

Environmental Quality in the Homes of Older People Living in Scotland

 Martin Quirke PhD, Lisa Davison PhD, Alasdair Rutherford PhD, Alison Bowes PhD

Poster #82420

BACKGROUND

- Characteristics of the indoor home environment such as temperature, humidity, and air quality are associated with risk of injury, illness, and cognitive decline.

METHOD

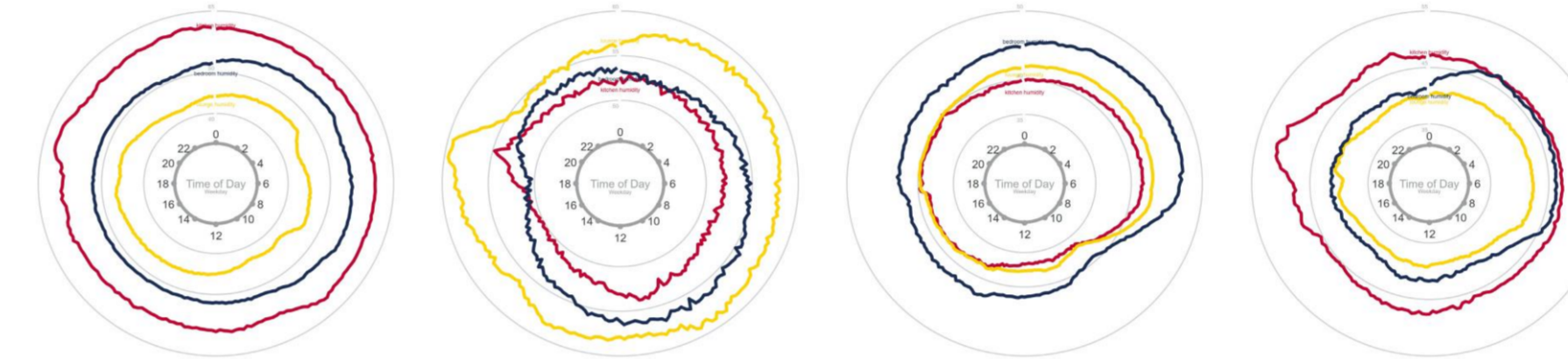
- 65 environment sensors were installed in the homes of people aged ≥ 55 ($n=10$), experiencing age related cognitive change, living in Scotland.
- Environment data along with infra-red occupancy data was collected every 60 seconds from spaces in each home over installation periods of 2 to 7 months.

DATA ANALYSIS

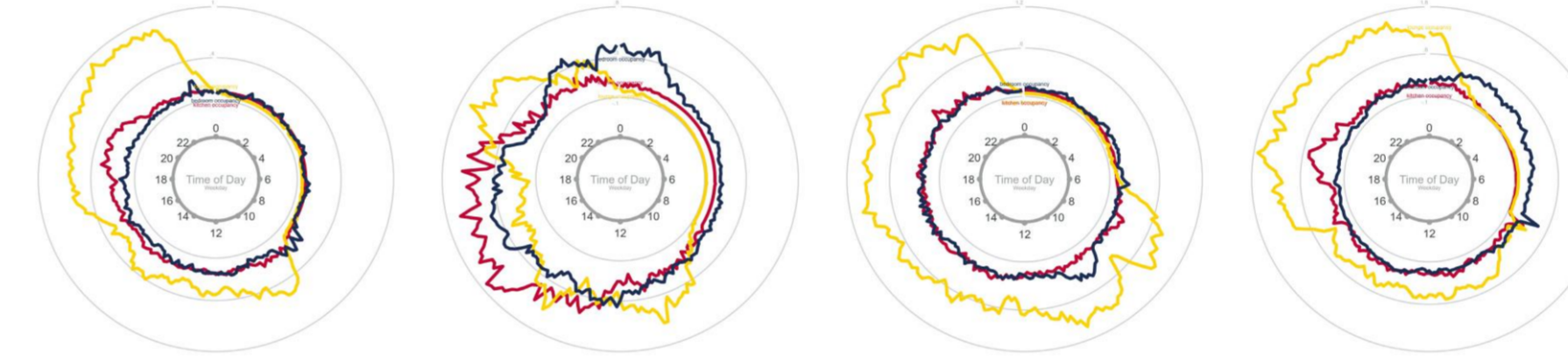
- Analysis includes evaluation of environmental sensor data (temperature, humidity, light, air quality) against occupant activity patterns and regional weather conditions.
- Data will be triangulated with participants' experiential accounts of their habits and activities.
- Using average weekday and weekend data patterns, potential influences on health-supporting qualities of indoor home environments can be identified. For example: occupancy, ventilation, and heating patterns.

EARLY FINDINGS

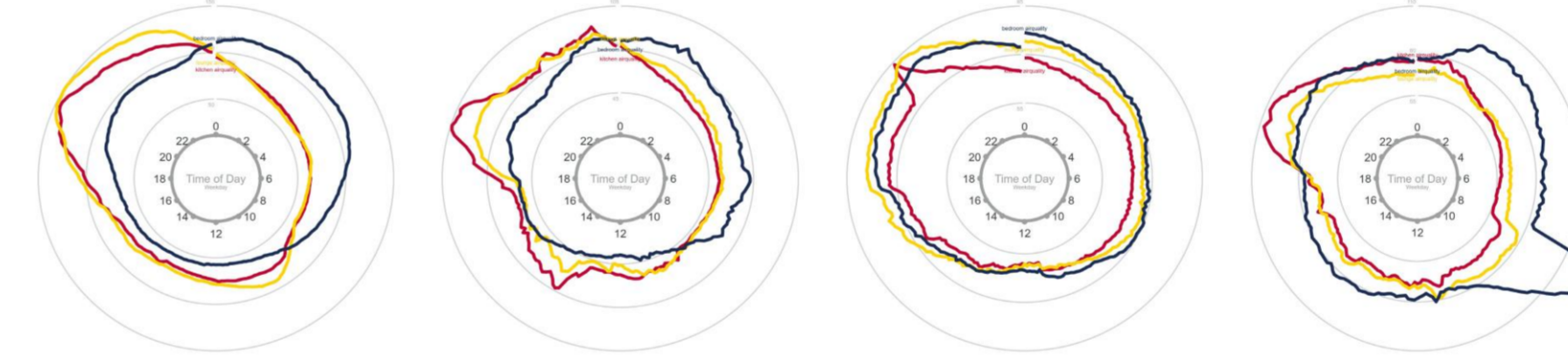
Weekday Average Humidity (%RH)



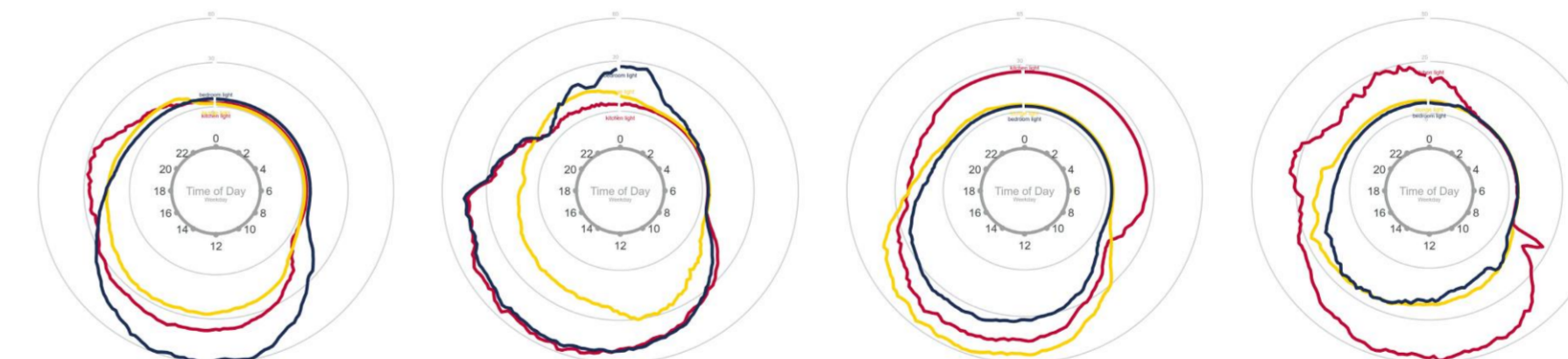
Weekday Average Occupancy



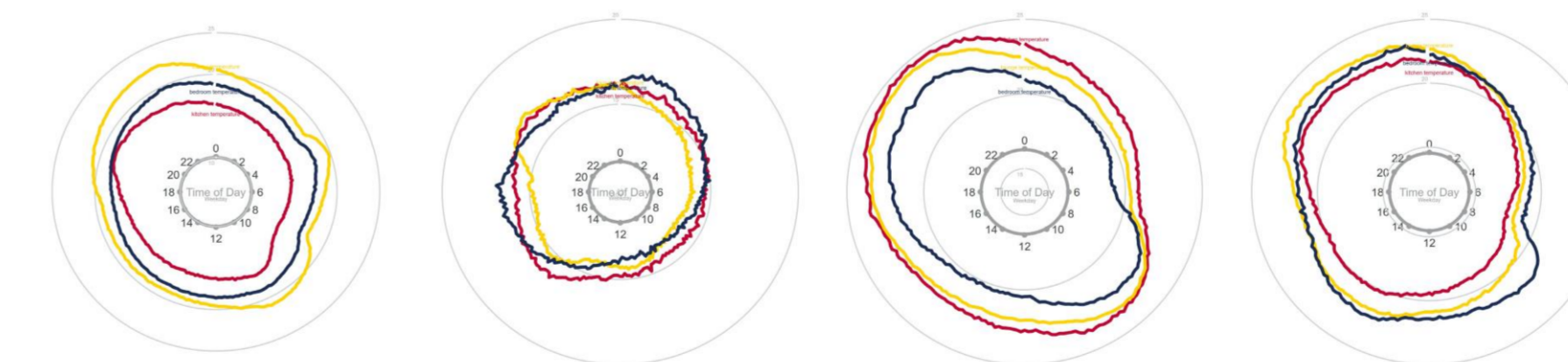
Weekday Average Indoor Air Quality



Weekday Average Indoor Light Levels (%)



Weekday Average Temperature (Celsius)



(Kitchen, Bedroom, and Lounge from 4 homes)

CONCLUSIONS

- Indoor home environments may contribute to poor health outcomes, including cognitive decline, amongst older people living in Scotland.
- Fuel costs and regional climatic conditions impact indoor environments, contributing to increased health risks.

ALZHEIMER'S ASSOCIATION[®] **AAIC >23** ALZHEIMER'S ASSOCIATION INTERNATIONAL CONFERENCE[®]

 **DesHCA**
DESIGNING HOMES FOR HEALTHY COGNITIVE AGEING

