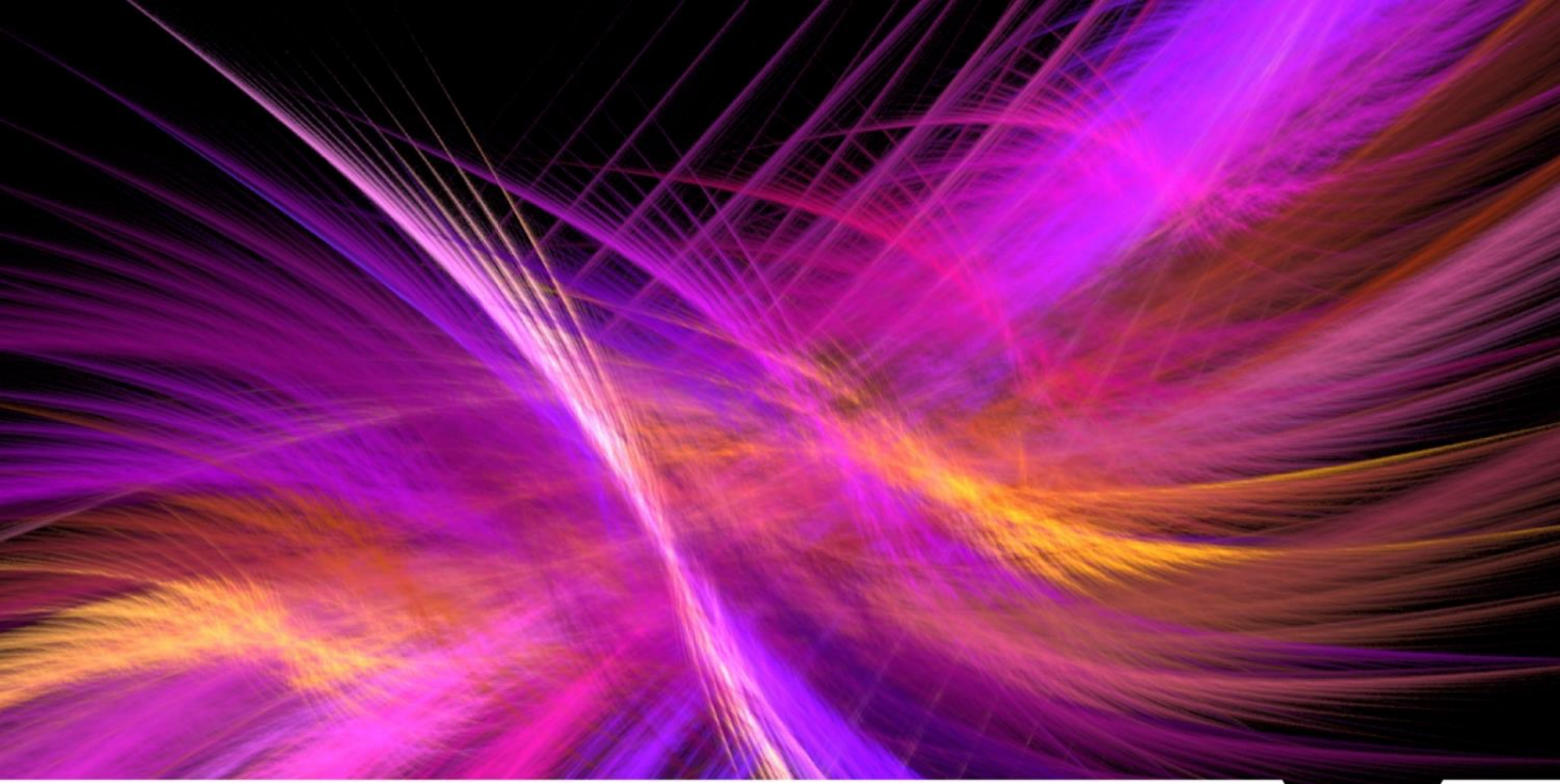


General and specified vulnerability, resilience and adaptation to extreme temperatures

WARWICK
THE UNIVERSITY OF WARWICK

Dr Ana Raquel Nunes

raquel.nunes@warwick.ac.uk

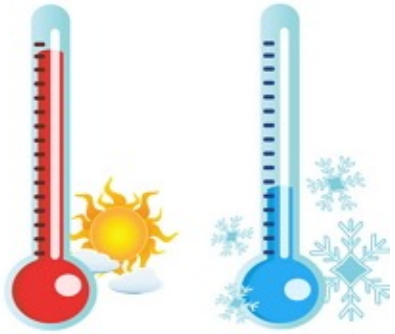
Overview

- Research context
- Methods
- Results
- Conclusions

Research context

- Increased impacts of climate change and temperature extremes on human health and wellbeing.
- Human vulnerability to extreme events results in increased impacts on mortality and morbidity.
- Increased frequency, duration ad intensity of extreme temperatures affect how individuals, communities, cities and nations adapt to such events.
- Health impacts of extreme temperatures are preventable and avoidable.
- Mitigated through strategies aiming at reducing vulnerability, increasing resilience and improving adaptation – ***root causes***

Methods



- Case study.
- Mixed methods research design.
- Inter-seasonal: summer and winter months.
- Older people, age 65 or older, living independently.
- Vulnerability – five types of assets (human, financial, physical, place-based, social) – GVI (General Vulnerability Index), HRV (Heat-Related Vulnerability) & CRV (Cold-Related Vulnerability)
- Resilience – Sense of Coherence (SOC) approach: comprehensibility, manageability, meaningfulness
- Adaptation – behaviours and responses

Results

Overall general vulnerability & general resilience

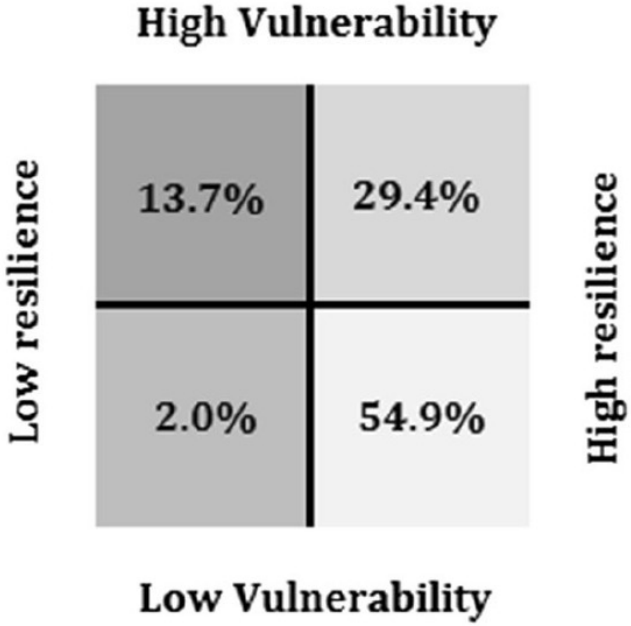


Figure: Percentage of participants in each overall general vulnerability & general resilience quadrant

Results

Heat-related vulnerability & resilience

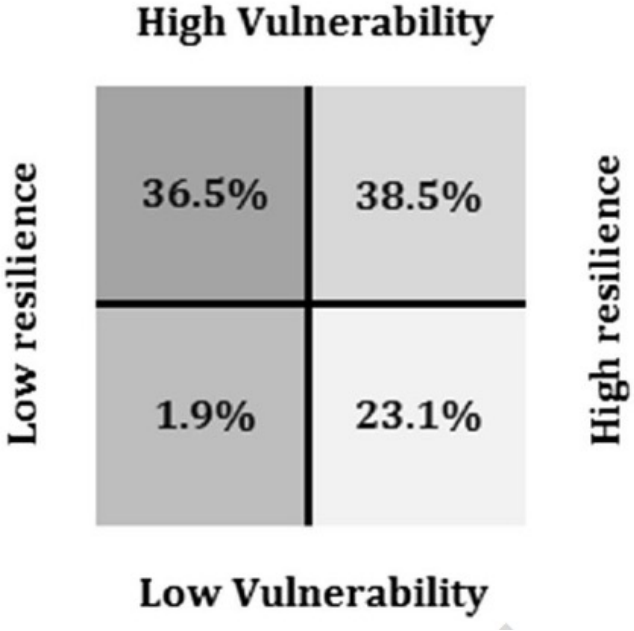


Figure: Percentage of participants in each heat-related vulnerability & resilience quadrant

Results

Cold-related vulnerability & resilience

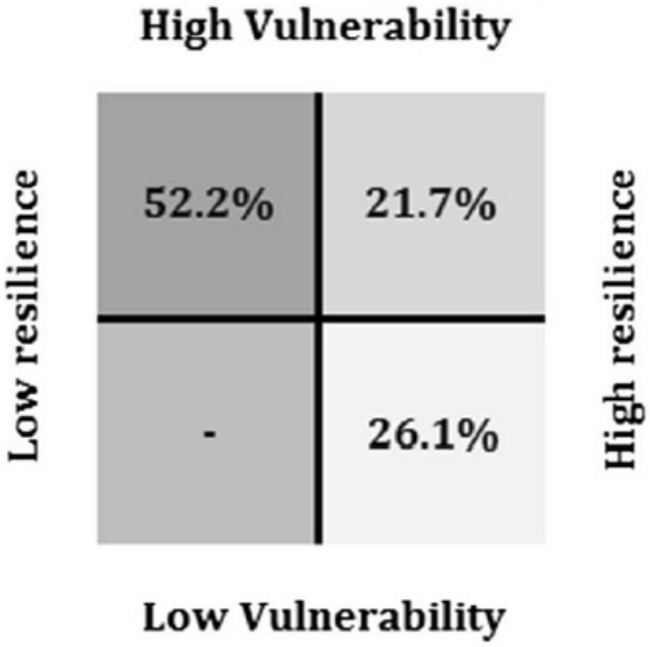


Figure: Percentage of participants in each cold-related vulnerability & general resilience quadrant

Results

Integrating vulnerability, resilience and adaptation

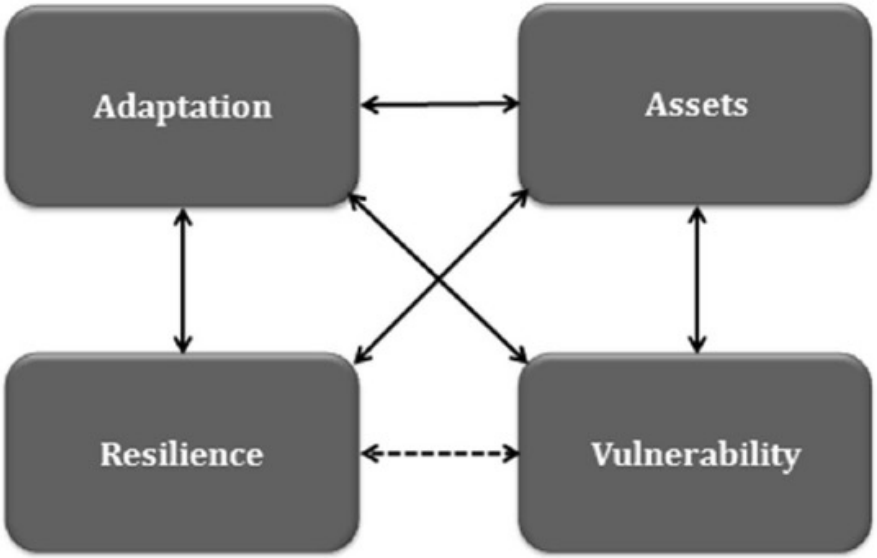


Figure: Relationship between specified assets, vulnerability, resilience and adaptation (straight arrow represents being a key determinant and dotted arrow represents not being a key determinant

Conclusions

- Unequal frequency & intensity of extreme heat & cold temperatures has implications for the degree to which individuals feel able to deal with such events.
- Individualised & tailored actions for increasing resilience are needed.
- Individuals can be vulnerable / resilient / adapt to one type of threat & not to another.
- Vulnerability, resilience and adaptation policies & strategies to focus on assets (e.g. physical, financial, human, place-based & social).
- Trust in & opportunities for local authorities for integrated structures & person-centred approaches for reducing vulnerability, enhancing resilience & improving adaptation to extreme temperatures.

Conclusions

- The findings signpost particular implementation and integration challenges, as well as links, interlinkages and interdependencies between vulnerability, resilience & adaptation to heatwaves and the SDGs.
- Achieving reduced vulnerability, strengthened resilience and enhanced adaptation is coherent and agrees with the need to achieve sustainable development.
- Prioritising vulnerability reduction, resilience strengthening and adaptation enhancement is consistent with efforts to achieve SDG1 (no poverty), SDG2 (zero hunger), SDG3 (good health and well-being), SDG7 (affordable and clean energy), SDG10 (reduced inequalities), SDG11 (sustainable cities and communities) and SDG13 (climate action).

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Thank you!

Questions?

Raquel.nunes@warwick.ac.uk