New Study Warns of Sharp Rise in Heat-Related Deaths Across Europe Due to Climate Change

Google NotebookLM/WorldPop, 12 August 2025

Transcript

Speaker 1: Welcome to the Deep Dive your shortcut to getting informed. Now, just before we dive in a quick but important note. We aren't real people. We're AI-derived from source material uploaded by WorldPop, and rest assured, this audio has been meticulously edited, checked and validated by the human experts right there at WorldPop.

OK. So today we're unpacking a new study. It's co-authored by WorldPop principal research fellow Dr Shengjie Lai, and it uses WorldPop's gridded population data to look at the effects of climate change on mortality rates in Europe.

Speaker 2: Yeah. And what's really fascinating here, I think is how this study, you know, really drills down into the specific health impacts. We're talking rising temperatures, changing demographics right across Europe. It's a very granular view.

Speaker 1: Exactly. So, our mission today is to pull out the most important insights. We're especially focusing on how WorldPop's data helps us understand future heat related mortality. So, let's get in to it.

Europe is warming up fast, nearly double the global average. That makes it a real hot spot for heat stress, combined that with a population that's ageing quite rapidly and well, you have a perfect storm for increasing health risks from heat.

Speaker 2: Right. And the study highlights these "compound day/night" heat extremes. So, high heat day and night plus humid heat, that combination really ramps up the health risks.

Speaker 1: So, it's not just about how hot it is, but how hot it feels.

Speaker 2: Precisely. A key thing here is how the study used a humidex metric, not just the dry temperature. Think of it like that 'feels like' temperature on your weather app. High humidity makes heat much more dangerous for us. So that gives a much more accurate picture of the actual health risk of the impact on mortality. And this methodology, it was powered by WorldPop's, high resolution gridded population data. That's for the historical baseline - looking back at 2010 to 2019.

Speaker 1: OK, so WorldPop's data isn't just like big country level numbers. It's about knowing where people live down to small grid squares.

Speaker 2: Exactly. That precision is crucial. It lets you map heat exposure onto specific communities, onto vulnerable age groups, with really unprecedented accuracy. That's how they build such a robust historical baseline for Europe.

Speaker 1: So, that detailed 'where' allows for really accurate weighting.

Speaker 2: Yes, precisely. Population weighted climate variables calculated at a fine regional scale. It gave that really accurate historical baseline, and it demonstrated how you effectively link that granular population data with climate variables. That method was vital for interpreting the future projections accurately.

Speaker 1: Got it. So WorldPop data for the solid historical foundation that 2010-2019 period, but for looking ahead projecting out to 2100.

Speaker 2: Right, for the future projections, the study integrated population data from another source, the Gridded Population of the World, or GPW version 4.

Speaker 1: OK. And what did those forward-looking numbers show as Europe keeps warming, what's the impact on heat related mortality?

Speaker 2: Well, connecting this to the bigger picture, the findings are quite stark. Between 2010 and. 2022 extreme heat was linked to over 368,000 deaths across 34 European countries. And get this, a staggering 89.4% of those deaths were people aged 65 or older. It just underscores the huge vulnerability of the elderly population.

Speaker 1: That's incredible. And looking forward?

Speaker 2: Looking ahead, future heat related mortality is projected to increase every year by somewhere between 103.7 to 135.1 deaths per million. For every single degree of global warming by 2100. And Climate Change, the main driver here. It accounts for, like, 84% to almost 97% of the projected increase if warming goes past 2°C.

Speaker 1: OK. And this next bit genuinely surprised me, it kind of challenges how we think about coping, doesn't it? The study found that even if we get much better at adapting physiologically, say, a 50% reduction in risk, it still won't be enough to offset the increase driven by Climate Change. And even broader socioeconomic adaptations, they show limited effectiveness in the models.

Speaker 2: It really shatters that illusion. You know that adaptation alone is the answer. The sheer scale of the warming means we can't just adapt our way out of this, especially with Europe's population ageing so quickly.

Speaker 1: So, if we connect this to the bigger picture.

Speaker 2: This Deep Dive really highlights how complex the future of heat related mortality is in Europe. It shows us that even with some adaptation, the scale of the challenge is just immense, particularly for vulnerable groups like the ageing population. And it really underscores how critical detailed population data like WorldPop's historical baseline data is for making these kinds of projections.

Speaker 1: OK, let's unpack this a bit more then something else that stood out. Countries we often think of as cooler Germany, Finland, Sweden and the UK, they actually show the greatest potential for adaptation to mitigate increases. That kind of challenges our assumptions about where the biggest heat stress burdens might fall doesn't it?

Speaker 2: It does. It's complex.

Speaker 1: It shows it's not just about, you know, feeling comfortable. For older people, extreme heat can push the body beyond its limits. It worsens existing health issues, puts huge strain on healthcare systems, especially during long heat waves.

Speaker 2: Which raises a really important question, I think. Beyond just our individual bodies adapting, how can we scale up those broad socioeconomic adaptations effectively? How do we make them truly offset these escalating risks?

Speaker 1: So, what does this all mean for you listening?

Speaker 2: Well, it means understanding the nuances here, understanding how data, like WorldPop's detailed gridded population figures for the baseline helps us project these critical public health trends.

If you want to read the full journal article yourself, you can follow the link below.

team just follow the link below.