MedicalXpress

Reducing energy costs and social isolation important for older adults in extreme weather

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The cost of heating and cooling the home, and increasing social isolation are significant factors in health risk of older adults during extreme weather, according to a new study by the University of Warwick.

The research, published in *PLOS ONE*, also reveals how poor understanding of the dangers of extreme heat or cold also affected how well older adults adapt to adverse weather conditions such as a heatwave or cold snap.

The research from Warwick Medical School used an asset-based approach to determine how capable those adults were in adapting to the negative effects of extreme weather conditions. An asset-based approach involves categorising all the resources, both tangible and non-tangible, that individuals need to maintain their health and wellbeing and assessing their access to those and ability to utilise them.

Older adults (aged 65+) are considered a high risk group to the impacts of extreme temperatures. Direct and indirect effects of heatwaves and cold waves are associated with an increase in respiratory and cardiovascular diseases. This contributed to an estimated 50,100 excess winter deaths in England and Wales in 2017-18 and an estimated 1,246 excess deaths in June to July 2018 according to recent figures from the Office for National Statistics.

The findings of this research have national and international relevance and it recommends implementing a number of measures to policymakers to respond to temperature extremes:

- improve individuals' health status
- strengthen knowledge of what to do in the case of extreme temperatures and to be proactive
- improve the general awareness of risks and impacts by the individual
- improve social networks around the individual, and strengthen the links between health and social care teams
- in countries where GP appointments are charged for, reduce the cost compared with overall income
- implement policy measures to reduce poverty, hunger and improve the quality of housing stock

Lead author Dr. Raquel Nunes from Warwick Medical School used over 45 interviews with older adults living in Lisbon, Portugal, conducted in both summer and winter. She said: "The findings of this research are comparable to that in the UK, France, US, New Zealand and internationally that also found that low educational levels, low income, lack of mobility, lack of housing insulation and weak social networks had adverse consequences on older adults' ability to respond to extreme temperatures.

"We show that the vast majority of older adults face restrictions in availability and access to assets that impact on their ability to respond to extreme temperatures. Despite this, participants in this research revealed a range of opportunities for enhancing their adaptation strategies, drawing on assets that they would welcome."

The research identified a strong sense of independence in older adults, which helped to enable those people to adapt to changing weather

conditions. However, expenses such as high electricity and gas prices and low income/pensions were seen as constraints, as well as a general misunderstanding of the risks and cost-effectiveness of technologies such as heaters and fans. As a result, older people did not prioritise investing in cooling and heating their homes, with tenants often more affected than homeowners.

Participants with the lowest literacy (primary school education or less) and with a poor understanding of what to do during hot/cold weather preferred personalised advice provided by specialists (i.e. GP, Nurse, Community or Council officers) to general advice such as leaflets or information in the media. Social interaction with family, neighbours and services were perceived as a 'lifeline' as their advice was seen to be more trustworthy.

Dr. Nunes added: "Addressing issues such as electricity and gas prices, as well as subsidies for older adults living with low pensions, are considered to be essential opportunities in reducing the pressure on finances and would support individuals in adapting to extreme weather.

"Local and community organisations and institutions would be most appropriate to implement adaptation measures, as they are closer and more accessible to older people. These organisations and institutions could aim to work together to examine particular aspects and characteristics of older people's lives that are crucial to respond to during temperature extremes, and implement suitable measures.

"The asset-based approach that was used and the concept of assets allow a better understanding of the factors shaping older adults' adaptation strategies and can help us understand the challenges they face during extreme temperatures.

"To increase all types of assets requires sufficient funding and political

commitment for the short-, medium and long term, and an investment in tailored national and local policy decisions and interventions."

More information: Ana Raquel Nunes et al. The contribution of assets to adaptation to extreme temperatures among older adults, *PLOS ONE* (2018). DOI: 10.1371/journal.pone.0208121