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Interior Design

 An interior designer works alongside other designers, architects, construction workers, and interior decorators in order to create an aesthetically pleasing interior space that also is functional, within budget, and follows all building codes and regulations. The work of interior designers is broken down into two equal subcategories: commercial and residential projects. Commercial projects are projects where the audience is either employees or the general public, this includes but is not limited to offices, stores, restaurants, or corporations. While commercial projects are often for the general public, residential projects have a much more specific audience which is individuals who live within the space. This makes all homes, apartments, condos, and hotels considered to be a residential project for interior designers. Although these projects differ in requirements and audience, the same process is used to design the space.

Before creating a fully designed space, it is mandatory that the interior design takes careful steps when drafting and planning the space. They are required to make specific lighting, color scheme, décor, and seating arrangement choices to please their clients, fit building requirements, and look pleasing together. These choices also play a specific role in how the individuals within the room are affected while they are in it. Recently scholars and professionals have begun to study exactly how the interior design of a room affects the individuals within the space. Most research has linked specific lighting, color scheme, décor, and seating arrangement choices to have direct psychological effects on individuals within a commercial space. It has been found that different lighting brightness and placements can affect an individual’s level of calmness or arousal while in a counseling room (Miwa, Kazunori 497). Similar changes in levels of calmness and arousal can be seen when studying how the color scheme of a classroom affects students within it (Yildirim 517). Along with these effects, other characteristics of interior design can help or hinder an individual ability to perform within the room. It was found that décor, specifically displaying art, had a positive impact on the amount of work done by employees in an office (Ornstein). The amount of work completed by students within a classroom has been linked to the seating arrangement present within the space, traditional forward-facing seating arrangements have been shown to increase work completion, but circular seating arrangements increased group work and communication (Tondeur, et al. 550). This research demonstrates how the interior design of commercial spaces causes different effects on individuals. Less explored areas of research include how the interior design of residential areas affect individuals. Nearly half of the interior design community focuses on designing residential spaces yet little research in this area is being done. It is critical to begin researching this topic because finding how each characteristic within a residential room can affect individuals could lead to new information and possibly new standards for home design.

My research will focus on how the different characteristics of interior design affect individuals within a residential space. The purpose of my proposed observational study will be to find the effects of lighting, décor, and color scheme on individuals within a residential area. This study will not include seating arrangement because typical seating arrangements only apply to commercial spaces. By exploring the effects of interior design within residential spaces, new knowledge of interior design and how it affects clients would be introduced. Studies proving how the interior design of commercial spaces is readily available, but the same studies need to be done to find the effects of the same characteristics for residential areas. This paper will begin with a literary review of 8 different journals that focus on how the four main characteristics of interior design effect individuals within the space. New research demonstrates how the lighting décor, color scheme, and seating arrangement of a space can affect people but often is limited to commercial spaces rather than residential. I plan to explain these effects before proposing my own study in the next section of the paper. This section will include a description of the observational study that I am proposing which will explore how three of the four main characteristics affect individuals within a residential area. The methodology and limitations of this study will be explained in this section in detail, and finally, the impact of this study on the interior design community will be discussed.

Literature Review

Lighting

Choosing the correct lighting for a space is a critical decision for interior designers to make. They must decide what lighting fixture, placement, and intensity are necessary for the given space. While it is important that their choices add to the overall design and aesthetic of the room, their choices also must reflect how an individual is supposed to feel while in the space. It has been found that the lighting within a room plays a key role in the feelings an individual has within the room.

Lighting intensity within commercial spaces has the opportunity to affect how pleasant a person feels. Dim lighting often causes people to feel calmer while brighter light is more arousing (Baumstarck, Park 3). Researchers Yoshiko Miwa and Hanya Kazunori researched how lighting within a counseling room can affect the individuals within it. They found that dim lighting did, in fact, cause a more peaceful experience for the individuals in the room than bright lighting (Miwa, Kazunori 496). Along with this calm feeling, it also affected the individual’s likelihood to talk about their feelings. This research found that dim lighting caused people to self-disclose easier than they would in bright lighting (Miwa, Kazunori 498). In this case, dim lighting would be the obvious choice for interior designers, but some spaces need to create a more aroused environment such as a dressing room. Anne Baumstarck and Nam-Kyu Park researched how lighting intensity within a dressing room can affect customers. They found that bright lighting yielded a more aroused state and in returned increased the customer’s experience (Baumstarck, Park 7). Their research led them to the conclusion that although dim light is favorable for a calm environment, brighter lighting is needed within a dressing room to create an aroused experience for customers.

Along with lighting intensity, lighting placement plays an important role in the individual within the space. Anne Baumstarck and Nam-Kyu Park’s dressing room study examined how overhead versus frontal lighting placement affected customers. They found that frontal lighting caused less facial shadowing making the customer feel better about themselves and have a more pleasant experience (Baumstarck 9). While frontal lighting is beneficial for dressing rooms, it would be impractical for other spaces, such as the previously studied counseling room, and would cast a far brighter light than overhead lighting would. This means that like lighting intensity, lighting placement is dependent on the function and needs for the space being designed. Overall, lighting has the ability to alter how calm or aroused an individual feel in a space which in return can affect their ability to self-disclose and their general experience in the given area.

Color Scheme

 The color scheme of a room is often one of the first choices an interior designer makes when designing a space for a client. Although sometimes the client has a specific color scheme in mind, the interior designer is often left with the responsibility of creating a color pallet that will match the mood and emotions present within the given space. The bases for all color schemes are broken down into three categories, warm colors (reds and oranges), cool colors (blue and green) and achromatic colors (browns and black). Each of these three types of colors evoke different feelings when they surround an individual.

Interior design researchers found that warm colors are often related to excited states while cool colors are associated with calmness (Yildirim 516). Researcher Kemal Yildirim studied how warm and cool color schemes affect individuals in different ways. He found that rooms with a cool color scheme were often rated as more inviting and relaxing than warmer colors (Yildirim 518). Kubula Cagatay also researched how the color scheme of a room affects individuals within it and found similar results. He states that “In common with other studies, this study has found that the use of cool color, blue for interior surfaces would engender a pleasant, peaceful, calm and comfortable perception of occupants; whereas warm colors such as pink, would make space seems more stimulating but smaller” (Cagatay 615). This research demonstrates that warm color scheme should be used when individuals within a space should feel aroused and cool color schemes are better for spaces that should have a calm or relaxed mood.

Along with causing an aroused or relaxed state on the people within the room, some color schemes have been proven to promote work and yield a higher level of concentration over other color schemes. Kubula Cagatay’s research was put to test in a classroom to find how color schemes affect young boys and their level of achievement. This study found that cool colored classrooms promoted on-task behavior and increased work completion while warm colored classrooms promoted discussions and collaboration (Cagatay 612). This demonstrates that the specific purpose and audience for a given space must be taken into consideration before deciding on a color scheme. Kemal Yildirim and Kubula Cagatay’s research shows that the color scheme of a room affects an individual’s emotional state, promote a working environment, or lead to more beneficial conversations.

Décor

 Any item within a room that is not furniture or lighting is considered décor. This often includes things like photographs, murals, sculptors, mirrors, or knickknacks. Much like the other characteristics of interior design, the décor items chosen by an interior design drastically affects the individuals within the space. The décor chosen can alter the level of calmness an individual feel in the space (Tsunetsugu, Miyazaki, Sato 1345).

Research within the interior design community has recently proven that the décor of a commercial space affects employees and the way they perform (Ornstein 4). Specifically, it has been proven that having artwork such as murals or sculptors can reduce stress, calm workers, and even promote work completion within an office space (Ornstein 6). Suzyn Ornstein found in her décor research that a highly demanding office had improved productivity level when some artwork was placed around the office (9). Upon interviewing employees, her research also found that artwork helped to calm workers and reduce the stress they felt while at work (Ornstein 9). Researchers Y. Tsunetsugu, Y. Miyazaki, and H. Sato also proved that the décor of a space changes the calmness of the individuals within the room. Their research included a study on how people respond to décor they considered to be ordinary and unique. Ordinary décor included things such as photographs and art while unique décor was exposed wooden beams and textured walls (Tsunetsugu, Miyazaki, Sato 1341). The study found that ordinary rooms including artwork often caused the participants to feel calm and at ease, while the unique décor caused individuals to feel aroused and even sometimes a level of nervousness occurred (Tsunetsugu, Miyazaki, Sato 1344). This demonstrates how décor can affect the calmness or arousal that an individual feel in a given space. Overall, research within the interior design community has found that specific types of décor such as murals, art, or sculptors can cause induvial to feel relaxed and even promote better working habits.

Seating Arrangement

 The last characteristic of interior design that can affect individuals within a space is the seating arrangement. Seating arrangement refers to the overall style of furniture in the room. This can include having the seats face one another, be in a row, form a circle, or have an angular configuration. Recent studies have shown that the seating arrangement of a commercial space can affect the way individuals interact with one another.

Suzyn Ornstein found in her study that along with décor, seating arrangement can affect people within an office. She found that certain seating arrangements can affect how employees communicate with one another and how much collaborative work is completed (7). Offices that have open style seating promote group work and have a better level of communication between workers than typical office styles (Ornstein 7). Open style office seating is when desks are situated to face one another and do not have dividers between workspaces, this allows people to look to their coworkers for ideas, inspiration, and help when in need (Ornstein 8). The increased level of communication that occurs due to specific seating styles was also proven by research J. Tondeur and their colleagues. They found that classrooms in traditional forward-facing seating style caused a lack of group work and idea sharing (Tondeur, et al. 540). They then tested how collaboration changed when the seats were configured into smaller pods and then in a large circle. Their research found that both seating styles improved collaboration between students, but the smaller pods yielded the highest work completion overall (Tondeur, et al. 555). The seating arrangement of a commercial space can change the level of communication between peers and increase the amount of work completed.

Along with affecting individual’s communication and work completion, research has also shown that seating style can affect how people are persuaded within a space. Rui Zhu and Jennifer Argo are partners on the project that found how different seating styles caused individuals to have a higher likelihood of being persuaded by different forms of advertisements. Their researched studied how angular versus circular seating can alter an individual's ability to be persuaded to material that is either direct to belongingness or uniqueness. They used self-oriented and family-oriented advertisements in both seating styles to see the effects. They found that:

The results demonstrate that circular shaped seating arrangements prime a need to belong, and this leads participants to evaluate persuasive material more favorably when it conveys belonging information (i.e., family-oriented information). In contrast, when the shape of the seating arrangement is angular, a need to be unique is primed, and this results in individuals responding more favorably to information related to uniqueness (i.e., self-oriented information). (Zhu, Argo 344)

Different seating arrangements in commercial spaces have the ability to affect the type of material that persuades an individual, as well as influence communication levels and the amount of work an individual completes.

Overall, the four main characteristics of interior design have been studied and proven to drastically affect the individuals within a commercial area. Generally, these design elements can alter a person’s emotions, experiences, and actions while in the space. While the effects of interior design within a commercial space are being studied in depth, there is a lack of information on how the design of a residential area can affect an individual. Nearly half of the interior design community focuses on designing homes and residential places, yet little research focuses on how lighting, décor, or color scheme can affect someone in their home. To test how these interior design elements can affect someone within a residential space, I propose that a series of living rooms with different interior design elements are presented to 90 people and their emotional state, experience in the space, and actions be recorded. Next, I will provide a detailed description of my proposed observational study before discussing its limitations and benefits to the interior design community.

Proposal

Methodology

 To research how the interior design of a residential space affects individuals within the home, I will propose a three-part observational study. Each part of this experiment will study how either lighting, color scheme, or décor can affect individuals within the residential space. This study will be very similar to the observational study performed by the previously mentioned interior design researcher, Kemal Yildirim, when he studied how the color scheme of a room can affect the individuals within it. Yildirim, along with many other interior designers use observational studies to find how the interior design of space can impact the individuals within it because it allows the researchers to see how people react naturally within a space due to its design and then follows up with a survey to see how the room affected the individuals emotionally. The widespread use of observational studies within the interior design community and their ability to show how interior design elements affect the actions and experiences of individuals within the space, as well as the emotional effect in the follow-up survey, is the reason I am proposing a three-part observational study.

For this study, there will be six rooms that resemble designed residential spaces and 90 participants who will be randomly selected. The participants will be randomly assigned to lighting, color scheme, or décor forming a group of 30 individuals for each characteristic being studied. The groups are randomly selected and the labels for each group will not be given to any participants to decrease any possible bias. For each of the three separate observations, the participants will be asked to look at two residential rooms, both of which are identical in all aspects besides the changing variable. This means the individuals seeing the lighting rooms will see two identical rooms whose only difference is lighting intensity, one room will be dim and the other will have bright lighting. The color scheme rooms will have the same lighting, furniture, and décor, but one room will have a warm color palette so reds and oranges will be present, while the other will have blues and greens so the color palette will be cool. Individuals seeing the décor rooms will view two rooms that both have a neutral achromatic color scheme and medium lighting, but one room will include décor such as family photos and artwork, while the other room does not.

While in both rooms, the participants will be monitored, and their actions and experiences will be recorded to see how they differ from the other room within the same design element. The differences found between the two lighting, two color scheme, and two décor room will explain how an individual’s actions and experiences are affected by the interior design of a residential space. To then find the emotional effects of each characteristic, the participants will be surveyed. They will be asked a series of open-ended questions such as how both rooms made them feel, which one they preferred, what mood do they associate with each of the rooms they entered, how aroused or calm they felt in each space, and if they felt any notable emotional changes between the rooms. This survey will take place directly after viewing the rooms to ensure the information is as accurate as possible. It will be done online on computers present within the space in order to make sure every participant is able to respond. The differences found during the survey for each interior design category will explain how that element can affect people emotionally within a residential space. The results of this observational study will then be examined and connected to other studies within this field. Overall, this proposed observational study will explain how the lighting, color scheme, and décor of a residential room can affect an individual’s actions, experiences, and emotions while in the area.

Discussion

Observational studies often have a large margin of error because they involve recording how a person behaves and making assumptions about it which can often cause misinterpretation. This proposed studies margin of error is also large because it involves a survey at the end. Survey responses can be skewed and cannot be fully depended on for accuracy. Along with having a large margin of error due to the type of experiment I am proposing; other factors can also limit the accuracy of the study. This study is based solely on visual stimulation and the responses people have to it, because of this an individual’s memories or preferences could play a large role in the results. An example of this could be an individual having a negative memory that involves bright lighting causing a skew within the data for the lighting study. Another way the visual nature of this study limits the accuracy of the results could be the way in which individuals perceive color. This could occur if an individual experiences some form of colorblindness that either minorly or drastically affects the way they see color; if this individual was randomly assigned to the color scheme rooms and the observers were unaware of the participants colorblindness then the data for this study could be drastically skewed because they would not perceive this interior design element the same ways the rest of the participants do. Due to the limitations I have explained, my proposed observational study can only provide interior designers with a general idea of how the interior design of a residential space can affect clients. If this study shows substantial differences in how the interior design of a residential space impacts an individual, then further research should be proposed and completed to find more definite information and explanations for these effects. This observational study would benefit the interior design community in order to provide more information on how the interior design elements can affect clients within a residential space. The effects of residential interior design are rarely studied while nearly half of interior designers focus solely on designing residential spaces so this study would give vital information to these interior designers who often are forced to guess how each element will truly affect their clients. Overall, this observational study can alter how interior designers plan and design residential spaces in the future and could even begin a new topic of research for the interior design community.

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