

## **Sustainability | Poster**

### **PP - (21165) - DIFFICULT WINDOWS: UNPACKING HIDDEN BARRIERS TO OCCUPANT-WINDOW INTERACTIONS**

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#### **Research or practical problem and objectives**

Our relationship with the window, as an architectural feature or building element, is manifold. During the pandemic lockdowns, windows were both the metaphorical and literal connection to the outside world for many. From a technical perspective, windows also provide one of the most fundamental ways of ventilating the indoor environment, now a key parameter to ensure safe return to our workplaces. Yet little is known of exactly how people interact with windows, how window designs and associated elements (such as windowsills) aid or hinder those interactions in different context and for different purposes.

#### **Methods and process (for empirical research)**

An online questionnaire survey of occupant-window interactions was conducted across Scotland at the end of the first lockdown in the UK. Participants were asked about the physical characteristics and usability of the windows in the room in their home where they spent the most waking hours during the lockdown. Importantly, participants were asked to describe how they interact with the windows and windowsills, and what (if anything) they find particularly enjoyable or frustrating in the interactions. A total of 977 valid responses were collected. Likert-style items were analyzed quantitatively using statistical techniques whereas free-text questions were coded and analyzed qualitatively.

#### **Main results preview and importance (or main arguments in the case of critical reviews)**

Whilst most people indicated that their windows satisfy their needs, when prompted to reflect on their daily experiences many respondents described difficulties that undermine the various uses of their windows, including view, daylight, ventilation, and outside connection. These barriers can be mapped to specific elements of the window; from higher-level design decisions such as orientation and opening mechanism, to details such as handle placement and weight of moving parts. At best, these difficulties pose minor nuisance to the occupants' experience when interacting with windows; at worst the barriers can compromise the accessibility to important functions of windows such as ventilation, and in turn negatively impact occupants' wellbeing.

**Palavras-chave : windows, affordance, occupant, architecture**