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ASSESSING VISITORS’ THERMAL COMFORT IN HISTORIC
MUSEUM BUILDINGS: RESULTS FROM A POST-OCCUPANCY
EVALUATION ON A CASE STUDY

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Abstract: Adaptive reuse of historic buildings as museums is an effective strategy for retaining heritage architectures while achieving environmental sustainability objectives. Building adaptation, retrofitting and preserving optimal environments for artwork and exhibit preservation are inherently complex, multifaceted tasks. However, indoor microclimates do not only affect collections; occupants and visitors must also be considered. The aim of this research is to explore whether artwork preservation constraints in reused historic building affect patrons. The authors thereby promote a more comprehensive approach, combining the objectives of exhibit conservation, preservation of heritage buildings and adequate indoor conditions, particularly thermal comfort. Data was gathered using the Post-Occupancy Evaluation process applied to a case study where a combination of microclimate monitoring and questionnaire surveys was carried out over a 12-month period. Results demonstrate that: i) the existing microclimate did not always provide visitors with adequate thermal conditions, showing dissatisfaction during the cooling season (July-September), with average TSV values ranging from -1.03 to -1.13; ii) TSV and PMV values were significantly divergent throughout the year, with TSV mainly included within the (-1, 0, +1) band and PMV mainly within the (0, -2) band; and iii) questionnaires show that visitor choice of clothing
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