

The Material Touch: Exploring How Surface Textures and Finishes Affect User Experience in Interior Design

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Abstract:

This research explores how surface textures and material finishes in interior design influence user experience, with a focus on tactile and visual sensory perception. While interior spaces are often designed with visual aesthetics in mind, the tactile quality of materials—how they feel to the touch—plays an equally important role in shaping comfort, emotional response, and overall satisfaction. This study examines how materials such as wood, stone, fabric, metal, and glass are perceived by users in terms of texture (smooth, rough, soft, hard) and finish (matte, glossy, warm, cool). Through a combination of case study analysis and user feedback, the paper highlights the significance of selecting materials that support both function and emotional well-being. Findings suggest that material choices can evoke feelings of warmth, luxury, calmness, or discomfort depending on their sensory qualities. The paper concludes with practical recommendations for interior designers to consider materiality not only as an aesthetic element, but also as a key factor in creating meaningful and user-friendly spaces.

Keywords: Materiality, Surface Texture, Tactile Perception, Interior Design, User Experience

1. Introduction:

In interior design, the sensory experience of users within a space is increasingly recognized as a crucial factor in shaping perception, comfort, and emotional well-being. While traditional design has primarily emphasized visual elements such as form, color, and proportion, the evolving focus on multi-sensory design underscores the importance of engaging all human senses. This approach acknowledges that users not only see a space but also interact with it through touch, sound, and other sensory cues. Among these, materiality—specifically texture and finish—plays a pivotal role in how interior environments are perceived and emotionally experienced.

Materiality refers to the intrinsic characteristics of materials, including their appearance, tactile quality, temperature, and aging behavior. These elements influence how users interact with a space and form emotional connections. For example, warm wooden surfaces can evoke feelings of comfort and familiarity, while cold, polished metals may convey sleekness but feel distant. These interactions activate both visual and tactile senses, often affecting users at a subconscious level.

The visual and tactile dimensions are particularly significant in creating atmospheres that align with the intended use of a space. Materials can influence how light is reflected, the perception of texture, and how a surface feels to the touch. These factors shape users' impressions of comfort, luxury, and emotional warmth. Despite their impact, material choices are often driven by aesthetics or functionality rather than sensory experience.

This study investigates how surface textures and finishes affect user comfort, emotional response, and aesthetic appreciation, aiming to highlight their role in enhancing holistic interior experiences. The study investigates the sensory effects of common materials used in

interior design—such as wood, stone, metal, glass, and fabrics—focusing on how users respond to their tactile and visual properties.

Through this investigation, the paper seeks to contribute to a more user-centred approach to material selection in interior design—one that values sensory comfort and emotional connection as key design goals, alongside aesthetics and functionality.

2. Literature Review

The built environment communicates with its users through more than just visual aesthetics. In recent years, interior design has seen a paradigm shift from visually dominated approaches to more multi-sensory frameworks, which consider how space is perceived through touch, sound, smell, and even temperature. Among these senses, touch and vision remain the most actively engaged in everyday interior interactions, and are significantly influenced by the materiality of surfaces—especially texture and finish.

2.1 Sensory Design in Interior Environments

The concept of sensory design refers to the deliberate use of sensory stimuli to shape user experience within a space. Scholars such as Malnar and Vodvarka (2004) emphasize the role of sensory perception in understanding the holistic experience of built environments. They argue that interiors designed to engage multiple senses lead to deeper emotional resonance and cognitive engagement. Similarly, Pallasmaa (2005), in *The Eyes of the Skin*, critiques the dominance of vision in modern architecture and advocates for tactile and embodied engagement through materials, textures, and spatial rhythm.

In interior environments, sensory design often manifests through temperature-sensitive surfaces, acoustically tuned materials, ambient lighting, and textures that invite physical interaction. The inclusion of such design elements leads to spaces that feel more intuitive, comfortable, and emotionally rich.

2.2 The Psychology of Touch and Vision in Spatial Perception

Human perception of space is closely tied to visual and tactile interaction. Visual perception influences how we assess depth, openness, warmth, or brightness in an environment. Meanwhile, tactile perception—which includes texture, temperature, and resistance—shapes our emotional and physical reactions. According to Peck and Childers (2003), tactile interaction provides more affective and lasting impressions than visual input alone, especially in environments where users physically engage with surfaces, such as seating, handrails, countertops, and flooring.

Research in environmental psychology suggests that textures perceived through touch can elicit a wide range of emotional responses—from relaxation and comfort to tension and alertness (Jang & Nam, 2013). Furthermore, the congruence between what is seen and what is felt significantly enhances the user's spatial satisfaction. When the visual appearance of a material aligns with its tactile feel, the space is perceived as more harmonious and trustworthy (Lederman & Klatzky, 2009).

2.3 Material Finishes in Interior Design: Hard vs. Soft, Matte vs. Glossy, Warm vs. Cool

Material finishes directly influence the sensory perception of interiors. According to Fleming and Honour (2011), the surface quality of materials can convey different sensory messages:

Hard surfaces like stone or metal are often associated with durability, modernity, and coolness, but may also feel uninviting if overused.

Soft surfaces such as upholstered fabrics or carpets introduce warmth, comfort, and a sense of intimacy.

Glossy finishes reflect light and create a sense of sleekness and openness, while matte finishes absorb light, often creating a calmer, more grounded effect.

Warm materials (wood, cork, leather) generally invite tactile interaction, whereas cool materials (glass, steel, polished stone) can be perceived as formal, sterile, or high-end.

Material composition and finish also play a role in acoustics, temperature regulation, and maintenance. This balance between aesthetic appeal, sensory comfort, and functional performance is at the core of material selection in interior design.

2.4 Theoretical Frameworks: Sensory Affordances, Material Semiotics, and Neuroaesthetics

Several theoretical approaches support the role of materiality in shaping user experience:

Sensory affordances, based on Gibson's theory of affordances, refer to how an object or surface invites specific sensory interactions. In design, this implies that certain materials inherently suggest how they should be used or felt—for example, a soft cushion invites sitting, while a rough wall deters touch.

Material semiotics interprets materials as carriers of meaning. Leather might communicate luxury; recycled wood might suggest sustainability. As discussed by Forty (2004), materials are not neutral—they signify values, aesthetics, and even social hierarchies.

Neuroaesthetics, a recent field combining neuroscience and design, investigates how sensory environments activate brain responses. Research indicates that texture-rich environments reduce stress and improve emotional regulation, particularly when materials align with biophilic principles (Kellert & Calabrese, 2015).

The reviewed literature affirms that materiality—through texture and finish—plays a crucial role in shaping sensory, emotional, and cognitive responses in interior design. Touch and vision, as the primary modes of spatial perception, are directly impacted by the choice of surfaces and materials. While functional and visual aesthetics often dominate material selection, incorporating a deeper understanding of sensory psychology and user-centered theories can lead to more inclusive, emotionally resonant, and comfortable environments.

This foundation informs the current study's exploration of how users perceive and respond to interior materials, particularly in terms of comfort, emotional engagement, and perceived spatial quality.

3. Case Study Methodology:

3.1 Research Design

The research design navigates to the data collection methods, and analysis procedures used to investigate how surface textures and material finishes influence user experience in interior design. The study adopts a mixed-methods approach to comprehensively understand the

visual and tactile aspects of materiality and their impact on user comfort, emotional response, and aesthetic perception.

The study employs a triangulated methodology combining three key strategies:

- Case study analysis of selected interior spaces with a strong material focus,
- User experience surveys and interviews to understand perceptual responses, and
- Tactile interaction tests using curated material sample kits.

This multi-pronged study allows for a richer interpretation of both subjective experiences and observable patterns related to materiality in interior environments.

3.2 Case Study Selection:

Three case study interiors were selected for their intentional use of contrasting material palettes and surface finishes:

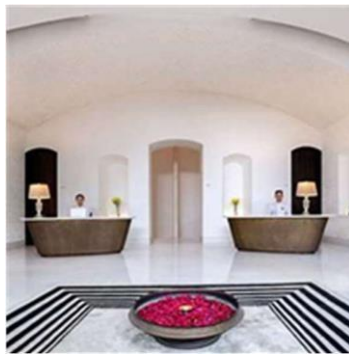
- Boutique Hotel Lobby** – featuring a juxtaposition of matte wood panels with glossy metallic accents, aimed at creating a luxurious and contemporary atmosphere.
- Wellness Spa Interior** – emphasizing warm, soft materials such as natural stone, textured textiles, and bamboo to promote relaxation and sensory comfort.
- Retail Concept Store** – designed with raw materials such as exposed brick, concrete, and reclaimed wood to enhance sensory branding and user engagement.

These spaces were chosen based on their accessible public presence, their diversity in material finishes, and the clarity of their sensory intentions.

3.2.1 Chosen Case Studies for Material-Centered Sensory Design:

i. Case Study of Boutique Hotel Lobby: The Roseate, New Delhi

The Roseate, a luxury urban resort located in New Delhi, presents a compelling case for the study of materiality and sensory engagement in interior environments. The design of the hotel lobby—crafted under the vision of Thai architect Khun Lek Bunnag in partnership with the Indian firm Morphogenesis—embodies a refined synthesis of spatial



Reception Area
Source:<https://www.roseatehotels.com/newdelhi>



Reception Area,
Source:<https://www.expedia.com/Delhi-Hotels-Roseate>

drama and sensory restraint. Set amidst serene water bodies and manicured landscapes, the lobby serves as the transition point between the external chaos of the city and the tranquil experience within. Its material language is central to this spatial narrative.

The interior of the lobby employs a contrasting palette of materials that communicate both sophistication and serenity. The use of polished black granite flooring creates a reflective, mirror-like surface that amplifies spatial depth and drama. This visual sharpness is softened by matte-finished sandstone walls, whose tactile roughness and earthy tone establish a sense of rootedness and calm. The sandstone surfaces, sourced from local quarries, lend

authenticity and cultural specificity to the spatial character. Complementing these primary materials are natural wood installations and bronze detailing, which introduce warmth and artisanal quality into the space. The strategic inclusion of water elements—including reflective pools around the entrance and within the circulation spine—further enhances the sensory experience by adding sound, motion, and visual calm.

The design's sensory strategy lies in the balance between raw and refined—hard and soft, warm and cool. The juxtaposition of cool, glossy surfaces (granite, bronze) with warm, tactile materials (wood, sandstone) creates a layered sensory experience that is both luxurious and introspective. As users walk through the space, the shift in textures underfoot, the reflection of natural light on polished surfaces, and the subtle transitions in acoustics collectively produce a space that is immersive yet minimalist. These sensory cues subconsciously encourage visitors to slow down, reflect, and attune themselves to the spatial rhythm.

In the context of this study, The Roseate's lobby serves as an excellent example of how material contrasts can be used to shape emotional and perceptual responses. While its visual aesthetic aligns with global luxury standards, the use of culturally rooted materials like sandstone and wood adds a layer of familiarity and comfort. This deliberate sensory composition ensures that the space does not feel sterile or overly polished, but rather evokes a sense of “monastic opulence”, as frequently described by visitors.

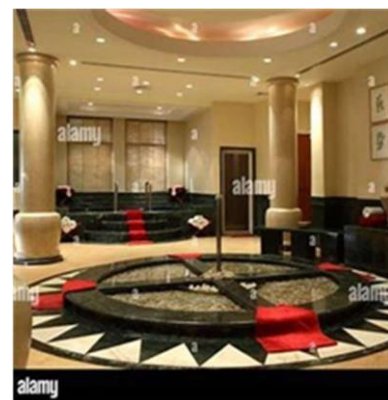
From a user experience perspective, the lobby environment leaves a lasting impression—not through overt decoration, but through material expression. Guests describe the space as “quietly powerful,” “tactilely rich,” and “emotionally balanced.” These responses validate the notion that materials are not just visual surfaces but sensory instruments that shape how spaces are experienced, remembered, and emotionally absorbed.

ii. Case Study of Wellness Spa Interior: Ananda in the Himalayas, Rishikesh

Settled in the tranquil foothills of the Himalayas, Ananda in the Himalayas is internationally recognized as a premier wellness retreat, designed with a deep focus on holistic healing and spiritual rejuvenation. The architectural and interior design of the



Yoga Pavilion Overlooking the Himalayas
Source: <https://www.vogue.com/article/ananda-in-the-himalayas-wellness-retreat>



Spa Interior at Ananda
Source: www.anandaspa.com/en/gallery

spa facility is central to this experience, where materiality and sensory design have been meticulously curated to create a serene, immersive, and therapeutic environment. The spa



Lobby at The Roseate New Delhi
Source: <https://www.roseatehotels.com/newdelhi>

interiors reflect an intentional fusion of traditional Indian aesthetics with contemporary wellness sensibilities, relying heavily on natural materials that align with the philosophies of Ayurvedic healing and meditative calm.

The material palette includes a blend of locally sourced natural stone, handwoven jute, Himalayan pinewood, cotton fabrics, handmade ceramics, and subtle marble accents. These elements are chosen not merely for their aesthetic value but for their inherent sensory and symbolic qualities. For example, the use of Himalayan pine—a native, aromatic wood—introduces both tactile warmth and olfactory stimulation. Natural stone flooring, slightly textured and cool to the touch, enhances a grounded and earthen spatial feeling, encouraging slow movement and bodily awareness. Throughout the spa, soft cotton drapes, linen upholstery, and hand-finished jute rugs soften the environment, absorbing sound and creating a hushed, cocoon-like ambience.



Inside the Spa Facilities

Source: <https://www.tripadvisor.com/>

The sensory strategy employed in Ananda’s design is rooted in tactile softness, organic finishes, and ambient neutrality. Surfaces are intentionally left matte or subtly textured to avoid glare and encourage a feeling of earthiness. The interplay between light and material—such as filtered daylight falling on stone-clad walls or the glow of oil lamps against clay-toned ceramics—enhances both visual warmth and emotional receptivity. The minimal use of artificial materials ensures that users are constantly in contact with surfaces that feel natural, honest, and unintrusive, supporting a multi-sensory environment conducive to detoxification, mindfulness, and healing.

From a user interaction perspective, the interiors are designed to be felt as much as they are seen. Visitors often describe their experience using words like “serene,” “pure,” “harmonious,” and “nourishing”. These perceptions stem from how materials affect bodily comfort and emotional equilibrium. The coolness of the stone floor underfoot, the textural richness of cotton bedding, and the tactile grain of untreated pine furniture each play a distinct role in encouraging sensory stillness. The materials work collectively to reduce visual noise, ease psychological tension, and facilitate a deeper connection with the surrounding natural landscape.

In the context of this research, Ananda’s spa interior is an exemplary model of material-led sensory wellness. It clearly demonstrates how natural textures and finishes can be orchestrated to shape psychological responses and enhance user comfort in therapeutic environments. The design goes beyond aesthetic styling to explore how materiality becomes a facilitator of emotional clarity, introspection, and calm—goals that are fundamental in wellness-oriented spatial design.

iii. Case Study of Retail Concept Store: Raw Mango Store, Delhi

The Raw Mango Flagship Store in Lodhi Garden, New Delhi, designed by Studio Lotus, stands as an example of how materiality and multisensory design can be employed in retail spaces to evoke cultural identity and emotional engagement. Created for Raw Mango, a fashion label rooted in traditional Indian weaving and textile heritage, the store’s interior

design mirrors the brand's ethos—a celebration of the handmade, the imperfect, and the deeply rooted Indian aesthetic. The space becomes more than just a shopping environment; it functions as a textural narrative that communicates authenticity and invites tactile interaction.

The material palette is a carefully curated assembly of exposed brick walls, lime plaster finishes, Kota stone flooring, salvaged timber ceiling beams, brass detailing, and handwoven textiles. These elements were intentionally left unpolished or minimally treated to preserve their natural textures and surface irregularities, reinforcing a sense of raw elegance and rootedness. The walls, finished in layered lime plaster, create subtle tonal shifts and tactile variation, offering a matte,



The main courtyard

Source:<https://www.architecturaldigest.in/magazine-story/delhi-raw-mangos>

softness of hand-woven saris, the grain of aged timber, and the coolness of stone underfoot coalesce to create an atmosphere that is immersive, intimate, and emotionally resonant.

From a design research perspective, the Raw Mango store exemplifies how material expression can be leveraged to create brand-aligned sensory environments. Rather than relying on digital screens or bright signage, the store communicates through tactility, patina, and layered textures. The design elicits emotional responses such as nostalgia, cultural pride, and aesthetic appreciation—sentiments that align closely with the brand's storytelling. Customers often describe their experience as “textured,” “intimate,” “earthy,” and “deeply cultural”, affirming that the store's physical elements contribute directly to their engagement with the products.

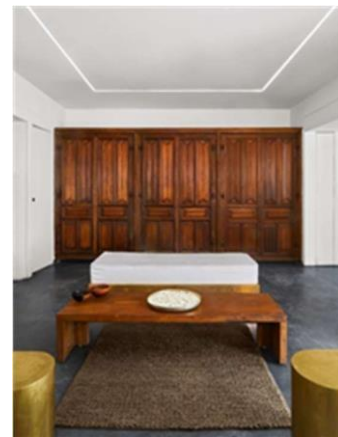


Raw Mango Store Showcasing Traditional Aesthetics

Source:<https://www.instagram.com/p/CgTLZNRJSwQ/>

porous surface that absorbs light and gently softens the spatial atmosphere. Exposed brick lends warmth and a handcrafted feel, while the Kota stone floor—cool, firm, and slightly honed—grounds the sensory experience in a material historically associated with Indian architectural practices.

The sensory strategy of the store pivots around fostering a visceral connection between the user and the material environment. Lighting is subdued and indirect, allowing textures to emerge softly rather than glaringly. Fixtures and shelving are often made of reclaimed wood and hand-forged metal, encouraging visitors to not only view but also touch and interact with the physicality of the space. The clothing displays are integrated into the architecture rather than isolated from it, enabling a more organic flow of movement and material contact. The



Centre of the sari room

Source:<https://www.architecturaldigest.in/magazine-story/delhi-raw-mangos>

Importantly, the store challenges the dominant narratives of gloss and glamour in retail design. It offers an alternative model where rawness is luxury, and where touch and texture become the primary tools of persuasion. The spatial experience invites slowness and exploration—qualities that are particularly significant in the context of handcrafted fashion. It also demonstrates that material choices in retail can profoundly affect how users relate to the space, perceive the value of products, and emotionally connect with a brand's philosophy.

3.3 Participants:

The study targeted a purposive sample of 30 participants, divided equally into three groups:

- **Design students** – to capture responses informed by material and spatial literacy.
- **Interior users** – individuals who have experienced or frequently visit the case study locations.
- **General public** – to provide a broader, unbiased perspective on sensory impressions.

This categorization ensured a diversity of viewpoints ranging from professionally trained to casual users, enriching the dataset with varying levels of familiarity and sensitivity to interior environments.

3.4 Data Collection Methods:

A. User Experience Survey and Interviews

Participants were asked to complete a structured questionnaire designed to evaluate their sensory impressions of different materials used in the selected interiors. Each question was rated on a 5-point Likert scale, covering the following aspects:

Tactile comfort – e.g., softness, warmth, and pleasantness of touch.

Visual appeal – e.g., aesthetic attractiveness of textures and finishes.

Emotional response – e.g., whether the material made them feel relaxed, stimulated, cozy, or distant.

Perceived material quality – e.g., durability, richness, or cheapness based on appearance and touch.

Following the survey, a subset of 10 participants from each group participated in semi-structured interviews to elaborate on their responses, share preferences, and recall memories or associations triggered by specific materials.

B. Tactile Interaction Test Using Mood Boards

Participants were presented with three visual-tactile mood boards, each composed of real material samples arranged according to tactile contrast:

Board A: smooth matte wood, soft felt fabric, frosted glass.

Board B: rough natural stone, glossy ceramic tile, brushed stainless steel.

Board C: cork board, velvet textile, polished marble.

Participants were encouraged to touch, explore, and reflect on each material individually and in combination. They rated their responses based on comfort, visual-tactile harmony,

emotional resonance, and overall preference. Observations were recorded using a response sheet and field notes.

3.5 Tools and Instruments

- Structured questionnaires with Likert-scale items
- Visual-tactile mood boards for material interaction
- Interview guides for semi-structured conversations
- Photography equipment for documentation of interiors and lighting effects
- Observation protocols and response sheets for field notes and interaction records

3.6 Data Analysis

Data collected through surveys was analyzed using descriptive statistics to identify trends in user preferences and perceptions across different material types. Charts and tables were used to visualize how users rated tactile and visual experiences.

Qualitative data from interviews and tactile tests was analyzed thematically. A coding framework was developed to categorize responses into themes such as comfort, emotional triggers, aesthetic appeal, and material memory. Key phrases and recurring associations were documented to reveal deeper user insights.

A comparative analysis was also performed across participant categories to examine variations in perception due to background (e.g., design training vs. general users).

4. Finding and Analysis:

Participants Overview

- Total Participants: 30
- Demographic: Mixed group (design students, architects, and general public)
- Methodology Used:
 - Likert-scale based questionnaire (1–5 scale)
 - Tactile mood board interaction
 - Open-ended interviews for qualitative feedback

4.1 Quantitative Results: Likert Scale Evaluation

Participants were asked to rate the material experience in each case study space across four parameters:

Space	Comfort (5)	Aesthetic Appeal (5)	Emotional Warmth (5)	Perceived Quality (5)
Boutique Hotel Lobby	3.8	4.6	3.9	4.7
Wellness Spa	4.7	4.5	4.8	4.2
Retail Concept Store	4.1	4.3	4.5	3.8

Observation:

- The Wellness Spa scored highest for comfort and emotional warmth due to its use of soft, warm, natural materials.
- The Hotel Lobby received the highest marks for perceived quality and aesthetics, linked to its polished and luxurious finishes.
- The Retail Store was praised for emotional resonance and tactile variety, though slightly lower in perceived material quality.

4.2 Tactile Mood Board Interaction

Each participant interacted with physical samples representing the materials used in the three case studies and described their sensory associations using adjective cards.

Material Sample	Common Descriptors
Matte Wood (Lobby)	Warm, smooth, refined
Glossy Metal (Lobby)	Cold, sleek, high-end
Natural Stone (Spa)	Grounding, organic, calming
Bamboo (Spa)	Soft, earthy, inviting
Reclaimed Wood (Retail)	Raw, authentic, rustic
Concrete (Retail)	Cool, industrial, minimal

Trend Noted: Participants overwhelmingly associated natural textures with comfort and emotional warmth, while high-gloss materials were perceived as visually appealing but emotionally distant.

4.3 Qualitative Interview Responses:

A few sample quotes from the open-ended interviews:

Boutique Hotel Lobby:

- *"The metal surfaces are visually striking, but they feel cold when touched."*
- *"I associate this space with professionalism and luxury—not necessarily comfort."*

Wellness Spa:

- *"The textures made me feel immediately relaxed—like I could stay there for hours."*
- *"Even the floor felt warm underfoot, which is rare. It feels very human."*

Retail Concept Store:

- *"It felt like walking into a story. The brick and wood made it feel handmade and honest."*
- *"Some textures were too rough, but they matched the vibe of the brand."*

4.4 Summary Table of Insights:

Space	Dominant Materials	Emotional Response	Design Implication
Hotel Lobby	Glossy metal, matte wood	Elegance, formality	Appeal to aesthetic taste; less tactile engagement
Wellness Spa	Natural stone, bamboo, textiles	Calm, comfort, relaxation	Strong tactile and emotional resonance
Retail Store	Exposed brick, concrete, wood	Authenticity, curiosity	Enhances brand narrative through sensory memory

5. Discussion:

The findings of this study illuminate the nuanced relationship between material selection in interior spaces and the user's sensory experience. The study reveals that surface textures and finishes do not only influence aesthetic preferences but significantly affect emotional and psychological responses.

5.1 Emotional Resonance through Materiality:

The comparative analysis of the three case study interiors—the boutique hotel lobby, wellness spa, and retail concept store—reveals a distinct pattern in how material choices affect emotional and psychological responses. Among the three, the wellness spa interior received the highest scores in both comfort (4.7) and emotional warmth (4.8), indicating that materials such as natural stone, bamboo, and soft textured textiles are particularly effective in creating calming, emotionally nurturing environments. Participant feedback frequently included descriptors such as “grounding,” “inviting,” “earthy,” and “organic,” suggesting that natural finishes activate a sensory connection that transcends visual appreciation.

This aligns with principles from neuro-aesthetics, which propose that sensory stimuli from textured and organic materials can induce positive affective states. The tactile experience, in this case, reinforces the function of the space as a sanctuary of relaxation, supporting the hypothesis that material tactility is integral to emotional well-being in interior environments.

5.2 Visual Sophistication vs. Emotional Distance:

In contrast, the boutique hotel lobby scored highest in aesthetic appeal (4.6) and perceived material quality (4.7), primarily due to its strategic use of high-gloss metallic finishes and matte wood panels. These materials were visually interpreted as luxurious, refined, and high-end. However, the same environment received comparatively lower ratings for comfort (3.8) and emotional warmth (3.9). This finding underscores a key dichotomy in interior design: while certain materials can visually signal affluence and sophistication, they may not necessarily foster emotional warmth or tactile comfort.

Interview responses noted that while the metallic accents added a sleek, professional tone, they also contributed to a “cold,” “formal,” and “emotionally distant” atmosphere. This suggests that visual opulence may come at the cost of sensory intimacy, especially in spaces intended for social or prolonged engagement.

5.3 Material Identity and Brand Expression:

The retail concept store, with its exposed brick walls, concrete surfaces, and reclaimed wood finishes, offered a rich, multi-sensory environment that prioritized brand identity and narrative immersion. It received high scores for emotional engagement (4.5) and aesthetic appreciation (4.3), though it rated slightly lower in perceived material quality (3.8). Interestingly, this space was most frequently described using terms such as “authentic,” “raw,” “story-driven,” and “industrial,” reflecting a material palette that supports the store’s branding and thematic expression.

Participants appreciated the sensory honesty of raw and imperfect materials, which created a sense of emotional connection with the space. This validates the theory of material semiotics, where the meaning and cultural symbolism of a material can enhance the narrative and experiential depth of a space. In this case, materiality became a storytelling tool, reinforcing the store’s identity and customer engagement strategy.

5.4 Multi-Sensory Integration as a Design Imperative:

Across all three environments, it becomes evident that materiality is most successful when it engages multiple sensory modalities. While visual appeal remains a crucial component of interior perception, its effectiveness is significantly enhanced when supported by tactile richness and emotional resonance. Participants were consistently more favorable toward interiors that incorporated soft textures, natural elements, and contrasting material finishes, suggesting that the integration of touch and sight produces a more memorable and satisfying user experience.

This insight supports theories of sensory affordance, which propose that users form impressions of usability, comfort, and quality based on the way materials feel as well as how they look. Designers should therefore seek to choreograph material experiences that not only appeal to the eye but also communicate warmth, comfort, and familiarity through the sense of touch.

5.5 Implications for Interior Design Practice:

Based on these findings, several actionable insights can be drawn for interior designers and architects:

- *Purpose-Driven Material Selection:* Materiality should be approached not solely for its visual attributes but for the emotional and tactile responses it evokes. Designers should consider how a material will be perceived in terms of temperature, texture, and symbolic meaning.
- *Balancing Sensory Dimensions:* A thoughtful balance between hard and soft finishes—such as pairing cool metals with warm woods or natural fabrics—can mitigate sensory fatigue and foster emotional balance within a space.
- *Designing for Emotional Context:* Material choices should align with the emotional objective of the space—be it calmness in wellness spaces, sophistication in hospitality environments, or authenticity in retail settings.
- *Incorporating User Testing:* Design processes should integrate tactile mock-ups, material mood boards, and user feedback as early inputs during the conceptual phase. This ensures that material decisions align with actual user perceptions and preferences.

- *Sensory Branding through Materiality*: In commercial and retail interiors, materials should be treated as components of brand identity, capable of communicating values and narratives through sensory association.

6. Conclusion:

This study set out to investigate the influence of surface textures and material finishes on user experience within interior spaces, with a particular focus on the visual and tactile sensory dimensions. Drawing upon insights from existing literature, case study analysis, and empirical user evaluations, the research affirms that materiality is not merely a stylistic or decorative choice but a fundamental driver of sensory perception, emotional response, and spatial interaction.

The findings clearly demonstrate that different material palettes elicit distinct user experiences based on their tactile feel, visual tone, and emotional associations. Interiors that incorporated natural, warm, and texturally rich materials—such as stone, wood, fabric, and bamboo—were consistently rated higher in terms of comfort and emotional warmth. In contrast, spaces designed with sleek, hard, and reflective finishes—such as metal and glass—were perceived as more refined and luxurious, yet emotionally distant or less comforting.

Moreover, the study emphasizes that multi-sensory integration is essential for creating spaces that are not only visually appealing but also emotionally engaging and physically inviting. This supports the growing paradigm in interior design that calls for user-centric, experience-based design approaches, where material choices are guided by human needs, affective responses, and sensory ergonomics.

The chosen case studies—spanning hospitality, wellness, and retail interiors—provided concrete examples of how materials can shape user perception, convey brand identity, and enhance functional use. The data derived from participant responses offer practical evidence that material affordances, when aligned with spatial intent, can profoundly enrich the user experience.

Ultimately, this research reinforces the argument that materials communicate—they inform, they comfort, and they shape our behaviour in space. Interior designers, therefore, hold the responsibility of curating materials not just for their aesthetic compatibility, but for their ability to touch, quite literally and metaphorically, the lives of the people who inhabit those spaces.

References:

1. J. Malnar and F. Vodvarka, *Sensory Design*, University of Minnesota Press, 2004.
2. J. Pallasmaa, *The Eyes of the Skin: Architecture and the Senses*, John Wiley & Sons, 2005.
3. J. Peck and T.L. Childers, "To have and to hold: The influence of haptic information on product judgments," *Journal of Marketing*, vol. 67, no. 2, pp. 35–48, American Marketing Association, 2003.
4. H. Jang and T. Nam, "Touching materials with senses: Relationships between material properties and tactile responses," *Proceedings of the 6th International Conference on Tangible, Embedded and Embodied Interaction*, pp. 239–242, ACM, 2013.

5. S.J. Lederman and R.L. Klatzky, "Haptic perception: A tutorial," *Attention, Perception, & Psychophysics*, vol. 71, no. 7, pp. 1439–1459, Springer, 2009.
6. D. Fleming and H. Honour, *Materials for Interior Environments*, Fairchild Books, 2011.
7. Forty, *Words and Buildings: A Vocabulary of Modern Architecture*, Thames & Hudson, 2004.
8. S.R. Kellert and E.A. Calabrese, "The Practice of Biophilic Design," *Terrapin Bright Green*, pp. 1–60, 2015.

Weblinks:

1. <https://www.roseatehotels.com/newdelhi/theroseate/hotel> (Accessed on 02/04/2025)
2. <https://www.architecturaldigest.in/story/how-ananda-in-the-himalayas-defines-its-eco-conscious-approach-to-design> (Accessed on 05/04/2025)
3. <https://elledecor.in/article/sanjay-gargs-new-spacious-raw-mango-store-in-delhi-is-a-minimalistic-masterpiece> (Accessed on 07/04/2025)
4. <https://www.roseatehotels.com/newdelhi/theroseate/contact-us/lobby-opt-3/> (Accessed on 07/04/2025)
5. https://www.tripadvisor.in/LocationPhotoDirectLink-g304551-d4579616-i284631745-The_Roseate_New_Delhi-New_Delhi_National_Capital_Territory_of_Delhi.html (Accessed on 07/04/2025)
6. <https://www.anandaspa.com/en/gallery> (Accessed on 09/04/2025)
7. https://www.tripadvisor.com/LocationPhotoDirectLink-g297690-d1174508-i17782819-Ananda_in_the_Himalayas-Narendranagar_Tehri_Garhwal_District_Uttarakhand.html (Accessed on 09/04/2025)
8. <https://www.vogue.com/article/ananda-in-the-himalayas-wellness-retreat> (Accessed on 12/04/2025)
9. <https://lifestyle.livemint.com/fashion/trends/a-raw-mango-store-where-textile-traditions-art-and-history-live-111661686381005.html> (Accessed on 14/04/2025)
10. <https://www.architecturaldigest.in/magazine-story/delhi-raw-mangos-newest-store/> (Accessed on 18/04/2025)