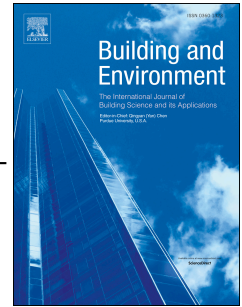


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Assessing visitors' thermal comfort in historic museum buildings: Results from a Post-Occupancy Evaluation on a case study

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1           **ASSESSING VISITORS' THERMAL COMFORT IN HISTORIC**  
2           **MUSEUM BUILDINGS: RESULTS FROM A POST-OCCUPANCY**  
3           **EVALUATION ON A CASE STUDY**

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

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