



**HAL**  
open science

# Heatwaves' impact on social and mental well-being: a qualitative study on elderly women in a french metropolis

Célia Sondaz, Claire Harpet, Frédéric Kuznik, Lucie Merlier

## ► To cite this version:

Célia Sondaz, Claire Harpet, Frédéric Kuznik, Lucie Merlier. Heatwaves' impact on social and mental well-being: a qualitative study on elderly women in a french metropolis. AGU 23, Dec 2023, San Francisco, United States. 2023. hal-04920702

**HAL Id: hal-04920702**

**<https://hal.science/hal-04920702v1>**

Submitted on 30 Jan 2025

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

# HEATWAVES' IMPACT ON SOCIAL AND MENTAL WELL-BEING: A QUALITATIVE STUDY ON ELDERLY WOMEN IN A FRENCH METROPOLIS

SONDAZ Célia<sup>1</sup>, HARPET Claire<sup>2</sup>, KUZNIK Frédéric<sup>1</sup>, MERLIER Lucie<sup>1</sup>

<sup>1</sup>University of Lyon, CNRS, INSA Lyon, University Claude Bernard Lyon 1, CETHIL (Centre for Energy and Thermal Sciences of Lyon) UMR 5008, 69100 Villeurbanne, FRANCE

<sup>2</sup>University Jean Moulin Lyon 3, EVS (Environment City Society) UMR 5600 – Chair "Valeurs du soin" (Values of care), 69007 Lyon, FRANCE



## CONTEXT

**Health:** "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO 1946)

### Some heat effects on health

Physiological effects:

- Oedema
- Heat cramps
- Heat syncope
- Dehydration
- Heatstroke
- Sleep disorders & Fatigue

Psychological effects:

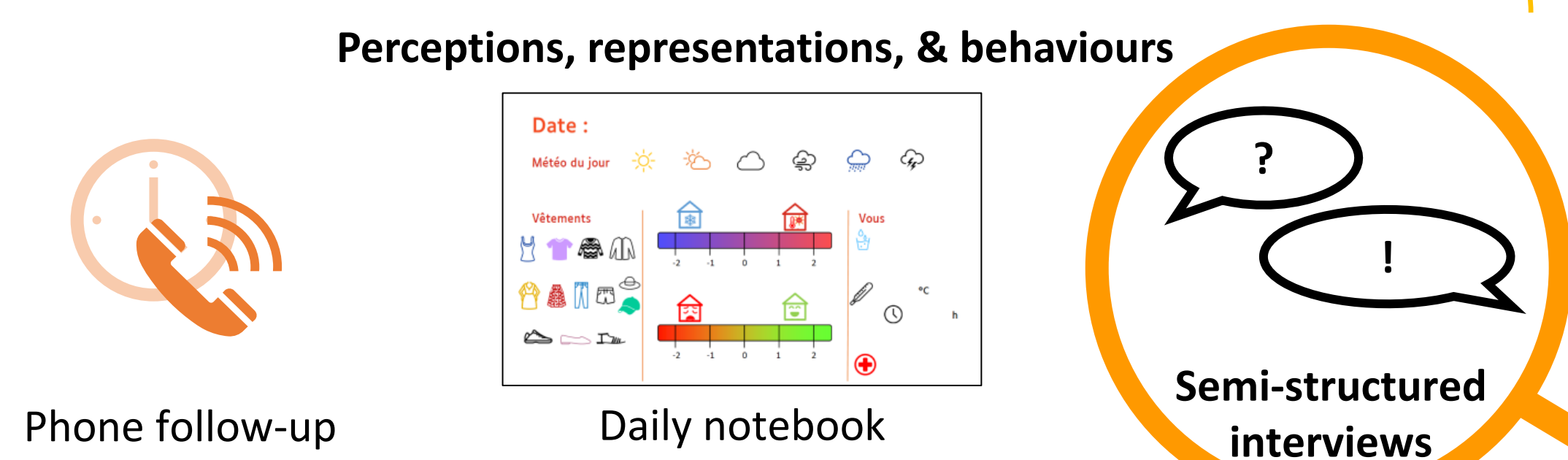
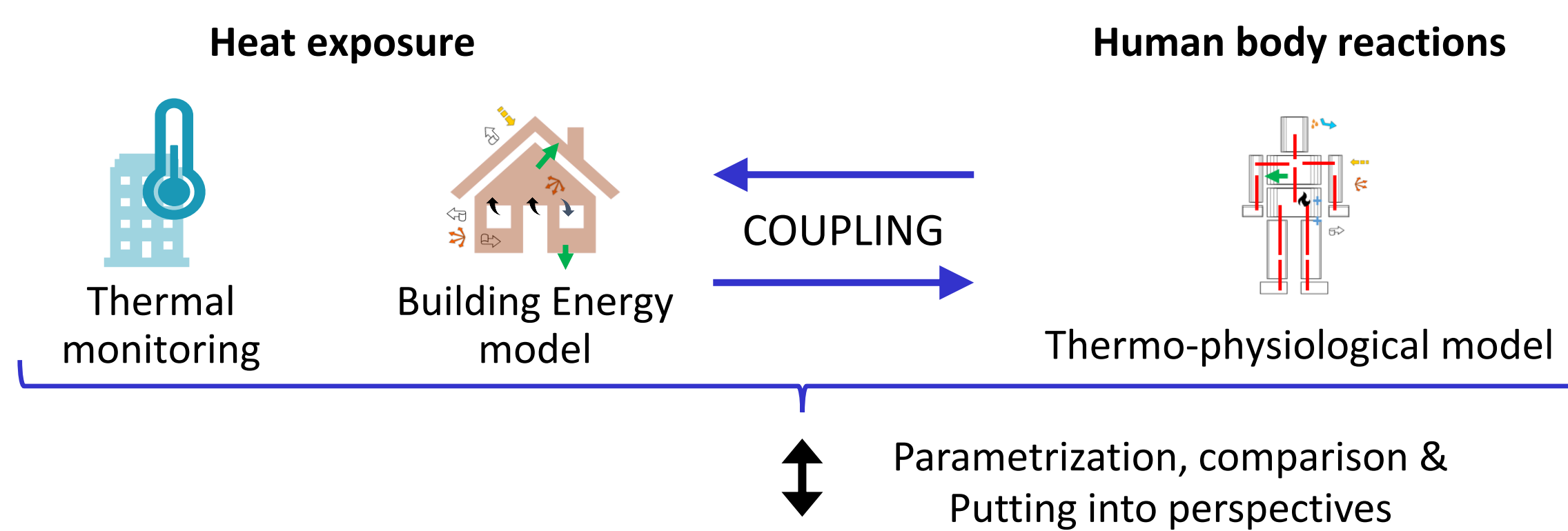
- Mental illnesses
- Mood disorders
- Amplified emotions/aggressiveness
- Anxiety and depression
- Obsessive thoughts
- Lack of motivation

Effects observed at epidemiological scale:

- Rised morbidity rates for chronic illnesses(respiratory, cardiovascular, renal, psychiatric...)
- Increased risk of accidents

### Health vulnerability and urban heat stress – An interdisciplinary study of reactions to heat (doctoral project)

- Study the effects of urban overheating on individual health
- Build interdisciplinary methods to identify and understand the vulnerability factors, especially those linked to the living environment



- Experiment the methods on a **vulnerable population**, the elderly women (70+ years old)
- Epidemiologically vulnerable** (Ellena, Breil, et Soriani 2020)
- but individually vulnerable?** (Not according to their feelings (Bittner et Stöfel 2012))

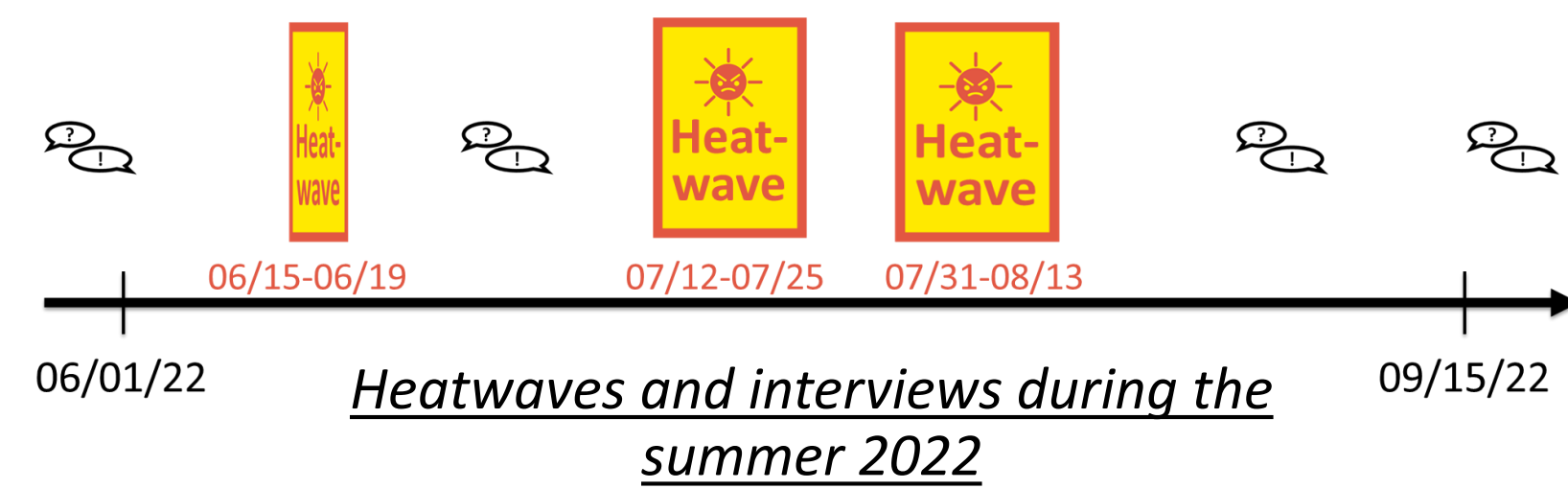
### Objectives:

- Identify overheating impacts on lifestyle, behaviour, mental status and the relation to living space
- Discuss about vulnerability factors associated

## METHODS: SEMI-STRUCTURED INTERVIEWS

→ Qualitatively explore and deeply investigate the context of heat effects, gathering detailed accounts of lived experiences.

For each interviewee: Observations, repeated visits and 4 recorded interviews



6 elderly women (70 - 87 years old)  
Living in one of biggest French metropolis  
Autonomous and without serious chronic illness

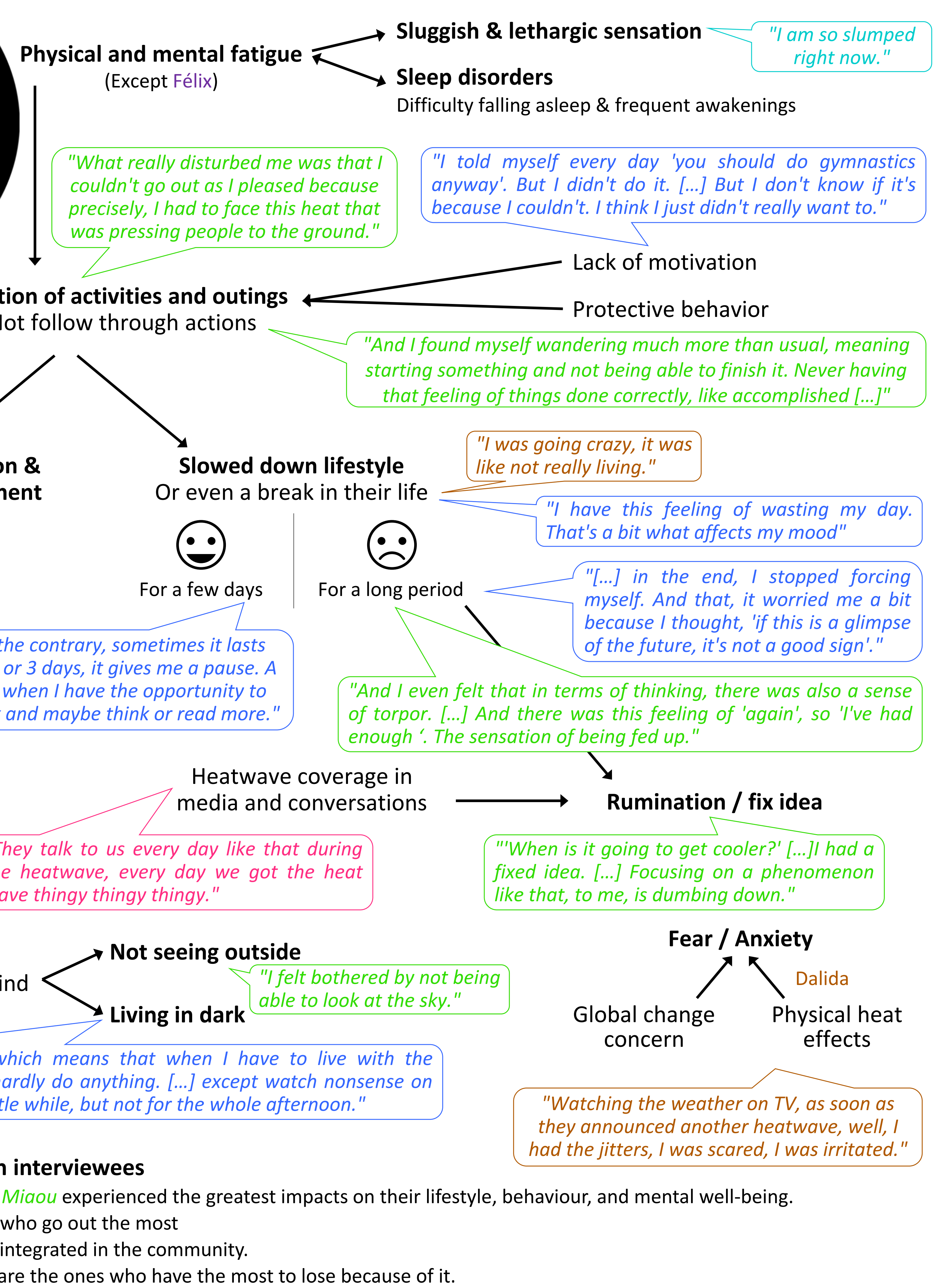
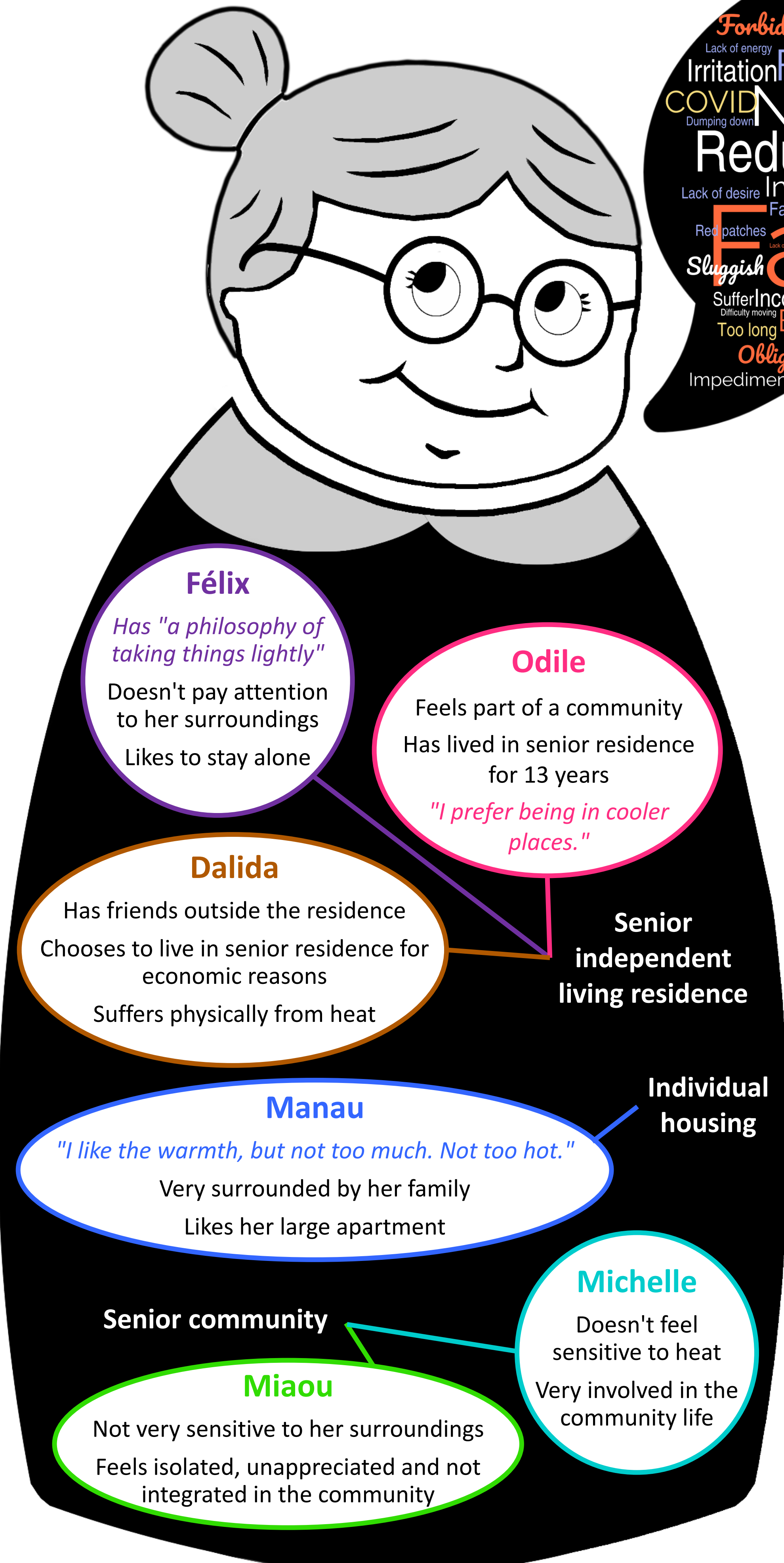
### Qualitative approach

→ Not representative of a population  
→ Following ethnographic methods that emphasize the importance of researcher-subject relationship:  
"The disturbance that the ethnographer imposes through their presence in what they observe, which also disturbs the ethnographer themselves, far from being considered an epistemological obstacle that needs to be neutralized, is an infinitely fruitful source of knowledge." (Laplantine 1987, [p183])

The interviews were conducted in French  
To keep the interviewee identity secret, each interviewee chose a nickname



## RESULTS: MENTAL, SOCIAL AND BEHAVIORAL REACTIONS TO HEAT



## PERSPECTIVES

Heat reactions has be compared with thermal environment, body responses, and vulnerability factors

**Individual particularities or global phenomena?**  
→ These qualitative findings could serve as assumptions for a quantitative survey

### References

Bittner, Martin-Immanuel, et Ulrich Stöfel. 2012. « Perceptions of Heatwave Risks to Health: Results of an Qualitative Interview Study with Older People and Their Carers in Freiburg, Germany ». *GMS Psycho-Social-Medicine*;  
Ellena, M, M Breil, et S Soriani. 2020. « The Heat-Health Nexus in the Urban Context: A Systematic Literature Review Exploring the Socio-Economic Vulnerabilities and Built Environment Characteristics ». *Urban Climate* 34  
Laplantine, François. 1987. *L'anthropologie*. Clefs. Paris: Seghers.  
WHO. 1946. *Constitution of World Health Organization*.