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MULTISENSORY DESIGN IN THE INTERIORS OF SENSORY ROOMS FOR VISITORS IN SHOPPING AND ENTERTAINMENT COMPLEXES

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The concept of sensory rooms in shopping and entertainment complexes is explored as a space for relaxation and psychological relief in crowded environments. It's been established that multisensory design, focused on accessibility, sustainability, and eco-friendliness, serves as the foundation for shaping the interiors of sensory rooms. As an emerging field in modern interior design, multisensory design seeks to integrate visual experiences, acoustics, tactile interactions, and olfactory influences to create immersive environments. The means by which the necessary interior space can be created have been identified. Specifically, these include greenery, the use of natural materials such as wood and its derivatives, light and natural tones, the selection of a minimalist style in decoration and furnishing, and more. The study explores the concept and characteristics of multisensory design, focusing on inclusion, sustainability, and multisensory engagement in the interiors of sensory rooms for visitors of shopping and entertainment complexes. As a new field in contemporary interior design, multisensory design aims to integrate visual impressions, acoustics, tactile interactions, and olfactory influences to create an engaging and unique space.

Key words: design, multisensory design, interior, shopping and entertainment complexes, sensory room.

INTRODUCTION

The Traditional design often prioritizes on visual effects while neglecting the potential and contributions of sensory modalities. It results in a one-dimensional and static user experience, which fails to meet contemporary demands for rich, multidimensional, and immersive environments. The design of modern interiors must meet the requirements of inclusion, accessibility, sustainability, and perception through all human senses – sight, hearing, smell, and touch. Multisensory interior design is responsible for achieving this. Therefore, sensory rooms in shopping and entertainment centers are indispensable as they cater to diverse visitor needs, promote inclusivity, and enhance overall customer experience.

One of the key factors influencing the aesthetic perception of the environment is the relatively new field of multisensory design. Thus, the range of design tools expands to create comfortable conditions for human presence in architectural spaces.



Several academic interior designers and architects have contributed to the research and development of multisensory design. For instance, Andersen M., Gaver B., Moussavi F., Ratti C., Pallasmaa J. have advanced the understanding and application of multisensory design in architecture and interior design, enriching the ways spaces can engage and influence occupants [1-4].

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PURPOSE

The aim of this study is to identify the concept and characteristics of multi-sensory design and its application in shaping the interiors of sensory rooms for visitors in shopping and entertainment complexes.

RESULTS AND DISCUSSION

A Multi-sensory design is an approach that engages multiple human senses – sight, sound, touch, smell – to create more immersive, comfortable, and inclusive environments. This design philosophy enhances the way people interact with spaces, making them more engaging and accessible. Multisensory design is relevant in shaping the interior design of sensory rooms - places for rest and relaxation in crowded spaces, especially shopping complexes (Fig.1.).

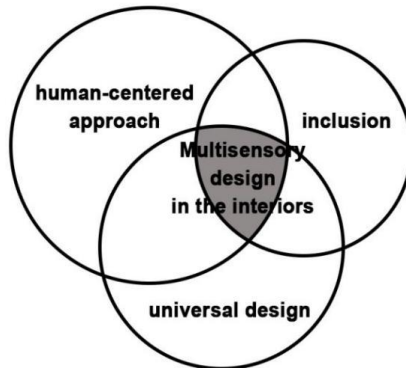


Fig.1. Components of multi-sensory design

In the shopping complex, the task of sensory room is to enhance people's perception and emotional experience of a product or environment by engaging multiple senses. This multisensory stimulation influences mental states, providing healing, relaxation, and rest, thereby enhancing user experience and fostering emotional connections and memorable experiences.

Sight is one of the primary means by which people perceive things. Visual elements such as color, shape, texture, and dynamic effects are effective in capturing attention and conveying specific information or emotions. Harmonious colors and shapes in medical settings can reduce patients' anxiety and fear, while



bright and lively colors combined with interesting shape designs in educational environments can stimulate students' interest in learning and creativity.

A good example of implementing a sensory zone design is Shanghai K11 Shopping Center. It has transformed its open-air atrium into a giant art installation, creating visual impact through dynamic projections and enhancing tactile participation via interactive sculpture exhibitions and VR experiences (Fig.2.).



Fig.2. K11 Shopping Center (K11 Art Mall). Interiors of the sensory zone, Bregman and Hamann Architects, Shanghai, 2013

Similarly, Jewel Changi Airport's «Forest Valley» and «Rain Vortex» integrate natural elements into the commercial complex. It constructs a multisensory ecological space through the plant community of the «Forest Valley», the sound of the waterfall, and the visual impact of the «rain vortex». The design concept emphasizes the healing effects of an «urban rainforest», utilizing a natural light dome to modulate the transition between day and night lighting (Fig.3.).



Fig.3. Jewel Changi Airport, arch. «Moshe Safdie», Singapore, 2019: **a** – general view of the center; **b** – interiors of the sensory zone



CONCLUSIONS

Sensory rooms in shopping and entertainment complexes serve as inclusive and functional spaces that enhance accessibility and customer satisfaction. Their thoughtful interior's design benefits neurodiverse individuals, families, and anyone in need of a moment of calm amidst the bustling environment.

REFERENCES

1. Andersson C. Public Space and the New Urban Agenda. *The Journal of Public Space*. 2016. Vol. 1, no. 1. P. 5-10. DOI: <https://doi.org/10.5204/jps.v1i1.4>.
2. Gaver W., Gaver F. Living with light touch: an autoethnography of a simple communication device in long-term use. In proceedings of the 2023 CHI conference on human factors in computing systems (CHI '23). Association for Computing Machinery, New York, NY, USA, 2023. №633, 1–14. DOI: <https://doi.org/10.1145/3544548.3580807>
3. Moussavi F. The Function of form. Harvard Univeresity Graduate School of Design & Actar, 2009. 384 p.
4. Pallasmaa J. The eyes of the skin: Architecture and the senses. John Wiley & Sons, 2024. 112 pp.

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МУЛЬТИСЕНСОРНИЙ ДИЗАЙН В ІНТЕР'ЄРАХ СЕНСОРНИХ КІМНАТ ДЛЯ ВІДВІДУВАЧІВ ТОРГОВО-РОЗВАЖАЛЬНИХ КОМПЛЕКСІВ

У статті розкривається поняття сенсорних кімнат у багатолюдних просторах – торгівельно-розважальних комплексах, як місця для: відпочинку, релаксації, психологічного розвантаження. Встановлено, що мультисенсорний дизайн, який зосереджений на: доступності, екологічності, сталому розвитку – є основою у формотворенні інтер'єрів сенсорних кімнат. Будучи новою областю сучасного дизайну інтер'єру, мультисенсорний дизайн прагне об'єднати візуальний досвід, акустику, тактильну взаємодію та нюхові впливи для створення захоплюючого середовища. Визначено засоби, за рахунок яких можна сформувати необхідний інтер'єрний простір. А саме: озеленення, використання природніх матеріалів – дерева та його похідних, світлих і природніх тонів, вибору мінімалістичного стилю у оздобленні та меблюванні в інтер'єрі, тощо. Дослідження вивчає концепцію та характеристики мультисенсорного дизайну, зосереджуючись на включенні, доступності, стійкості та мультисенсорному залученні до інтер'єрів сенсорних кімнат для відвідувачів торгових та розважальних комплексів. Як нове поле в сучасному дизайні інтер'єру, мультисенсорний дизайн прагне інтегрувати візуальні враження, акустику, тактильні взаємодії та нюхові впливи для створення цікавого та неповторного простору.

Ключові слова: дизайн, мультисенсорний дизайн, інтер'єр, торгово-розважальні комплекси, сенсорна кімната.