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HUMAN PSYCHOLOGY AND ARCHITECTURE

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Abstract : The link between design thinking, psychology, and architecture provides a deeper approach to creating areas that actually connect well with how people act and feel. Architectural practice may combine elements of art, science, and management and requires strong understanding of design processes focused on user experience. Through the observation of human behavior, health, and environmental issues, architects can instigate new ideas for creating better spaces where individuals live.

The design thinking approach comes into play in this situation by carefully listening to and taking care for what the user needs. It is mostly a five-step process generally: understand users, definition of problems, solutions, model creations, and test result production. Working through this process while maintaining the user's perspective helps architects design spaces that are not only useful but also pleasurable and significant. It is through this user-centered approach that the created spaces are developed for the particular needs and preferences of who will occupy them.

Psychology in design reveals the profound influence of architecture on human behavior. Neuroscience studies reveal how various elements such as color, texture, form, and materials significantly impact people's emotions. For instance, warmth perhaps brings a sense of comfort and security; different textures make the individual more engrossed and enhance the touch experience. In addition, the way spaces are configured is very important for social interaction. Bright, open spaces with much natural light can improve mood and increase productivity; small or dimly lit areas create feelings of anxiety and depression. Knowing all these psychological factors enable architects to create a good space that promotes well-being and encourages good interactions among people.

Natural light is very important to affect feelings and overall health in buildings. Careful additions of natural light to building design can improve mood, improve productivity, and make people feel comforted. Also, using more natural light reduces energy consumption and makes life better to live or work with. Research indicates that places designed to use the availability of natural light reduce stress and cases of depression.

In the final analysis, a synthesis of research, design thinking, and psychology in architecture builds spaces that meet practical needs but improves emotional well-being. Overall, this approach puts into question how very important it is to design places that encourage community and connection, helping us better understand human behavior in built environments. Thinking about just how all these elements can work together to reveal how a space can really connect with the people inhabiting and using it improves the lives of many, providing a sense of belonging and purpose.

IndexTerms - Architectural psychology, aging in place, Human-centered design, Navarasa, color psychology.

I. INTRODUCTION

1.1. Architectural Practice

Architectural practice, therefore, forms a vibrant and dynamic field that interweaves essential elements of creativity, rigorous analysis, and user-centered design principles in designing architecture. Designing in architecture brings with it unique freedoms in promoting innovative ideas and revolutionary thinking, which is often rooted initially with preliminary sketches as the foundation for further investigation and exploration. In this iterative and cyclical process, initial ideas need to be accompanied by thorough analysis and comprehensive information gathering in informing the design. Then, the concepts have to be refined by architects through the important task of modifying their approaches based on valuable feedback and extensive research to finally arrive at solutions effective and viable for the projects.

An important and central component of this whole process is the act of encouraging livelier discussions that would facilitate effective teamwork and brainstorming on multiple design issues to be encountered. Such incessant dialogue not only plays a crucial role in promoting creativity but also ensures that the designs produced in the process are friendly to the users and responsive to the dynamic needs of diverse populations. By prudently reflecting on socio-cultural perspectives, lifestyles, and

varied demands of different age groups, architects are uniquely positioned to conceive spaces that reverberate profoundly with the users on a deeper emotive level, leading to a powerful sense of belonging and community among everyone who shares these environments.

This multi-dimensional approach to design thinking stresses the critical need to hold the balance between local knowledge and creative innovation in the design process. By actively engaging in both local thinking, which draws on the uniqueness of cultural and environmental contexts, and creative thinking, which encourages out-of-the-box solutions, architects better navigate through the complexities and intricacies of modern design challenges challenging them in today's fast world. The relationship and connections that exist among the various stages of the design process—empathizing, defining, ideating, prototyping, and testing—are absolutely important to develop spaces that are not only functional in their intended use but also emotionally enriching, fostering a deeper connection between the environment and its inhabitants.

Now we can immensely appreciate both the deep ways in which thoughtful design actively fosters strong community connections and profoundly enhances emotional well-being through gaining further insight into the full complexity of the involved details within architectural practice as well as comprehensive design process

1.2. Design Process

In this light, the design process is quite important in the sense that it refines solutions systematically. It also presents a thoughtful and considered approach through which architects can continue to modify their designs. This leads to improving the functionality of the overall structures as well as enhancing user satisfaction. This is a wholesome problem-solving approach that places the emphasis significantly on the user experience above everything else. The importance of detecting problems early in the process of design lies in the fact that the detection of user needs and challenges necessitates the recognition of how to develop specific solutions to address these issues significantly; this means not just boosting functionality but also emotional impacts that the designs have on the people using them.

There is the role of primary importance, that of understanding the complexity of human behavior. The multivariety of such different materials can be explored in order to gain valuable insights into the emotional and functional impact these materials have upon the users who come into contact with them. The knowledge that is obtained from the study of various materials equips architects with the tools they need to create not only aesthetically pleasing spaces but those also richly resonating at an emotional level with individuals. Selection and choice of materials also directly affect the overall design outcomes in which this leads to enhancing and enriching a creative design process in its entirety.

Generative of ideas in design, for instance is a critical phase of the design process. It will lead to the coming up with innovative ideas and concepts that push the boundaries of creativity. This significant element fits within the larger concept of knowledge creation through different methodologies and approaches, not only informing but also improving the design process itself, culminating in solutions that find expression deeply reflective of other social and cultural contexts. And for effective and impactful design outcomes, absolutely necessary is the continuous process of knowledge generation and ideas.

Prototyping is an essential part of the design process, which essentially means producing different forms of representation that contain various ideas. This is deeply interlinked with model-based thinking; architects make use of both physical and digital models to probe different spatial combinations and rigorously test a broad range of ideas before their final realization. This is an all-imaginative dimension belonging to the broader design processes, thereby letting architects effectively conceptualize and communicate clarity and precision in innovative ideas.

1.3. Design Thinking

Architecture serves as a significant form of knowledge, and it is indeed a discipline that is firmly rooted in a vast and comprehensive body of knowledge. A thorough understanding of various aspects such as building performance, health considerations, and the overarching effects of the constructed environment on human behavior is crucial for devising designs that truly resonate with the users and meet their needs effectively. This wealth of knowledge plays a pivotal role in shaping and guiding the design process, thereby guaranteeing that the resulting solutions are not only functional but also highly responsive to the diverse requirements and preferences of the users.

Design can influence human's emotional well-being and social interactions. This ties into the idea that the built environment significantly affects people's behavior, highlighting the need for architects to consider how their designs will impact users' experiences and actions.

The principles of design thinking are centered around the concept that it serves as a comprehensive problem-solving framework that is specifically aimed at prioritizing and enhancing user experience. This particular approach effectively enables architects to not only identify but also thoroughly address specific challenges that may arise, thereby ensuring that the solutions developed are well-suited to meet the diverse and varying needs of users. Furthermore, there is the significant idea that a solution formulated for one particular problem can indeed be adapted and modified to address and resolve different issues by utilizing the methodologies of design thinking.

Gaining a deep understanding of human needs and behaviors is critically important when implementing a human-centered approach in the field of architecture. By truly adopting the perspective of the consumer, architects have the opportunity to design and create spaces that are not only visually aesthetically pleasing but also highly functional and deeply emotionally engaging for the individuals who will inhabit them. This particular approach actively fosters the development of adaptive architecture that places a significant emphasis on enhancing user experience, making it a priority over simply achieving mere beauty in design.

The exploration of different materials is quite beneficial when it comes to achieving desired design outcomes. Gaining a deep understanding of material innovation proves to be essential for architects, since it empowers them to design and create spaces that are not only sustainable but also responsive to the diverse needs of users. Furthermore, advancements and innovations in materials have the potential to significantly enhance the performance of buildings while also improving the overall health and comfort of those who occupy these spaces.

The connection that exists between architectural design and the sensory experiences that individuals encounter, which include sight, sound, and touch, plays a vital role in shaping and influencing the ways in which users engage and interact with

their surrounding environment. A deep and nuanced spatial understanding is fundamentally important in the practice of architecture.

1.4. Design Thinking Method in Architecture

Design thinking is an approach to comprehensive problem-solving that emphasizes prioritizing the needs of users. How critically relevant for older adult populations is especially needed, for which there is a need to understand the specific drivers of user needs, preferences, and challenges. Such methodologies are needed to help systematize and articulate the problem to be solved so that solutions developed are specifically addressing something that would greatly enhance the quality of life for those users.

It's imperative to conduct thorough surveys and extensive research in order to deeply understand the needs of users, which are varied. Therefore, by understanding what older people expect and like, architects can come up with places that not only serve them very well but also care for them fully in all aspects of their human nature. The human-centered approach advocated by the abstract seeks close proximity to the design creation process, which gives life to stories, emotions, and voices as expressed by those who are living inside these environments.

This vividly demonstrates the important role which thorough research plays in the creative design ideation process. This opinion is further compounded by the creation of new ideas, whereby the design thinking approach is utilized deliberately to devise innovative solutions that are tailored for the particular difficulties seniors face. By methodically iterating and intensively testing promising concepts, architects have a chance to refine their designs such that they better fit and fulfill the needs of the intended end users.

We need to expend the time required on careful consideration and analysis of the problems, however vital recognizing that an expectation present in all users is absolutely critical to achieve sound architectural design, as well as placing a strong emphasis on understanding the subtleties of human behavior and the emotions that go with it, which help to predominantly support our goals. This important need urges the creation of spaces that facilitate a deep sense of safety and comfort but also have a real sense of community among people who use those spaces.

A move away from institutional hospital forms toward more modern forms is an important aspect in creating positive environments for seniors. the effect of architectural design on human behavior, which is of especial value when exploring how design can shape mood or well-being in elderly care facilities.

In direct alignment with what is discussed in the abstract regarding the emotional impacts that design elements can have, this focus placed on the selection of materials and the careful choice of colors, which work together to foster a positive mood, highlights the efforts that are made to ensure that senior living environments are not only improved and enhanced by thoughtful and intentional selections but also concerning the chosen color palettes, that often can significantly improve the overall atmosphere and, therefore, promote and encourage feelings of safety and, above all, a clear sense of orientation among its residents.

The idea of older user demands as becoming more demanding in terms of what they expect for the specific needs reflecting a much broader and more pivotal trend that is now configuring within architectural practice focused on inclusion and responsiveness to many user groups reflects the idea, as described in the abstract discussing the principles of user-centered design, where it stipulates the critical adaptation to changing needs of multiple populations to have settings that are responsive to everyone's real needs.

1.5. Design Psychology

Design psychology examines at a deep or profound level how architecture impacts human behavior, mood, and well-being. Architecturally, the designer is ideally equipped to design space environments that transcend mere functionality to promote moods and raise one's level of productivity. Space has been used in showing how deliberately designed areas-for instance, bright open office spaces with views of nature-can better facilitate creativity and efficiency as opposed to cramped, poorly lit spaces that just seem to hold one back from doing more.

Understanding complex psychology of spatial design is important because many aspects such as lighting, room's arrangement, and overall spatial layout have a direct and immense impact on mental health and emotional responses. Light plays a crucial role in this aspect; natural light can reduce energy consumptions with effectiveness but increases levels of productivity and overall wellbeing. Studies proved that people exposed daily to natural light help reduce depression and improve sleep quality. Thus, this shows the vital importance of light as an essential element that should be considered in the field of designs.

Further, the unique design of multiple ambiances highly influences the spaces' impacts on productivity. For instance, floor open configurations are designed to promote superior communication, cooperation, and maximum minimal errors that lead to better outcomes. Conversely, properly aligned and orientated layouts, which support with psychological needs, make it much more usable while also contributing to user experience related to an efficient work environment.

The varied materials in architecture provide an essential component in communicating messages and framing the way people experience a given space. Different selected textures, colors, and materials can evoke specific perceptions that are behavioral in nature. Harder materials, such as wood and textiles, create warm atmospheres as they reduce stress and anxiety. Cold, hard materials also characterize steel and glass, and these could be used to communicate professionalism and modernity, but if these materials are not balanced, then they create distant and uninviting environments.

The field of color psychology goes much deeper into a significant relationship that seems to exist between design elements and the way those people react emotionally to them. For example, calming blue colors are frequently used in bedroom decoration so as to create a peaceful ambiance. Stimulating, energetic red tones are often used within places like gyms or advertising agencies, truly energizing anyone who walks into those spaces.

Good architectural design should consider the dynamics of flow and navigation that happen in space. Good circulation patterns must then be created so that all usability and accessibility can be had by everyone who is involved with the environment.

1.6. Psychology of Space

The psychology of places deals with how significantly architectural design influences human behavior, emotions, and social interactions. The scheme of structures and the colors used in interior spaces play a critical role in determining how people behave and make use of their surroundings. Well-designed areas, such as libraries, museums, and community centers, foster a sense of connectivity and belonging, which makes it fundamentally important to have a thoughtful approach to design.

Color psychology is highly relevant here, as various colors provoke certain emotional responses. For example, blue reminds one of serenity and peacefulness; yellow gives one optimism and hope. Proper space utilization makes a space appear open and airy, which makes the overall user experience in buildings that emphasize light and spacious spaces very positive.

The cognitive effects of architecture explore how the built environment influences a person's thoughts and behavior in meaningful ways. Natural light is one influence on cognitive performance, happiness, and productivity. Neuroscience studies have established that building design has a clear connection to human emotions and that a typical environment provokes feelings of stress or unhappiness because of gloomy, stuffy, or noisy settings.

The emotional effect of architectural design can be seen in some subtle facets such as color, texture, and shape. Warm colors tend to energize, cool tones calm, smooth lines and curves bring comfort, whereas sharp edges evoke tension. Another way that furniture, lighting, and ornaments were arranged would influence the emotional climate of a space because the best-lit work environment stimulates creativity and output.

Understanding how people predict behavior towards different social groups is crucial in modern architectural design. Personality traits can inform architectural preferences, showing that people generally prefer low color contrast and high openness in their surroundings. As people experience diverse environments, they both are affected by and affect those spaces; first impressions and spatial experiences play a key role in decision-making.

II. METHODOLOGY

2.1. Method 1

Creating six categories based on the human age

2.2. Method 2

Creating a matrix for these 6 categories based on color, texture, materials, furniture, advantage, disadvantage and navarasa.

2.3. Method 3

Sketch up 3d model (experimentation)

III. METHOD 1

Creating six categories based on the human age

- 3 to 10 year's old child
Characteristics: Curiosity, imagination, and playfulness
- 11 to 18 years old teen
Characteristics: Self-discovery, exploration, and experimentation
- 19 to 25 years old young adult
Characteristics: Exploring career options, education, and personal interests
- 26 to 35 years old adult
Characteristics: Establishing stability, security, and routine
- 36 to 50 years old midlife
Characteristics: Evaluating life accomplishments, re-assessing priorities
- 51 to 80 years old elderly
Characteristics: Reflecting on life experiences, sharing wisdom.

IV. METHOD 2

Housing design has some needs and preferences based on different age groups. By considering elements such as color, texture, materials, furniture, advantages, disadvantages, and emotional responses (Navarasa), it's possible to create spaces that enhance the quality of life.

Designing spaces that cater to the diverse needs of various age groups is essential for promoting comfort, functionality, and emotional well-being. Each stage of life—from childhood to old age—brings unique requirements and preferences that can significantly influence the design of a home. By understanding these differences, architects and interior designers can create environments that enhance quality of life and support the physical and emotional development of residents.

This matrix analyzes six distinct age categories: children (3 to 10 years), teenagers (11 to 18 years), young adults (19 to 25 years), adults (26 to 35 years), midlife individuals (36 to 50 years), and the elderly (51 to 80 years). Each category is examined through various design elements including color, texture, materials, furniture, advantages, disadvantages, and the concept of Navarasa—the nine emotions in Indian aesthetics.

By exploring these elements, we can gain insights into how different age groups interact with their living environments, allowing for the creation of spaces that are not only visually appealing but also emotionally resonant. This holistic approach to housing design aims to foster a sense of belonging and well-being across all ages

4.1. WHAT IS NAVARASA

Navarasa is a concept in Indian aesthetics that translates to "nine emotions" or "nine sentiments." It is a framework used in literature, dance, drama, and visual arts to convey and evoke a range of human feelings. Each rasa represents a distinct emotional state that can be experienced or expressed, often serving as a foundation for artistic expression.

The Nine Navarasas

- Shanta (Peace): Represents tranquility, calmness, and serenity.
- Rati (Love): Embodies love, affection, and attraction.
- Sringar (Beauty) Represents humor, joy, and amusement.
- Hasya (Laughter): Represents humor, joy, and amusement.
- Karuna (Compassion): Evokes feelings of pity, sympathy, and compassion
- Raudra (Anger): Represents fury, rage, and intensity.
- Veera (Heroism): Embodies courage, valor, and bravery.
- Bhayanaka (Fear): Represents fear, anxiety, and terror.
- Adbhuta (Wonder): Conveys amazement, curiosity, and wonder.

Psychological Insight: The framework can be used to explore human psychology, helping individuals understand and articulate their own emotional experiences.

4.2. (3 TO 10) YEAR OLD CHILD

Bright colors stimulate imagination and creativity, making the environment lively and engaging. Soft textures are safe and comforting, encouraging children to explore tactile experiences. Lightweight and safe materials are essential for children's

Category	Color	Texture	Materials	Furniture	Advantage	Disadvantage	Navarasa
3 to 10 Child	Bright colors, cheerful colors, blue Green, shades of pink	Smooth wallpaper With animals or shapes	Soft carpets, sticky wallpaper, Lightweight	Small child sized furniture. Wood or plywood	Easy to clean Makes active	Temporary arrangement	Sringara – love Hasya- joy
3 to 10 Child	Dark colors Black, red, bright yellow	Sand , sharp, texture & sharp edges	Paints, glass, steel	Normal regular furniture, foldable heavy furniture	Long time usage	Eye irritation Dull mood Negative thought injury	Raudra – anger Bhayanaka – fear
Advantage	Make children Cheerful, energy, creativity.	easy to clean, visual interest, create interaction	Washable, easy maintenance,	Comfortable, Organizing, makes active.	-	-	Love, joy, happy mood
Disadvantage	Cause anger, sad mood,	Textured wall, sharpness, cause injury		Over-sized furniture for that age group, cause less interaction	-	-	Anger, fear, leads to unhealthy growth
Result	Cheerful color create cheerful child growth	Smooth wall	Wallpapers with shapes, animals creates visual interest	Small sized furniture for activeness and interactive organization	Easily to clean and health care	Temporary (max-14 years)	Positive mind, happy mood

furniture and play areas. Kid-friendly furniture fosters play and creativity, with safety as a priority.

4.3. (11 TO 18) YEARS OLD TEEN

Category	Color	Texture	Materials	Furniture	Advantage	Disadvantage	Navaras a
11 to 18 (teen)	Blue, green, shades of same color	Textured wall, themed wall paper, characters, paintings	Harmless paints, posters, decorative lightings,	Comfortable mattress, adjustable headboard, adjustable chair	Adds interest, Concentration in studies, creativity, art works	Scribbles in wall, damage of wall paints	Hasya – joy, Adbuta -wonder, playfulness,
11 to 18 (teen)	Red, brown, gray, dark purple, magenta, white.	Rough texture, plain wall	Glass, steel	Normal human size furniture,	Long time usable	Emptiness, dull, less active	Raudra -anger, sad
Advantage	Vibrant atmosphere, soft pastel colors, calmness and relaxation	Good looking, interesting, atmosphere,	Harmless paints, durable, comfort and health wellness	Adjustable chair and furniture, makes them feel comfortable	-	-	Joy, happy
Disadvantage	Dark and warm colors create discomfort and make them anger	Feel emptiness and less activeness	Harmful and fading	Active, interest in moving and arranging furniture	-	-	Sad, dull,
Result	Calmness , relaxation, vibrant and joy	Teamed wall paper, or characters	Decorative materials	User friendly furniture	Concentration, creative and active	Scribbles in wall	Playful, happy

Trendy colors reflect the evolving identities and interests of teens, encouraging self-expression. Varied textures cater to different interests and styles, promoting creativity and personal expression. Durable materials withstand the wear and tear of teenage life, allowing for flexibility in design. Modular furniture allows for customization and adaptability, catering to the social nature of teens.

4.4. (19 TO 25) YEARS OLD YOUNG ADULT

Category	Colour	Texture	Material	Furniture	Advantage	Disadvantage	Navarasa
19 to 25 (young adult)	Neutral colours pastel, Soft colours, combined colours with white or cream colours	Pattern wallpaper, natural theme, geometric pattern, smooth texture	Durable wallpaper, Wood, metal,	Multi-functional furniture, adjustable and space-saving furniture - storage bed	Modern look, long life span, easy maintenance	Bored over time	Veera – courage Joy, peaceful
19 to 25 years (young adult)	Dark colour, deep brown, red =, yellow	Rough texture. More patterned wallpaper	Sharp or rough textured wall materials	Heavy furniture		Creates anger, unstable mind, mood swings	Bibhatsa – disgust anger
Advantage	Act as decorative	Refreshed, include	Durability, long life	Multi-use furniture			Peaceful, happy

	element, themed colour arranges	nature, makes positive energy	span		-	-	
Disadvantage	Dark makes to feel discomfort, irritability dullness	More pattern will make clumsy	Costly	Hard to re-arrange	-	-	Produce sad, confusion and cause anger
Result	Pastel colour, combination of two colour	Natural theme wall paper	Durable	Multi-use furniture	Long life span	-	Happy, creativity

Neutral colors provide a modern backdrop that allows for personal touches without overwhelming the space. Smooth, modern textures reflect contemporary aesthetics, appealing to young adults' preferences. Affordable yet durable materials reflect the budget constraints of young adults starting out. Functional and stylish furniture reflects independence and personal style choices

4.5. (26 TO 35) YEARS OLD ADULT

Category	Colour	Texture	Materials	Furniture	Advantage	Disadvantage	Navarasa
26 to 35 years (adult)	Neutral colour, light grey, shades of green, earthy tones,	Clean, smooth, strips pattern, natural textures	Durable wall paper, stylish materials, comfortable flooring	king, queen sized furniture, Ergonomic furniture	Relaxation, Calming effect, Long-time use, Simple and modern	Difficult in re- arrangement of oversized furniture	Hasya - joy, Comfortable.
26 to 35 years (adult)	Over bright colour like red dark green, pink, etc..	Over playful textures, too rough textures	Inexpensive finishes, shiny, artificial, fabrics,	Themed furniture.	Looks good	Difficult to clean, childish vibe	Bhibhatsa - disgust
Advantage	Calming profile, natural earthy tones, nature vibe	Easily applicable, looks simple	Long time, user friendly, comfortable.	Long-time use, multipurpose usage. Comfort	-	-	Happy, joy
Disadvantage	Vibrant colours, youthful environment, childish feel.	Over decorative cause no pleasant look	Damage, non-durable,	Crack, heavy to lift, looks childish.	-	-	Feel neutral
Result	Neutral colour, earthy tones	Natural texture, Simple pattern	Durable, comfortable	Easily movable, long time usable	Relaxed mind	Difficult to clean	Happy, joy

Warm colors create inviting spaces that promote relaxation and family gatherings. A mix of textures adds depth and comfort to living spaces, suitable for family environments. Quality materials provide durability and aesthetic appeal, balancing style and functionality. Ergonomic furniture supports both comfort and functionality, ideal for family living.

4.6. (36TO 50) YEARS OLD ADULT

Category	Color	Texture	Materials	Furniture	Advantage	Disadvantage	Navaras
30 to 50 years (midlife)	Monochromatic, earthy, natural, neutral tones, beige, grey, soft cream white.	Simple textured wallpaper or wall art, wall with wood texture	Natural material, wood, stone, metal, soft furnishing hard wood floors	Polished wood furniture, with same wood theme in all areas	Easy maintenance light attractive colors	Costly	Santa – peace. Relaxation
30 to 50 years (midlife)	Neon and over bright colors and dark colors like yellow, red etc..	Themed wallpaper	Plastic materials , or bamboo curtains	Heavy furniture	Low cost, looks good in beginning	Breakable, faded, high maintenance, fungus	Sad, dull
Advantage	Natural earthy tone gives peacefulness	Simple textured wallpaper, saves cost	Wood, stone natural themes materials and natural material	Polished wood furniture	-	-	Peacefulness, happy
Disadvantage	Dull , bright colors brings sad and anger	Wallpaper will be faded	natural materials need extra maintenance because it cause allergy and fungus	Wood need to be polished and varnished extra expense	-	-	Sad, angry, pressure
Result	Natural colors, combined colors	Smooth finish	Natural themed materials	Wood furniture	easy to clean	Allergy	Happy, enjoyable

Rich colors convey sophistication, resonating with personal success and stability. Textural variety enhances visual interest and comfort, making spaces inviting and sophisticated. Premium materials reflect personal achievements and contribute to a comfortable living space. High-quality furniture balances work and leisure, enhancing the living experience.

4.7. (51 TO 80) YEARS OLD ELDERLY

Category	Color	Texture	Materials	Furniture	Advantage	Disvantage	Navarasa
51 to 80 years (elderly)	Soft beige, cream, light gray, pale peach, neutral color, soft blues	Fabric wall paper	Soft fabrics, soft cottons for sofa, wood linen, non-slip flooring, Lightweight materials	polished smooth wood, curved end furniture	Boost Mood and energy level, creates connection to nature, comfort, brighten up spaces, less weight	Visible of dirt	Shantha – peace, joy ,
51 to 80 years (elderly)	Bright colors red, electric blues, muddy browns	Harsh, rough texture, smooth floors, polished, tiles	Glass, steel, cold marble,	low deep seated sofa, fiberboard cabinets and cupboards	Looks good, decorative look,	uncomfortable	Rudra – anger Bhayanaka - fear
Advantage	Shaping mood, increase	Comfort space, sense of	Connection to nature, adding interest, easy to	Less injury when we prefer curved	Comfort	-	Calm, happy, joy

	energy, sense of calm	touch, warmth and comfort	use for elderly	edges			
Disadvantage	Discomfort, stress	Affect physical comfort, sense of fear	Cause injury and material breakage	Feels heavy, clumsy	-	-	Disgust, sad, angry
Result	Neutral color	Soft fabrics	Natural theme	prefer curved edges in furniture	Comfort, Good Energy level	Maintenance	Positive, happy, joy, peace

Soft colors help create calm environments that promote peace and relaxation. Easy-to-clean textures support independence and comfort for the elderly, minimizing maintenance concerns. Lightweight materials enhance accessibility, making it easier for seniors to navigate their homes. Comfortable and accessible furniture promotes safety and ease of use for the elderly.

The results of this analysis highlight the importance of tailoring housing design to meet the specific needs of different age groups. By considering elements such as color, texture, materials, furniture, and emotional responses, designers can create spaces that enhance the quality of life for individuals at every stage of life. This thoughtful approach not only promotes physical comfort but also fosters emotional well-being.

V. METHOD 3

Sketch up 3d model (experimentation)

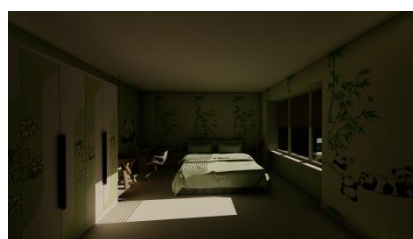
5.1. (3 TO 10) YEAR'S OLD CHILD

- Early Morning, afternoon, late nigh



5.2. (11 TO 18) YEARS OLD TEEN

- Early Morning, afternoon, late nigh



5.3. (19 TO 25) YEAR OLD YOUNG ADULT

- Early Morning, afternoon, late nigh



5.4. (26 TO 35) YEARS OLD ADULT

- Early Morning, afternoon , late nigh



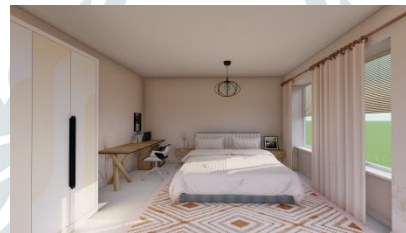
5.5. (36 TO 50) YEARS OLD MIDLIFE

- Early Morning, afternoon , late nigh



5.6. (51 TO 80) YEARS OLD ELDERLY

- Early Morning, afternoon , late nigh



V1. RESULTS AND DISCUSSIONS

The research focuses on how understanding human psychology and behavior can make architectural designs better, especially when creating spaces for people of different ages. By studying aspects like color, texture, materials, furniture, and emotional reactions (Navarasa), the study shows that thoughtful design can improve people's lives at every stage of life.

1. Key Findings

6.1. Design for Age Groups

The study categorizes people into six distinct age groups, each with unique design needs and preferences. Here's a breakdown of each age group.

1. Children (3-10 years)

- Safety features (e.g., rounded corners, soft surfaces)
- Interactive and engaging environments
- Flexible spaces for play and learning
- Bright colours and playful patterns
- Access to natural light and outdoor spaces

2. Teenagers (11-18 years)

- Private spaces for relaxation and focus
- Technology-integrated environments
- Flexible spaces for socializing and collaboration
- Modern and trendy design elements
- Access to charging stations and digital tools

3. Young Adults (19-25 years)

- Functional and efficient spaces
- Ample storage and organization options

- Access to communal areas for socializing
- Sleek and minimalist design

4. Adults (26-35 years)

- Balanced work-life spaces
- Functional and comfortable living areas
- Access to outdoor spaces for relaxation
- Timeless and classic design elements
- Quality materials and craftsmanship

5. Middle-Aged Adults (36-50 years)

- Adaptable spaces for changing lifestyles
- Comfortable and accessible living areas
- Access to natural light and ventilation
- Warm and inviting colour schemes
- Traditional and familiar design elements

6. Seniors (51-80 years)

- Safe and accessible spaces
- Simple and intuitive navigation
- Access to natural light and outdoor spaces
- Calming and soothing color schemes
- Familiar and nostalgic design elements

By understanding the unique needs and preferences of each age group, designers and architects can create spaces that cater to their specific requirements, promoting comfort, well-being, and quality of life.

6.2. Important Design Factors

6.3. Certain design elements play a crucial role in shaping the emotional and behavioral responses of individuals within a space. These elements include COLOR, texture, materials, and furniture.

6.4. Emotional Reactions (Navarasa)

The research utilizes Navarasa to investigate how design elements evoke emotional responses. Navarasa describes nine fundamental emotions that are universally experienced by humans.

- Sringara (Love and Beauty): evoked by elements like soft colors, curved lines.
- Hasya (Humor and Joy): triggered by elements like bright colors, playful textures..
- Karuna (Compassion and Sorrow): evoked by elements like muted colors, gentle curves, and natural materials.
- Raudra (Anger and Fury): triggered by elements like bold colors, sharp lines, and dramatic lighting.
- Veera (Courage and Heroism): evoked by elements like strong shapes, bold textures, and vibrant colors.
- Bhayanaka (Fear and Anxiety): triggered by elements like dark colors, sharp angles
- Bibhatsa (Disgust and Revulsion): evoked by elements like harsh colors, rough textures, and unpleasant odors.
- Adbhuta (Wonder and Amazement): triggered by elements like striking colors, unusual shapes, and innovative materials.
- Shanta (Peace and Serenity): evoked by elements like soothing colors, gentle curves, and natural materials.

6.5. Personalized Design

Designing spaces that cater to the unique needs of each age group is crucial for creating comfortable and effective environments. This approach emphasizes the importance of understanding the distinct requirements, preferences, and abilities of individuals at different stages of life.

V11. WHY IT IS IMPORTANT

7.1. Better Living Spaces

Creating spaces that fulfill the unique needs and preferences of specific age groups can significantly improve the quality of life for individuals at various stages. This tailored approach enables designers and architects to craft environments that are not only functional but also enjoyable, promoting overall well-being and happiness.

7.2. User-Focused Design

This shows the importance of prioritizing the preferences and needs of the people who will be using the spaces. This user-centered approach is essential for creating environments that are functional, comfortable, and supportive of the users' well-being.

V111. FUTURE POSSIBILITIES

8.1. Collaborative Working

The integration of architecture, psychology, and human behavior expertise is crucial for creating designs that promote occupant well-being, productivity, and happiness. By collaborating, architects, psychologists, and human behavior experts can develop spaces that not only meet functional needs but also address the emotional, social, and psychological needs of users.

8.2. Key areas of collaborative working

- **Lighting and Colour**
Collaboration can lead to the development of lighting and color schemes that promote occupant well-being, mood, and cognitive function.
- **Space Planning and Layout**
Psychologists and human behavior experts can inform the design of spaces to promote social interaction, reduce stress, and enhance productivity.

1X. CONCLUSION

The incorporation of human psychology and behavior in architectural design is crucial, particularly when creating spaces for people of different ages. Architects and designers must consider the unique needs and preferences of each age group to create spaces that promote comfort, well-being, and quality of life. Children require spaces that stimulate their curiosity and creativity, while older adults need spaces that accommodate their physical limitations and promote social interaction. Design elements such as color, texture, materials, and furniture also play a significant role in shaping emotional and behavioral responses. The concept of Navarasa provides a framework for understanding how design elements evoke emotional responses. Navarasa refers to the nine emotions that are universally experienced by humans, including love, laughter, and wonder. By incorporating design elements that evoke these emotions, architects and designers can create spaces that promote emotional well-being and connection. A human-centered approach to design prioritizes the needs and emotions of users. This approach improves the functionality and aesthetics of spaces, promoting the well-being and happiness of their users. By adopting this approach, architects and designers can create spaces that support and enhance human experience. The incorporation of human psychology and behavior in architectural design is essential for creating spaces that promote comfort, well-being, and quality of life. By considering the unique needs and preferences of different age groups and incorporating design elements that evoke positive emotional responses, architects and designers can create spaces that support and enhance human experience.

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