

Australian Zonta Says NOW Think Tank

14 December 2024

Dr Catherine Trundle, La Trobe University

Introduction:

Catherine Trundle, who is speaking today, is a medical anthropologist in the Department of Public Health at Latrobe University.

Medical anthropology is related to a subfield of anthropology.

It tries to better understand factors that influence health and well-being.

It includes issues such as ecological adaptation and maladaptation.

Catherine's current research focuses on heat stress and climate justice in Australia, asking how we might include diverse voices and perspectives to inform solutions to extreme heat.

Her research engages different knowledge holders, communication, and organisers.

This talk today is on the gendered dimension of extreme heat.

The talk will discuss the diverse ways gender shapes the experience of extreme heat.

Catherine will explore how heat interacts with gender-based violence, care practices, and Women's Health, parenting, and gendered workspaces.

Also, how does gender inequality interact to impact women and women's rights?

Catherine will discuss research in Australia as well as the diverse international settings and consider how the role of women's organisations can support women suffering from extreme heat.

So, thank you, Catherine. Over to you.

Presentation:

I want to give you a broad overview of how heat stress impacts women and girls. I am really interested in gender in my own research; I use a feminist lens in much of what I do, and a social justice lens.

So I'm particularly interested in how inequities exacerbate harm for certain communities and groups more than others.

I would like to write an information sheet for Zonta members to help them understand the issues surrounding how heat stress affects women and girls. Can you please suggest a title, some headings, and some key references? The information is in two parts: physiology and how inequity exacerbates harm. Here is the physiology information.

Physiology:

So I'm going to give you quite a high-level overview of the sort of factors that make women and girls more vulnerable to heat stress in Australia and the broader Asia Pacific, which is where a lot of the research I've been looking at recently explores.

But I think it's worth us just starting with a brief pause to think about what we mean by heat. We often think about heat atmospherically. We think about heat as the air getting hot around us and causing damage, but I think actually it's really important to come back to what heat is and heat is actually a form of energy.

So I continue to ground myself in the laws of thermodynamics when I think about heat and then equality, because it helps me a lot.

So heat is a form of energy that's always trying to move. Heat energy, like all energy, is always conserved. We can't create and destroy energy. We just merely transfer it from one object or location to another from one state to another.

So really the key concern in a warming world is how do we deal with the flow of heat.

We can't live apart from it.

But human power and human vulnerability and human care is really going to lie in how we can slow down or speed up heat's movement, redirecting it in ways that avoid harm.

So we have to think of heat is really an interaction of bodies, environments and atmosphere rather than simply atmosphere.

Of course, heat is always trying to move towards cooler objects. That's the sort of second law of thermodynamics. The heat's always moving. So, keeping something cool in a steady state requires energy. It requires resources, and so heat is always trying to get in.

And so women, girls, and gender minorities are usually at greater risk of being vulnerable to heat because they can't keep heat out.

Or heat gets stuck where they are, such as in the idea of a heat island, where we think about spaces that get hot quicker and for longer. So, I think it's really important we think about heat not as just an atmospheric climate issue, but more as an interaction of bodies in their environments.

I'm sure you all know about the physical impacts of heat on the body.

It's rather dramatic: cramps, dizziness, exhaustion, nausea, vomiting. Heat stroke is a really serious condition that can cause death.

And so it's worth us just thinking first about the social dimensions that shape vulnerability, but actually there are some physical dimensions that are worth noting. Women are at greater risk during heat waves because their bodies are different.

Women usually have a higher body fat percentage and a lower water content, and that actually really affects their heat tolerance and their hydration levels.

Also, various issues around hormone fluctuations relating to menstrual cycles, pregnancy, and menopause can actually make it harder for the body to regulate temperature.

We also know that girls, young children, particularly infants, are at much greater risk of heat stress because they have a larger surface skin to mass ratio. They have more surface area per unit of mass, which means they can heat up much more quickly, and, like older populations, they don't have as efficient sweat glands. They have fewer sweat glands, so they can't sweat as well. And we know that sweating is the body's primary mechanism for cooling.

The body has to retain this constant core temperature between 36 and 37. When the body gets really hot, it sends all the blood towards the skin, the arms, the legs, and the head to cool down. It's really the sweat that takes that heat out of the body, and it has to evaporate off. It can't drip off. So when you're in a humid climate, you can't cool down from sweating.

It's the evaporation that really causes cooling, which is why humid climates feel so much more oppressive in the heat.

We also know, as I said, that older people are at greater risk. We know that women make up a larger portion of the older population. That, again, is because their sweat pores become less functional over time. Also, because older people have certain vulnerabilities around chronic health conditions like cardiovascular conditions, when your heart has to work a lot harder in the heat to pump the blood around.

So first of all, there are those really basic physiological things that we have to remember. But that's only a very small part of the story.

Those physiological things do extend to pregnancy and maternal health.

Heat waves' impact on maternal health is quite significant. We know that heat affects low birth weight, preterm delivery, and stillbirth. Even just a one-degree rise in maternal heat exposure has quite a huge impact on rates of miscarriage.

We know that pregnancy reduces the body's ability to handle heat. It often creates more; it makes the body more susceptible to heat stress and dehydration.

These are the physiological things.

Social factors

The important things that make a really big difference are the interaction of a whole lot of social factors: our gender norms, socioeconomic norms, and inequities.

We know that women are more likely to live in poor households in Australia.

We know that women are likely to earn 75% of what men earn in paid labour.

We know that children account for a relatively large percentage of the global extreme poor. 44% of the global extreme poor are children, and of course, we know that that puts girls at high risk.

We know that women live in houses with less air conditioning. We know that they live in poor-quality houses. All of these forms of systemic income injustice have a greater impact on women.

We can also think just more broadly about forms of systemic racism and the way in which discrimination and systemic racism impact communities of colour.

We know in Australia that Aboriginal and Torres Strait Islander communities have much greater barriers in accessing good-quality housing. This creates an enormous amount of heat stress, because of that lack of access to good quality housing, there may be more people living in a house, which can make it harder to keep cool and less access to air conditioning and other forms of cooling mechanisms.

So these things are really important, and the other thing I want to stress is the importance of thinking about heat, not just at the disaster level.

We often think about it in terms of extreme heat waves and people turning up in emergency rooms, but I really encourage you to think about heat right from the spectrum of those extreme effects to the subclinical levels, where a lot of impacts occur, particularly on women, I think. Those subclinical stresses—I like the word 'heat stress' because it captures everyday stresses and strains as well as bodies under a lot of stress.

I'll just give you some examples of some of the subclinical impacts on health of heat stress that you might not have thought about.

There is some wonderful work being done for people living in social housing in NSW. Those communities report that during times of extreme heat, they haven't been able to get access to air conditioning in their houses. That lack of government support leaves them feeling very strongly aggrieved, a feeling of inequality and of injustice, and the stresses of feeling like you're not looked after by your society and are valued less.

We know that people during times of extreme heat just are lonelier, that they report missing relatives and friends, and feeling frustrated and exhausted about not being able to socialise and talk with each other.

So when we think about heat stress and its impacts—including gendered impacts—we should think as broadly as we can. An obvious stress that comes immediately to many of our minds when we think of this in terms of care work.

We know that women do twice as much unpaid care as men in Australia, e.g., childcare, housework. We know that the main way that Australia has encouraged people to approach extreme heat and to keep themselves safe is through health promotion material that seeks to shape individual behaviour: increase your personal responsibility, check on your neighbours, check in on older people, your parents, deliver them food, or make sure they've got medications they need. Make sure your kids stay hydrated. Prepare smaller meals. Make sure you have fruit and vegetables. These are all the sorts of responsibilities we are encouraged to take on. These are important things, but they become very hard to do for women, particularly those from low socioeconomic backgrounds or women who face forms of social discrimination.

It's not just that it is harder to look after yourself - if you're looking after others, that adds quite a big burden of care to look after others in the heat.

For example, parents, mothers who are looking after children, have to deal with the fact that kids are really grumpy in the heat. Part of that is because they can't go outside. They're stuck inside, but they also have, you know, mood changes, their inability to cope. They get scratchy, they get anxious.

If young people have mental health conditions, those are exacerbated in the heat.

So women with care responsibilities are having to take on all of these things, which are really stressful, especially if their resources and ability to control their environment are low.

We know that among young people between 16 and 24 years old in Australia, 40% have experienced mental health disorders at times in their lives. If you're a mum and you're telling your teenagers, you've got to do this, you've got to do this. But if teenagers are experiencing mental health issues, their levels of motivation, their abilities to enact self-care, and their ability to cope with anxiety are going to be impacted. Their ability to plan and make decisions, and even to communicate their needs, is all going to be impacted by their own well-being.

So parents, and mothers who take on the majority of this care work, are having to navigate caring for others who may be hard to care for in those circumstances.

Cool rooms tend to attract people, so if women do manage to keep their households cool, they often get extra visitors, particularly in communities with limited incomes. People gravitate towards houses that are cool, so that care commitments of feeding and looking after people in those spaces, even if you are able to look after your own family, can increase, particularly in communities where there is a lot of need for and a lack of cool spaces in people's houses.

Heat really disrupts kids' education and learning. Disrupted education and learning fall on women. We know that from what happened with COVID. Teachers in schools in communities with inadequate housing report that it is just really hard to teach kids at school.

Often, kids have been sleeping outside on mattresses because it's too hot to sleep inside in their houses, and so they come to school, bitten by mosquitoes, and they can't concentrate. Or they come to school completely sleep deprived because they haven't been able to sleep during the night in a hot house. So, they're often missing out on a lot of education.

And then there's extra pressure on both teachers and parents, and especially mothers, to really try and address some of that.

So all of these things are going on.

It's a simple thing, but if you don't have the capacity to cool your house at night, you don't sleep as well, which makes everything worse. We all know that. But one of the more visible forms of harm is around domestic violence, intimate partner violence, and family violence. We know that there's a clear correlation in Australia and internationally between hot weather and violence.

I think it's important we don't just blame the violence on the heat.

You know, violence needs to be dealt with as violence. We do know that lack of sleep, irritability, and heightened stress can escalate into aggression and violence more easily in the heat.

And we also know, for example, that drinking might increase as a way to stay cool. We know that just being in spaces together for longer increases the likelihood that domestic violence will happen. We also know women find it much harder to access support for leaving abusive relationships.

During periods of extreme heat, mobility is limited. The services available to them are often operating at limited capacity. They may be really worried, for example, about their pets and the extreme heat. So there are a lot of factors that make it harder to leave those situations.

In line with that, we know that forced marriages and trafficking go up in the Asia Pacific area in times of extreme heat. When families get under stress, forced marriages and trafficking become a coping mechanism that people are pushed into. And there's a lot of evidence of this occurring in places like Bangladesh, Cambodia, Nepal, and also Papua New Guinea.

I wanted to mention eldercare. Women make up more than 60% of the older population in the Asia Pacific. Women are the ones who provide the majority of formal and informal care. They work in elder care institutions and facilities, providing the majority of informal care. That becomes a double burden for many women if they're looking after children and also trying to care for older people in their lives.

And finally, I just want to mention work, because I think it's really important.

There's quite a lot of visibility for certain forms of work that have heat stress, such as people who work outdoors, perhaps road workers, and miners who work underground.

But a lot of heat stress exists inside indoor spaces. People who work in food service, cleaners, and domestic workers. We know that women have greater labour force vulnerability in terms of more part-time, more insecure, and more informal work. They're more likely to go without pay in a heatwave because they don't have social protection or labour laws protecting them.

And we know that, because they earn less, they are less able to bear those losses than men.

And I also want to emphasise that women do a lot of emotional labour jobs, working in service industries and customer-facing work.

In the health and social sector work, where they're doing a lot of interacting with people and a lot of emotional labour, even if they're working in cool places, they're often having to deal with irritable, tired, fed-up hot people. Whether they're nurses, receptionists at doctors' clinics, or even people working in cafes. These are spaces where their job gets harder and more stressful.

A final point about food security. We know, for example, that in Asia Pacific, women bear a lot of responsibility for producing food, for domestic consumption, and for all the gleaning and harvesting of fish and other things. Then there is the added burden during times of heat of not being able to provide for their families. We also know of women's experiences of the unequal allocation of food within households during times of crisis.

My research in Asia shows that, for example, and even here in Australia, a lot of social services that provide food security come under enormous stress during times of heat. Volunteers and food support recipients struggle to provide and receive those services.

To conclude, I really just wanted to show you the myriad ripple effects that heat has on women's and girls' lives, and the ways these impacts can build up in cascading ways.

And to really stress that many of them don't present in an ER. Many of them present with heightened stress and anxiety and difficulty getting through their lives. These things are just as important as the big statistics that we have. We should be thinking really holistically in terms of women's organisations and collective efforts.

I think that you know there is really important work to be done in trying to push beyond the individual responsibility health promotion model, which tends to dominate in Australia, towards thinking really hard about how we tailor information, access, and support to vulnerable communities. I do think there's a real role to be played by organisations that are acutely focused on gender, helping to spotlight and address this need.

End of presentation.

Q and A

That was a very timely presentation.

As we're all experiencing increased heat around the world, and I think you're taking us back to the everyday level, which was really important. Now, do we have some questions?

Question: I'm really particularly interested on women at home and the constant need to cook, prepare meals etc. I know you touched on it in a sense, but I'm really interested in that aspect of it, and it must be increasingly more difficult with the increase in temperatures and the stress on the body in those environments. Have you got any more information on that?

Answer: Yeah, I don't have stats – it's a hard thing to capture stats on. But yes, you are absolutely right. So anyone at home in front of a stove is going to get hot.

So the recommendation is that you eat lots of fruits and salads and things. That's really hard for people to do on a really low income because fruit and vegetables are expensive.

Fresh cold food requires that you can afford expensive fruit and vegetables or that you can prepare carbohydrates in advance and put them in the fridge. This requires you to have a good income all the time and have the time to plan ahead.

I actually think cooking presents quite a big stress.

Interestingly, a lot of women in family households, on low incomes, report that they find it so stressful that they get takeaway delivered, and then they feel really guilty.

Guilt because they are not nutritionally providing for their families. They're getting the advice to provide salads, and they are doing the opposite, but it's one way of avoiding cooking.

But of course, this puts other people at risk. Food delivery people are at quite a high risk, and they have very low security and have a lot of demands on them to get food. So that externalises the risk - it doesn't erase it.

Women can also be stressed about just getting food to their families. There's some research showing that in communities where houses don't cool at night, kids just leave in the evening because it's actually cooler outside by then—and they often stay out all night. Then of course, there's a lot of worry that comes with not, you know, providing them with meals, but also just worried about what they're up to. So, there's a whole set of interrelated stresses that come around providing.

I've talked to students who work in cafes in Melbourne about what it's like on hot days, and many of them are women. They talk about how hot it is to be in front of a coffee machine and also just how hot it is. Because cafes want to keep their doors open to let customers in and out, it's very hard to keep those spaces cool. So they just get really hot.

People who are working at preparing food in kitchens are in exactly the same situation.

So I think it's worth us just thinking about food and food equity as a big underlying issue here.

That's a very good question, Vicky.

What happens in countries where women do not have a choice of takeaway food? They have to remain in that hot setting, virtually all day - certainly all day until the late evening.

So are you looking at any of those sorts of scenarios?

Answer: I haven't come across any data on that. I have had some small conversations and some interviews I've done about gendered roles and the space where people are. For example, in a cultural context where men may go out and gather outside in the evening, and women may gather inside, there can be some equity around that.

It's not always straightforward, but it depends on whether the home is cool or not. It's also worth just pointing out that with those risks often come strengths. So there are a whole lot of often cultural adaptive strategies. So, in Australia, some of the literature has pointed out that some of our migrant communities come from cultures that are quite hot. So they already have a set of strategies in place. Rather than treating them simply as a vulnerable group, we should think of them as knowledge holders with a long history of lived experience. We could, in fact, be trying to build collaborative research with them, where their knowledge gets spotlighted rather than just thinking of them as vulnerable.

Question: Have you done any work looking at the differences between women in urban settings and women in rural or regional settings, because it seems to me that one of the problems living in an urban environment is that the heat stress is exacerbated. We know it's hotter living in the suburbs than further afield.

Has there been any work done on the different stresses on women in an urban area compared with rural, regional and country?

Answer: There has been work done in Australia on the differences, but it hasn't focused on gender. So, for example, in urban settings, women that I've spoken to who live in rented accommodation, they described the insecurity of their windows at night. They want to open the windows, but the windows don't have secure locks. It's really important on hot days that you're open and you ventilate your house at night. That's when it's cool, and you let all the hot air out, and then you close it down. This is the kind of main strategy that we are being taught to utilise. You can't do that at night if you are a woman in a house that has windows that you know you can't be securely fastened, at a certain opening. That is probably very specific to the urban setting. The risks around crime or perceptions of them and fear, which are, you know, real and legitimate.

I think in rural communities, one of the big issues that has been identified as isolation, you know, people being quite a distance from others. This makes the ability to check in harder.

There has also been some really interesting work showing how people raised in rural and remote communities have quite a lot of adaptive strategies for heat. They're more exposed to the elements, and they're sort of used to it. They're in places where there are bushfires and are used to that double whammy. So there is quite a lot of adaptation there.

But what we are seeing with the Aboriginal Torres Strait Islander communities is that, despite amazing cultural adaptation, we're reaching the limit thresholds of the human body in terms of what culture can do to adapt. There's research that shows, for example, that pregnant Aboriginal and Torres Strait Island Women who don't have a car, for example, for getting to a hospital or getting to their clinic, appointments when they live in remote and rural areas, puts them under enormous heat strain and they have higher rates of maternal health issues.

And so there's, you know, there's all of those things that play out with access to transport and isolation.

Question: If we wanted to advocate in this area, what area should we focus on to make the most difference?

Answer: In an Australian context, I think there's already good work going on around trying to get services in terms of gender violence services, and making them really adaptive to the heat and raising awareness. So I think that's ongoing.

I actually think all the everyday burdens of care are huge. I think about how we cannot individualise those problems to just individual women, but to think about how our social services might really support looking after dependents. I think that would make a really big difference, especially for women who are more vulnerable to heat and have fewer resources.

So I think focusing on it there, and there's a lot of interesting work already. One of the big issues around heat is housing. You've got the environmental heat that comes from where there is enough green space, and then you've got how well our houses are adapted.

So there are already groups such as renter advocates and social organisations that are providing good care facilities. The fact is that all of the support systems that women have tend to just completely fall away because those services just can't function in the heat.

So thinking about the whole infrastructure, I think, would be really, really good - because those stresses and strains then end up leading to illness.

You know, if you have all of those strains, they are subclinical, but they become clinical because they build up over time.

Comment: In the City of Toronto, they've brought out a bylaw that requires all rented accommodation to have air conditioning that keeps temperatures below 23 °C in the summer in Toronto.

Answer: So if the house is cool, then all of these things, these juggles that women are doing around trying to prepare cold food and dealing with scratchy kids, they're largely kind of dealt with. So even just really simple infrastructural things will have a really big impact.

General comments:

I think you've given us such a useful talk because we've now got some areas where we can see that advocacy in the future could be worthwhile.

We've also got the education of how to talk to people about the impact of increased heat, because often when you try to talk about a big picture, people don't really get it.

But when you can turn it around and show them this is your family, this is what's happening to them. This is your mother-in-law. This is your pregnant wife. We really appreciated all that today and learned so much. Thank you.