(unspecified)selected"other".
- In summary,the data suggests that the home environment is overwhelmingly the place where respondents feel color has the strongest emotional impact.School or university settings are also notably significant,with hospitals,workplaces,and public spaces having a substantially smaller influence.This suggests that the emotional influence of color might be more pronounced in spaces where people spend considerable time and form strong emotional associations.

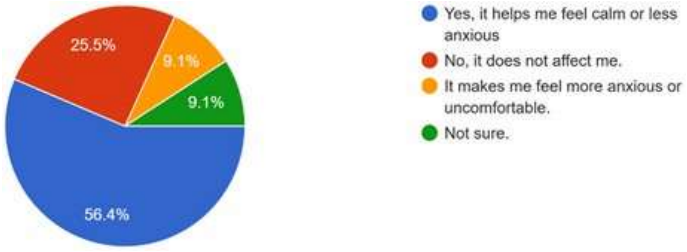
15. The pie chart displays the responses of 56 individuals to the question:"Do you feel that color affects your work performance or concentration in a professional setting?"

- Yes,it greatly affects my concentration and productivity:and Yes,but only slightly:These two categories are virtually tied,each representing 42.9%of the responses.This indicates that a significant majority of respondents believe color does affect their work performance or concentration,albeit to varying degrees.
- No,color does not affect my work performance:A small percentage(7.1%)of respondents indicated that color has no impact on their work.
- Not sure:An equally small percentage(7.1%)of respondents were unsure about the impact of color on their work performance.
- In summary,the data strongly suggests that color plays a significant role in influencing the work performance and concentration levels of the majority of respondents.While the degree of impact varies(some reporting a significant effect,others a slight one),the overall trend indicates a noticeable relationship between color and work productivity.The small percentage of those who reported no impact or were unsure suggests that the majority view holds a strong consensus.



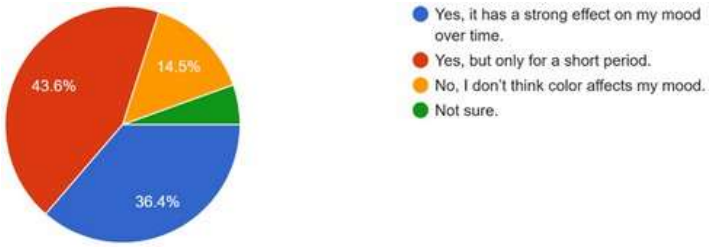
16. This pie chart shows the results of a survey asking 56 people which color they think is best for promoting relaxation in a room(examples given are living room and bedroom).Here's an analysis:

- White:The most popular choice,with 57.1%of respondents selecting white as the best color for relaxation.This suggests a strong association between white and feelings of peace or tranquility in a living space.
- Blue:The next most common choice(21.4%)was blue,indicating that a considerable number of people also associate blue with relaxation.
- Green:A smaller number(10.7%)selected green.
- Yellow:An even smaller number(unspecified percentage,but visually small)selected yellow.
- Other:A very small number(unspecified percentage,but visually small)selected"Other."
- In summary,the survey indicates a clear preference for white as the color most strongly associated with relaxation in a room,with blue also being a popular choice.Green and yellow received far fewer votes,suggesting a weaker association with relaxation compared to white and blue.The limited number of"Other"responses suggests that the vast majority of respondents found their preferred choice among the colors listed.



17. This pie chart presents the results of a survey asking 56 people which color they believe is best for creating energy or focus in a room(examples given are offices and study areas).Here's an analysis:

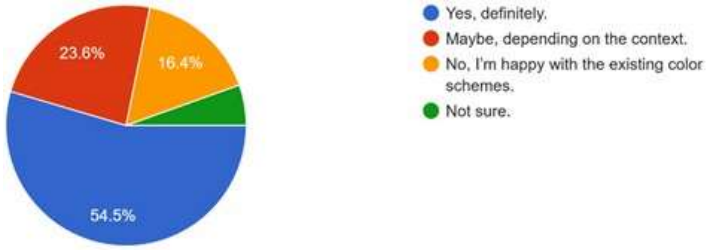
- Yellow:The most popular choice(32.1%)was yellow,suggesting that many associate yellow with increased energy and focus in a workspace.
- Red:The second most popular color(21.4%)was red,indicating that a significant number of respondents also link red with energy and focus.
- Other:A relatively large segment(19.6%)selected"Other,"suggesting that a significant portion of participants have preferences not included in the specified color options.This warrants further investigation to understand those preferences.
- Green:A smaller percentage(16.1%)chose green.
- Orange:The smallest percentage(10.7%)selected orange.
- In summary,the survey reveals that yellow is the most commonly perceived color for boosting energy and focus in a workspace,followed by red.The significant number of"Other"responses highlights the diversity of
- opinions and suggests the need for more comprehensive research encompassing a wider range of color choices.Green and orange were the least popular choices,indicating a weaker association with energy and focus.



18. This pie chart presents the results of a survey asking 56 people which color they believe is best for creating energy or focus in a room(examples given are offices and study areas).Here's an analysis:

- Yellow:The most popular choice(32.1%)was yellow,suggesting that many associate yellow with increased energy and focus in a workspace.
- Red:The second most popular color(21.4%)was red,indicating that a significant number of respondents also link red with energy and focus.
- Other:A relatively large segment(19.6%)selected"Other,"suggesting that a significant portion of participants have preferences not included in the specified color options.This warrants further investigation to understand those preferences.
- Green:A smaller percentage(16.1%)chose green.
- Orange:The smallest percentage(10.7%)selected orange.

- In summary,the survey reveals that yellow is the most commonly perceived color for boosting energy and focus in a workspace,followed by red.The significant number of"Other"responses highlights the diversity of opinions and suggests the need for morecomprehensive research encompassing a wider range of color choices.
- Green and orange were the least popular choices,indicating a weaker association with energy and focus.
- comprehensive research encompassing a wider range of color choices.Green and orange were the least popular choices,indicating a weaker association with energy and focus.



19. This pie chart shows the responses of 55 people to the question:"Do you feel that color in spaces like hospitals or clinics affects your emotional well-being?"Here's an analysis:

- Yes,it helps me feel calm or less anxious:This is the dominant response,representing 56.4%of the total.This suggests a majority of respondents believe that color in healthcare settings positively
- impacts their emotional well-being.
- No,it does not affect me.:A smaller percentage(25.5%)reported that color has no effect on their emotional state in healthcare environments.
- It makes me feel more anxious or uncomfortable:and Not sure.:These two categories are tied,each representing 9.1%of the responses.This indicates that a relatively small portion of respondents experience negative emotional responses or are unsure about the impact of color in these settings.
- In summary,the data strongly suggests a positive association between color in hospitals and clinics and emotional well-being for most respondents.A considerable number believe color helps them feel calmer or less anxious.The relatively small number of respondents who reported negative effects or uncertainty indicates that the overall trend favors a positive impact of color on emotional well-being in healthcare spaces.

4. Inference

A review of the data reveals a number of conclusions about how color,environment,and health relate:

1. 1.Strong Age Bias:The 82.1%of 18–24 year-olds in the sample has created a large age bias that may not allow findings to be generalized to older individuals;therefore,there is a need for additional studies in which more than one age group is represented.
2. 2.Predominantly Student Sample:The sample has a large(84.2%)student representation;therefore,the findings likely reflect students'experiences and preferences rather than the general population.The small percentage of individuals that were employed creates difficulty in generalizing results to working adults.

3. 3.White and Blue are Calming and Common:White and blue are identified as the two most prevalent colors and also as preferred colors for relaxation,suggesting a cultural association between those colors and peacefulness.
4. 4.Yellow and Red Provide Energy but are Polarizing:Yellow and red may provide excitement and focus,but there seems to be a split opinion of their stimulation;while some respondents have a positive association with them,others find them irritating,indicating that the effect of these two colors may vary based on the person and his/her context.
5. 5.Color is Related to Feeling and Health,but the Amount of This Relation is Found to be Variable:The data is repetitive in that there seems to be a connection between feeling and staying healthy when looking at different colors.The amount(i.e.how long you feel this way or how strong you can feel it)of color's effect,however,is also very variable.Most people usually feel that colors do have an effect(albeit usually short term),and most people(about 90%of those surveyed)also prefer a certain amount of flexibility concerning the type of colors they're using to enhance their health feelings.However,because the researchers could not come to an agreement about the length of time the effects of color are felt(i.e.do you feel this for a long period of time?or for a short period of time?),and due to the lack of relevant data regarding the specific color associations outside of those that were asked about in the surveys,there is a need for additional research.
6. 6.The Color of Healthcare Environments is Associated with Positive Effects on Patient's Oil and Emotional Values:Many survey participants reported that coloring in healthcare facilities positively influenced their sense of belonging and thus contributed to comfortable emotional states due to less distress.This points out that thoughtful choices regarding the colors used in healthcare facilities may result in a better experience for patients.
7. 7.There is an Affirmative Desire for Color Preferences:There is an overwhelming amount of respondents indicating their desire to have personalized color schemes because it allows them greater control over the overall aesthetics and emotional tones they create.In general,the results show clear support for the idea that color creates a positive impact on both a person's mood and emotion..Nonetheless,the sample was biased significantly due to both age group and profession as well as limited opportunities for participants to be exposed to various colors,which will affect our ability to generalize these results.To validate and build upon these findings will require broader scope of sample subjects across all occupations'ages and over longer periods of time.More studies must be done to support this thesis using appropriate random selection methods for study participants

5. Conclusion

Color plays an important part in the experience of the built environment by influencing feelings and behaviours.Many studies have shown how colours can affect our psychology and physiology,thereby affecting how we perceive and interact with the spaces around us.Warm colours such as red and yellow tend to stimulate,and energise,while cool colours,such as blue and green,can encourage relaxation and calmness.

Neutral and natural colours provide an appearance of stability and balance;therefore,they provide flexibility for a wide range of uses.

In the built environment,the thoughtful use of colour helps to create functionality by aligning the design of the space with the intended emotional effects.For example,bright colours could provide motivation in

educational or collaborative environments while muted tones could create an atmosphere of calmness in healthcare or residential settings.

In addition,cultural and individual variances in colour perceptions highlight the ambiguous nature of colour,and support the need for a contextual approach to design.This study highlights the importance of the colour of the environment,as it is utilised as a multi-dimensional medium for architects and interior designers alike,to achieve their design by understanding how colours affect one's moods and psychology,and therefore,creating spaces that will enhance the occupant's or end user's capability to achieve their intended purpose/function,while still providing for the
mental and emotional wellness of the occupants and/or end users.

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