

➤ A PREGNANT PAUSE

Midwifery care disrupted

THE MOTHER TONGUE

Multilingualism lightened lockdown



FLOOD FORCE

Hydro-powered warning system

FUTURE-MAKERS

THE COVID ISSUE

Researching the pandemic from every angle



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UNIVERSITY

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ABOUT

Western Sydney University is a large,
student-centred, research-led university.
Established in 1989, the University proudly
traces its history to 1891 through the
Hawkesbury Agricultural College. Today the
University has more than 200,000 alumni,
45,000 students and 3,300 staff.

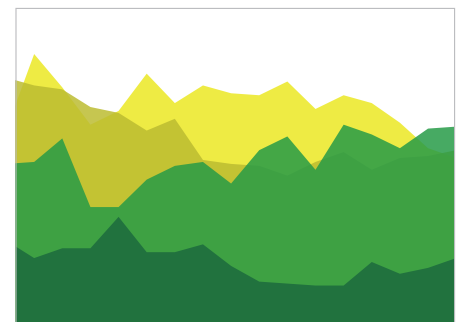
The University is now ranked in all major
global university ranking systems, is in the
top 2% of universities worldwide, and placed
1st in the 2022 Times Higher Education
Impact Rankings. Through investment in
its academic strengths and facilities, the
University continues to build its profile as a
research leader in Australia and is nurturing
the next generation of researchers. Western
Sydney University graduates go on to
take up rewarding careers that make real
contributions to societal change, lifting the
pride of students, staff and the community.

A guiding principle for the University
is that there is no limit to potential success
for those with drive, talent, confidence
and ambition.

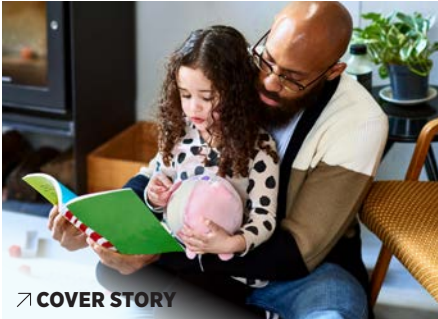
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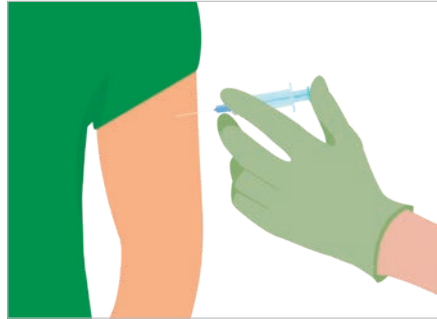
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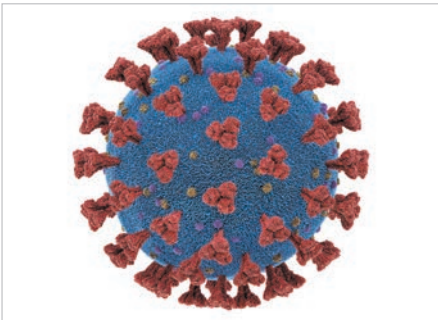
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RESEARCH PATHWAYS

Have you considered a career in research? Have you ever thought about studying a PhD? Do you have skills and experience that you could apply to an impactful research project?

Western Sydney University provides pathways for those interested in a career in research and looking to further their qualifications.

MASTER OF RESEARCH (MRES)

The Master of Research is a two-stage program designed to provide you with the skills you need to confidently undertake a PhD. Previous research experience is not required.

Stage 1: Research training coursework.

Stage 2: Supervised research project.

The degree involves two years full-time (or equivalent part-time) study.

Scholarships are available for domestic students undertaking full-time study.

RESEARCH TRAINING AND EXPERIENCE

If you have completed a substantial research project as part of a previous qualification (such as a Bachelor Honours or Research Masters), you may be eligible for direct entry into the PhD program.

If you can demonstrate significant research experience in your role at work or in the community, this may be recognised for direct entry into the PhD program.

DOCTOR OF PHILOSOPHY (PHD)

The Doctor of Philosophy provides you with the opportunity to develop capacity to conduct research independently at a high level of originality and quality. You will uncover new knowledge through discovery, the formulation of theories and the innovative interpretation of previously established ideas.

A PhD qualification opens up a range of new career opportunities. It is also a great way for you to contribute the knowledge and experience you have gained in your existing career and make a positive impact to the research happening in your field of interest.

The PhD degree involves three years full-time (or equivalent part-time) study. Scholarships are available for domestic and international candidates.

CAREERS IN RESEARCH

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Researcher
Executive

Industry
Researcher
Business Development
Scientist

Government
Policy Advisor
Intelligence Analyst
Communications Specialist

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ON THE COVER



➤ Western's COVID-19 related research covered a wide range of topics, from food insecurity to the impact of remote learning on students.

Cover image:
© Sam Falconer

FORGING AHEAD IN THE TIME OF CORONAVIRUS

Welcome to the sixth edition of *Future Makers*. We are delighted to share with you that Western Sydney University has been ranked number one worldwide in the 2022 Times Higher Education University Impact Rankings, in recognition of our social, ecological and economic impact. This significant achievement further enhances Western Sydney University's international reputation as an impact-driven, globally-engaged, and research-led institution.

The profound societal effects of the COVID-19 pandemic have undoubtedly presented challenges and opportunities for researchers globally. At a local level, the COVID-19 Delta outbreak in the second half of 2021 had significant psychological, social and financial impacts in Greater Western Sydney, home to one of the most culturally and linguistically diverse communities in Australia.

In this issue of *Future Makers*, we present the University's collaborative, timely and much-needed research on the COVID-19 pandemic and its enduring effects on communities, locally, nationally and internationally. The commitment of our researchers to excellence and integrity is reflected in their research that delivers tangible solutions to societal issues and is applicable to people's lives. Specifically, the stories provide insights into the impact of the pandemic on: pregnant women and the midwives who were with them; people living

with intellectual and developmental disabilities; the concerns for LGBTQIA+ people during lockdown; food insecurity during the lockdown period; the effect of school closures on young Australians; digital inclusion to enhance social and economic outlook for families; young people exposed to social isolation; the experiences of families with children placed in hotel quarantine, and; the pandemic's impact in a range of other scenarios. Our researchers have also investigated the challenges the pandemic has posed on higher education research, teaching and learning.

We hope these stories of discovery and their recommendations will act as a catalyst for sustained collaboration and global research efforts in responding to not only the COVID-19 pandemic and recovery, but to help communities better prepare for the future. We encourage you to not only read these stories but to also connect with us and work with our researchers to co-create and deliver tangible solutions to the inexorable universal grand challenges with which our researchers are engaging. ♥

Professor Barney Glover AO
Vice-Chancellor and President

Professor Deborah Sweeney
Deputy Vice-Chancellor and Vice-President
(Research, Enterprise and International)



The United Nations' Sustainable Development Goals (SDGs) are a blueprint towards a better, more sustainable future (see: sustainabledevelopment.un.org). Western has many research projects aligned with these goals. We have indicated the most relevant SDG above each article in this issue of *Future Makers* where applicable.



A HOLISTIC VIEW: OUR COVID-19 RESEARCH

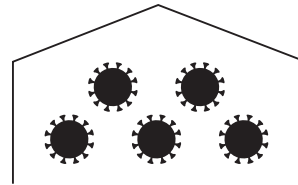
New South Wales' COVID-19 lockdowns in 2020 and 2021 were tough on everyone, but particularly on those in the Western Sydney LGA.

But despite being locked down for months, Western Sydney University researchers made the best out of a bad situation — publishing more than 5,000 papers in 2020–2021.

The research topics ranged from the University staff themselves and the effect of the pandemic on Western Sydney, to large international studies with collaborators in Asia, North America, Europe & Australasia.

Here is a snapshot of some of the main stakeholders in Western's COVID-19 research — a global university that serves the diverse community it operates in.

HOTEL QUARANTINE



Approximately
500,000
people

underwent hotel quarantine to return home to Australia.

PASIFIKA



More than
7,000
listeners and viewers

reached by WSU staff on Samoan radio and social media videos with culturally specific information about COVID-19 public health orders.

PREGNANT WOMEN



More than
6,000
women in Australia

were asked about their experience giving birth in the pandemic via the BITTOC study.

PROPORTION OF FOOD INSECURE HOUSEHOLDS IN TASMANIA



GLOBAL RANKINGS



1st
in the world

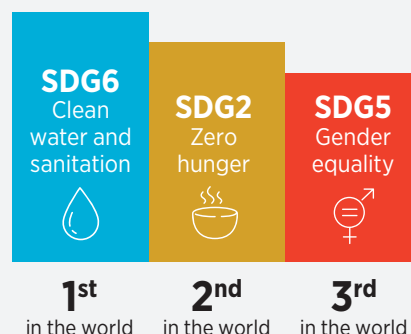


31st
in the world



TOP 250

RANKING FOR INDIVIDUAL SUSTAINABILITY DEVELOPMENT GOALS



2022 QS WORLD UNIVERSITY RANKINGS



ACADEMIC RANKING OF WORLD UNIVERSITIES 2022

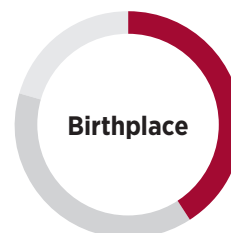


CULTURALLY AND LINGUISTICALLY DIVERSE FAMILIES IN WESTERN SYDNEY*



45.7%

Speak a language other than English at home



40.9%

People were born overseas

YOUNG PEOPLE*



24.4%

of the population of Western Sydney (LGA) is under 18

*Data sourced from:
<https://profile.id.com.au/cws>
Artis777/iStock/Getty

PEOPLE WITH DISABILITIES*

♿ = 2% of population



almost 6%

of the population in Western Sydney reported needing help in their day-to-day lives

Help!

2018 EXCELLENCE IN RESEARCH FOR AUSTRALIA WSU DISCIPLINES ABOVE WORLD STANDARD



- Agricultural and Veterinary Sciences
- Biological Sciences
- Complementary and Alternative Medicine
- Cultural Studies
- Ecological Applications
- Ecology
- Electrical and Electronic Engineering
- Environmental Sciences

- Evolutionary Biology
- Forestry Sciences
- Microbiology
- Nursing
- Oncology and Carcinogenesis
- Pharmacology and Pharmaceutical Sciences
- Plant Biology
- Soil Sciences
- Zoology



- Applied Mathematics
- Biochemistry and Cell Biology
- Communication and Media Studies
- Environmental Science and Management
- Human Geography
- Human Movement and Sports Science
- Language, Communication and Culture
- Linguistics
- Macromolecular and Materials Chemistry

- Materials Engineering
- Mathematical Sciences
- Medical and Health Sciences
- Performing Arts and Creative Writing
- Psychology
- Psychology and Cognitive Sciences
- Pure Mathematics
- Sociology
- Statistics



THE FORGOTTEN FAMILIES

Families with young children placed in hotel quarantine in Australia during the COVID-19 pandemic were badly let down by the system, a Western Sydney University study finds.

About half a million people, including young children went through hotel quarantine in Australia.

3 GOOD HEALTH AND WELL-BEING



During the COVID-19 pandemic, lockdowns and quarantines were put in place around the world in attempts to quell the spread of SARS-CoV-2. A mandatory two-week quarantine for those returning to Australia, and travelling between states, was a challenging part of these restrictions, that approximately half a million people went through. However, as troubling results from a study by researchers at Western now highlight, families placed in quarantine in Australian hotels were frequently neglected in terms of basic necessities, from provision of age-appropriate food, to ensuring hotel rooms were safe for children under 10.

“For two years, Australia shut its borders, and all travellers were required to spend two weeks in quarantine in hotels, paid for by themselves,” says Catharine Fleming, child and infant nutritionist at Western, who conducted the study with her colleague, leading expert on ‘children in emergencies’, Karleen Gribble. “The government outsourced quarantine provision to private hotel chains, and — we were shocked to discover — handed it over to the police and the military to run, even though quarantine rules were incorporated into Public Health Acts.”

Fleming and Gribble followed the unfolding story online, reading and listening to parents’ social media posts. “The things we were hearing were disturbing enough for us to put a rapid plan

together for a research project,” says Fleming.

Once they secured ethics approval, the team sent out a public survey on social media to gather parents’ views and collate photographs and other evidence. The survey covered many different themes, from child feeding to safety protocols, and the mental health of both parents and children.

“One mother shared a photo of the meal of chicken nuggets and chips provided for her 8-month-old,” says Fleming. “People were repeatedly given inappropriate food for their children, and because they couldn’t go anywhere, they couldn’t source anything else. As a nutritionist, I had to capture these details and document them.”

In total, the researchers received responses from 170 different families across different states in Australia from June to September 2021. When they approached the hotels and health officials for comment, they received very little acknowledgement or response.

“Each group passed the buck to someone else, but what surprised me most was the fact that many hotels didn’t accept responsibility for the safety issues within their own rooms,” says Fleming. “One family with very young children were given a room 30 floors up, with a balcony that had no lock on the door.”

“I WATCHED MY SON GO FROM A HAPPY KID TO A DESPONDENT, CLINGY CHILD.”

The responses from survey participants indicated a range of other issues, both emotional and physical. “I found it really challenging watching my son go from a happy kid to a despondent, clingy child. The impact of no daylight or fresh air on both adults and children can’t be underestimated,” said one participant. “My toddler essentially had a mental breakdown. Started pulling out hair, banging their head against walls, crying inconsolably,” said another.

And it wasn’t only the children that suffered, another respondent stated that “I felt the psychological support I was provided was token. For example, I said I was looking for ways to cope better — given how angry I felt towards my children, and that I was sleeping three hours per night — and the response was ‘cope however you can.’”

“The system was set up for adults who could just about cope with being in one room with room service and an exercise bike for two weeks. But families’ and young children’s needs were completely overlooked,” said Fleming.

Worse still, Fleming notes, most people had very difficult reasons for traveling at that time, often concurrently dealing with grief. They would be traveling for essential reasons, to reach the funeral of a loved one or to be with family who needed support, not to go on holiday.

“Long-term, I believe these families will greatly impacted from their experience, and we hope to possibly investigate this further in the future,” says Fleming. “Two weeks is a long time in the development of very young children. Our data points to child and parent distress and trauma, which will have a lasting effect on some families.”

The researchers hope to drive policy change so that full consideration is given to families’ needs in future emergency situations. They are calling for a clear policy on families in quarantine that all providers must follow, including basic safety checks on rooms, access to age-appropriate nutrition, provision of practical essentials such as nappies, and developmental essentials including toys and access to an outdoor space to play. Fleming also says that there should be a dedicated family hotline number for parents to access immediate support as needed.

“I hope our study helps bring home to those in power that this situation cannot happen again,” Fleming adds. ■

NEED TO KNOW

- Returned travellers in Australia were required to quarantine in a hotel for 2 weeks at the height of the pandemic.
- Proper provisions were not made for those with families and small children.
- Researchers believe a policy change for families in quarantine is needed.

Multilingualism can lead to increased social and cognitive flexibility.



HOW MULTILINGUALISM HELPED FAMILIES IN LOCKDOWN

A survey conducted in Norway during the 2020 lockdowns adds evidence to a growing body of literature that demonstrates the benefits of multiculturalism.



The negative impacts of the COVID-19 lockdowns on children's social skills and parental wellbeing have been well documented. Now, a study conducted in Norway has found that some families report multilingualism was a source of wellbeing during the 2020 lockdowns. The study helps to highlight the importance of diversity in societies, says Western's School of Psychology senior lecturer, Liquan Liu.

Liu's research focuses on infant and child development. When the pandemic hit, he was visiting the

University of Oslo in Norway as a Marie Skłodowska-Curie Fellow. Soon after Norway's first lockdown was announced in March 2020,

a colleague, Elisabet García González from the University of Oslo's Center for Multilingualism in Society Across the Lifespan (MultiLing), approached him with an idea.

García González recalls that many linguists at the time were discussing how the lockdowns were changing how people communicated and used languages. This made her wonder how they were influencing language use in multilingual families. "Children were essentially forced to spend more time with their parents, so was this an opportunity for them to have more access to the home language?"

Liu and the former director of MultiLing, Elizabeth Lanza, were

immediately on board. Together, they adapted a survey which was made available to the public from the UK to Norway between May and June 2020.

The data they collected from 188 adult respondents with children up to six years of age revealed a consensus that multilingualism was a source of well-being for parents during the lockdown. There was also a positive correlation between parents who had a positive attitude toward multilingualism and their likelihood of engaging in more activities with their children in the home language, such as reading, communicating online with families abroad, and watching television shows.

"Here we saw that, even in this very dramatic situation of a pandemic, multilingual families really relied on spending time with family to promote language use with their kids," says García González. "And they used the language to find a source of well-being during the pandemic."

The researchers are very enthusiastic about their results. "We already know from the literature that there are benefits to multilingual and multicultural exposure," says Liu. "This study adds to the literature showing that the diverse environments — in terms of language, culture, and other factors — in which bilinguals grow up can contribute to social and cognitive flexibility," adds García González. "The more languages you speak, the more perceptions you have of the world," she explains.

"Such socio-emotional flexibility will lead to increased cross-cultural acceptance, and crucially for the future — a society in which people understand each other better," Liu says. ♥

NEED TO KNOW

- A Western researcher collaborated with Norwegian colleagues to show that multilingualism contributed to wellbeing during the pandemic.
- This adds to the literature demonstrating the benefits of multilingual and multicultural exposure.

IN THE VACCINE RACE, DON'T LET ETHICS FALL BEHIND

Australia's high ethical standards must not be lowered, regardless of the crisis at hand.

3 GOOD HEALTH AND WELL-BEING



As COVID-19 rapidly spread around the world,

scientists and pharmaceutical companies mobilized to test vaccines and continue to develop new formulations to try to keep pace with the virus' fast emerging variants.

But, no matter the urgency, clinical trial coordinators must not let ethical treatment of human test subjects slip, senior

lecturer, Patrick Foong, and lecturer, Grace Borsellino, from Western Sydney University's School of Law write in an analysis of Australian COVID clinical trial regulations.

"In the midst of a pandemic, there's pure desperation to search for a cure or vaccine, and when things are done in a hurry, it can lead to bad science," Foong says. "We must gain and keep public trust and confidence, especially in times of crisis, so there's no excuse to lower scientific and ethical standards."

Their paper, published in *Biotechnology Law Report* in June, found best-practice recommendations issued by the Australian government "commendable", but lacking in one aspect — an examination of

Ethics approvals were fast-tracked during the COVID-19 pandemic.

regulations on human challenge studies was missing. Human challenge studies, also referred to as controlled human infection trials, intentionally expose healthy trial participants to a pathogen to more quickly test vaccine efficacy.

Human challenge studies are legal in Australia and are conducted for diseases such as influenza, but not yet for COVID-19. Foong and Borsellino suggest specific guidance for human challenge studies should be incorporated into the national framework, like that adopted by the UK.

With Western Sydney law colleague, Sonia Allan they also examined lessons learned from unethical clinical trials throughout history. Their paper is a guide to those overseeing studies conducted in humans. "People who sign off on compliance for clinical trials are often not lawyers, but they're doing legal work," Borsellino says. "We thought the paper would be good for clinical trial managers so they understand there's a real legal part to it."

And it hit its mark: a number of clinical trial managers contacted the Western researchers to say the paper prompted them to consider ethics more deeply and inform future trials.

When COVID-19 hit, Foong and Borsellino realised vaccine trials would be conducted with unprecedented speed, so they set to work again. "The speed at which the vaccines were being produced during COVID-19, via an expedited ethics approval, had the potential to rush processes that historically would take longer," says Borsellino. "We wanted to

NEED TO KNOW

- Western researchers analysed Australia's COVID-19 clinical trial regulations.
- They found that explicit regulations relating to human challenge studies were missing.
- Aside from that, Australia's COVID-19 clinical trial guidelines were commendable.

highlight the importance of working with urgency while still keeping clinical trial ethics as high priority. We should not be lowering standards when developing vaccines during a crisis."

Aside from lacking explicit regulations for human challenge studies, the duo found Australian COVID-19 clinical trial guidelines could be a model for other countries. Periodic reminders to meet and maintain high human clinical trial ethical standards will be important for the foreseeable future, Foong says.

"We are not out of the pandemic yet. There's still a lot of work to do to show safety and effectiveness of new COVID-19 vaccines. And maybe in the next 10 or 20 years, there'll be another pandemic.

"So these articles are to remind ourselves, no matter how desperate we are, to calm down. We will not lower scientific or ethical standards, as this can be harmful for human participants and breaches international conventions." ■

COMING OUT WHILE LOCKING DOWN

LGBTQIA+ youth used social media to explore their identities during COVID-19 restrictions.

3 GOOD HEALTH AND WELL-BEING



Despite facing difficulties during lockdown, young lesbian, gay, bisexual, trans, queer, intersex, and asexual, (LGBTQIA+) people found solace and comfort from social media and online communities.

Loneliness, isolation, and uncertainty are familiar feelings to all who lived through the COVID-19 lockdowns of 2020 and 2021. As everyday activities came to a halt and people were told to stay home, many feared that loss of social contact would seriously affect wellbeing. Mental health professionals were particularly concerned that young LGBTQIA+ people would be trapped in queerphobic households, and at greater risk of physical or psychological violence. But a recent report from Western Sydney University suggests that, thanks to social media, the queer community continued to thrive.

Benjamin Hanckel and Shiva Chandra, sociologists at Western's Institute for Culture and Society and Young and Resilient Research Centre, combined their experience to conduct one of the largest qualitative studies of social media use by sexuality and gender diverse young people. Before his PhD, Hanckel was working in the youth sector and

observed how young people used technology and social media to improve their wellbeing. "I began looking into how young people use online forums to make sense of gender issues and diversity," he says. "I grew up in a regional Australian community while trying to make sense of my own sexuality, so I know what it's like when you can't talk openly about these things." As social media use soared, he started studying its broader role in LGBTQIA+ health and wellbeing, and the pandemic presented the opportunity to investigate how lockdowns affected the use of such platforms. "I also wanted to check how the community was faring during these challenging times," Hanckel adds, "and find

NEED TO KNOW

- Western researchers conducted one of the largest qualitative studies of social media use by LGBTQIA+ young people.
- Young people used social media platforms to explore their identities during lockdown.
- They shared their findings with Meta to ensure that the needs of LGBTQIA+ young people are considered in platform design.

LGBTQ YOUTH are ALMOST

3 TIMES



more likely to be harassed online than their straight, cisgender peers

GLSEN, CIPHR, & CCRC (2013). Out online: The experiences of lesbian, gay, bisexual and transgender youth on the Internet. New York: GLSEN.

* & ? # !

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out how people were navigating online spaces and using them to talk about gender and sexuality."

Chandra approached the study with a deep interest in how people construct identities and build relationships. "I'm curious about how people construct their identities, how they come to understand who they are, and how they relate to the important people in their lives," he says. "This project was an opportunity to extend my work and see how social media can make things better for LGBTQIA+ people."

In December 2020, Hanckel and Chandra recruited 16 to 30 year olds through ads on Facebook and Instagram. More than 1,100 young LGBTQIA+ people applied, and the researchers painstakingly narrowed them down to 65 participants that captured a range of sexualities, genders, and ethnicities. "It was great that so many people wanted to share their experiences," says Hanckel, "but limited time and resources meant we could not speak with all those who expressed an interest.

Despite this, our study allowed us to explore the ways these young people were engaging with social media during the pandemic, revealing similar trends across the board and showed how young voices can, and must, be brought into discussions."

Through interviews and focus groups, Hanckel and Chandra learned about each participant's lockdown experience and the role of social media in it. "We spoke about their family relationships and whether they were 'out' or not at home, and found that queer people may curate their social media use in consideration of their families," says Chandra. "There is still a lot of stigma in some households, and some people are scared of accidentally 'outing' themselves online." A few participants had to conduct their phone interviews away from home to avoid being overheard. Despite these added difficulties, young people often showed concern for their families. "Some people are not open about their gender or sexuality on social media

“I KNOW
WHAT IT’S LIKE
WHEN YOU
CAN’T TALK
OPENLY
ABOUT THESE
THINGS.”

Sixty five in-depth interviews were conducted with LGBTQIA+ young people about their experience with social media during lockdown.

because of the potential impact it could have on their parents,” adds Chandra.

Research has revealed that restrictions particularly affected mental health amongst young queer people. “As feared, some people were stuck in transphobic spaces,” says Hanckel, “with the added stress of having to behave in a certain way”.

STUCK AT HOME, FREE TO ROAM

Despite the concerns for LGBTQIA+ people during lockdown, the report revealed that in many cases, queerness flourished. Lockdowns gave young people time and space to reflect on their sexuality and gender, and social media platforms such as Facebook, Instagram, YouTube and TikTok gave them a place to explore their identity, find similar people, and make sense of living with a diverse gender and/or sexuality. As one participant said “Lockdown was when I started to question my gender, so social media — especially messaging

platforms — really helped me to figure out my identity.”

“It became clear that people were navigating the features of social media sites, curating their profiles, friendships, and visibility, to meet their needs,” says Hanckel. For some, this meant creating multiple profiles and identities in order to remain anonymous.

By engaging with the broader LGBTQIA+ community online, young people could create spaces where they felt comfortable and safe. This included finding content that resonated with their queerness, but also with their interests, such as baking and gaming, and the realms often overlapped. For queer people in rural communities, the internet is often the only place to connect with people similar to them. Lockdown provided an extended opportunity for young LGBTQIA+ people to be online and explore identity and find similar others.

But the study also shed light on where social media falls short for the LGBTQIA+ community.

Queer people continue to encounter hate speech online, reporting discriminatory content and comments across platforms, sometimes even within queer spaces themselves. Queer content was sometimes unexpectedly removed according to ‘guidelines’ that were unclear. Many participants also noted a distinct lack of diversity in terms of race, ethnicity, image, ability and neurodiversity within LGBTQIA+ spaces. “Diverse representation is really important,” Chandra says. “Just seeing someone like you can be validating and make your identity feel more real.” Yet, certain voices even within the queer community are often marginalised. “Asexual and intersex people seem to get left out, despite LGBTQIA+ supposedly being an inclusive term,” Chandra adds.

COMMUNITY ACTION CALL

In light of their experiences, participants felt that social media platforms must take a stance through better moderation

of harmful content and more diverse representations of LGBTQIA+ people. The most resounding message was the need for education rather than censorship when dealing with prejudice and discrimination. Some young queer people are playing their part by sharing information about sexuality and gender diversity in online discussions and seeking to educate others.

“Getting more people engaged in the conversation is a really wonderful way to move forward,” says Chandra, “and social media platforms should try to educate those who are unfamiliar with queerness.” One idea from the report was pop-up notifications when certain words are used, explaining why they are problematic and hurtful. Participants also called for social media platforms to be more sensitive to the fluidity of LGBTQIA+ identities by, for instance, providing inclusive, adaptable profile options.

“Findings have been shared with the Meta (Facebook and Instagram) development team to ensure that sexuality and gender diverse people’s practices and needs are considered in platform design,” says Hanckel. “We are elevating young people’s voices by bringing their lived experiences into discussions where they might have previously been invisible,” he says.

“Our findings really challenged the doom and gloom narrative around lockdown,” says Chandra. “The pandemic showed that people can experience positive development even when the world is in crisis, and online spaces help make that possible.” ♥

THE IMPORTANCE OF DIGITAL INCLUSION

A national project is exploring internet access for low-income families, and its impact on their education and lifelong learning opportunities.

4 QUALITY EDUCATION



The COVID-19 pandemic highlighted the vital role played by the internet and digital access, in bringing social and economic inclusion to different communities around the world — however, for many low-income families, it further entrenched existing digital divides.

Tanya Notley, an associate professor at Western's School of Humanities and Communication Arts, is a chief investigator in a national three-year ethnographic project led by Michael Dezuanni, a professor at Queensland University of Technology. The project aims to deliver a much richer understanding of digital participation in low-income households and develop new practices, policies and sector-wide solutions. Notley leads the Western Sydney research component.

"The project gathers insights from 36 families who come from six communities, ranging from far north Queensland to Tasmania and from regional, urban and rural locations," she says, adding that people from diverse backgrounds and experiences are represented.

Researchers at each of the locations worked with six different families who were

participating in the study, exploring the digital inclusion implications of children's home and school learning experiences, school leavers' transitions into work, and parenting in the digital age.

"Rather than one-off interviews, this study involved us making repeated visits to these families, spending time in their home and interviewing them, and getting to know them and the challenges that they face," says Notley.

BROAD SURVEY GIVES A NATIONAL CONTEXT

Notley says that the research was informed by the Australian Digital Inclusion Index, which measures digital inclusion in Australia annually across three dimensions — access, affordability and digital ability.

The index measures the extent of digital exclusion along a four-category continuum from 'Highly Included' to 'Highly Excluded'.

The 2021 report, 'Measuring Australia's Digital Divide', found that while 68% of adult Australians spent more time online in the previous 12 months, this pattern was not the same for all groups.

"The Index has overall showed very little improvement in digital inclusion and access to technology in low-income households," Notley says.

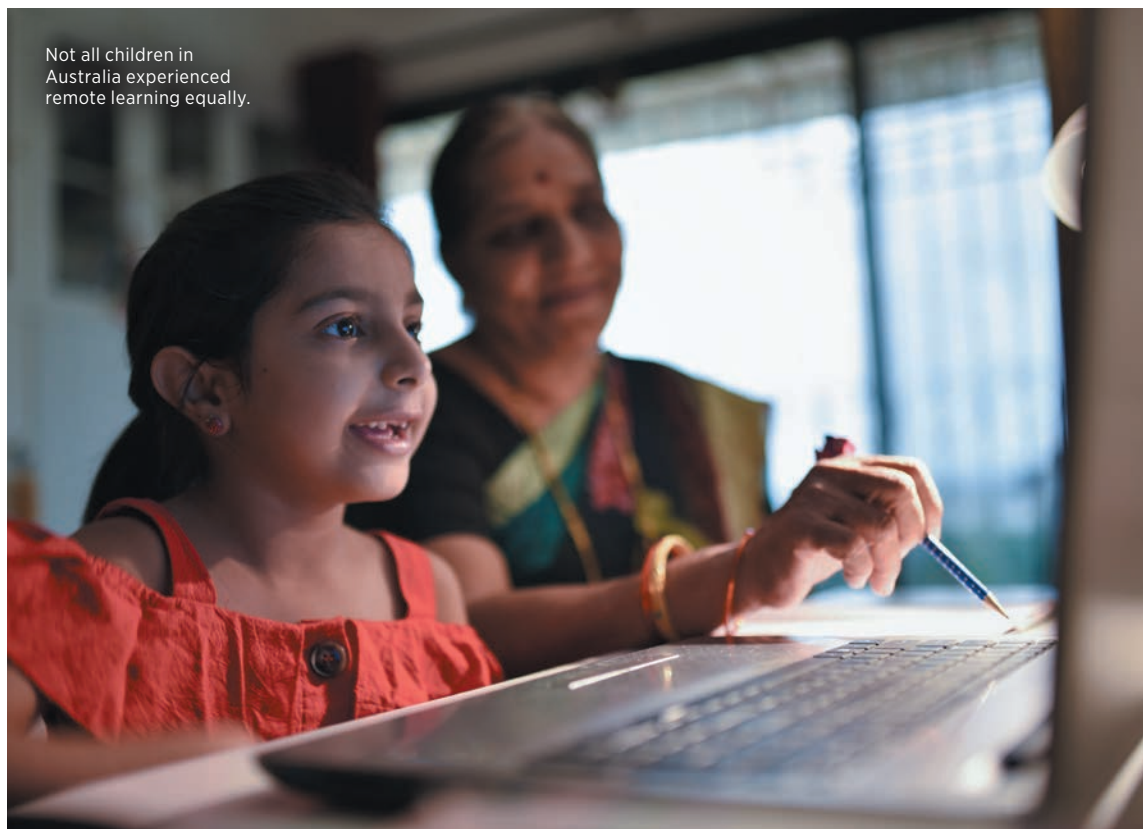
"Concerningly, that suggests a growing divide between low income and other households, so this project looks closely at the impact this could have on schoolchildren, and identify initiatives that could address this gap."

FAMILY FOCUS

Notley and her colleague, Jasbeer Musthafa Mamalipurath, visited six families living in a suburb in Western Sydney, and interviewed local community members and social services.

Each of the families were multilingual, four of the six were single-parent households, and each had at least one parent living in the home who had migrated to Australia, with several families having arrived as refugees. Notley says the families are emblematic of Western

Not all children in Australia experienced remote learning equally.



Sydney's position as Australia's most culturally diverse region and as a key arrival hub for refugees and new migrants.

Complicating the challenge for these low-income households, several of the parents had escaped violence and domestic violence situations, and in several households, parents and children faced serious health issues, in some cases not being treated because they can't afford the health care costs.

PARENT SACRIFICES TO GET TECHNOLOGY FOR CHILDREN

The first interviews occurred after Sydney's longest and most stringent lockdown, in the latter part of 2021, when both parents and children relied heavily on technology, particularly with school going online — and Notley says acquiring and maintaining technology was expensive and demanded sacrifices.

"There was a sense of desperation, and parents without enough technology in the home got locked into really bad deals in order to get access for their children," says Notley.

One single mother of four, with two children in primary school and who has limited English, signed on to a package deal with a phone, a small tablet and internet data— costing a third of her monthly income after rent, which she couldn't afford.

"The tablet broke just months after she got it, and she was deflated and exhausted with her experience with the company, attempting unsuccessfully to get it fixed," Notley says, adding that this left the family short of funds needed for their food and health care.

In another example, a single father with three teenagers who runs a small business despite poor health, prioritized technology over bills so his children didn't go without. "He's had to weigh up the cost of spending lots of money on repairs for phones that then only last another 4-6 months," says Notley — adding that this father spent money set aside for car registration to repair his son's phone.

LACK OF CONSISTENT SUPPORT AND SERVICES

Notley said that there were huge variations in technology support for children's education, even among six families in the same suburb.

Some schools provided laptops or data dongles, while others did not; for most families, this support was temporary — with some high school children expected to now return the laptops even though they still need them at home for their studies.

"People were put into really difficult situations as I think the government education departments were perhaps overwhelmed, and too slow to respond to what was really needed," says Notley.

She said some families were at breaking point, with parents not feeling confident they could support younger children to get online, and concerned about the rapid change in dynamics around technology use, including high-schoolers' use of dedicated laptops.

SHARED TECHNOLOGY BRINGS FAMILIES CLOSER

"One surprising pattern that emerged from the study was

NEED TO KNOW

- Digital inclusion refers to the capability to use the internet for day to day use
- The pandemic lockdowns highlighted the socioeconomic gap in digital access
- Western researchers are exploring the impact of this gap on learning opportunities.

the valuable role played by smart televisions in bringing families together, exchanging intergenerational knowledge and sharing cultural experiences," Notley says.

Parents could access and share content such as music, films and TV shows from their home country, making local language media a shared experience in the home. Families were using YouTube on the Smart TV to learn cooking, sharing content from school, looking up how to fix things and research health issues.

"Since the Smart TV is the only shared device in the household, used by all people and often together, it really holds a unique place in terms of supporting familial informal learning and cultural connection," says Notley.

LINK TO SUSTAINABLE DEVELOPMENT GOALS

The three-year project is a collaboration between researchers from Western Sydney University, Queensland University of Technology, Swinburne University, and RMIT

University, in partnership with the Good Things Foundation Australia, Infoxchange, Leep NGO, The Smith Family, and yourtown.

Now in its second year, the project has already delivered extensive insights and data, Notley says — such as a timely confirmation of the important role of internet access in Australia's pursuit of Sustainable Development Goal 4: to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

"Digital inclusion is now an essential prerequisite for all young people being able to fully participate in education and in turn employment post-school," says Anne Hampshire, who is head of Research and Advocacy at The Smith Family.

She says that this research is a unique opportunity to let the organisation hear directly from low-income families about the policies, programmes and initiatives that would best support their goal to achieve digital inclusion for young people in the Smith Family's long-term educational scholarship program.

"We're very much looking forward to the next stages of the project where we'll co-design with families the types of responses that will strengthen their digital inclusion," she says.

Notley says: "Every single house with kids at school needs to have the internet, and some families can't afford it, so we need to accept that this is critical for every student and work out how we make this affordable, so low-income households are not making choices between health appointments and internet access." ■

FORECASTING: AN INVALUABLE WEAPON AGAINST COVID-19

Modelling risks and assessing management strategies during the COVID-19 pandemic.

3 GOOD HEALTH AND WELL-BEING



As the spread of COVID-19 rapidly accelerated in March

2020, Omar Mubin, an expert in human computer interaction from Western Sydney University, and his PhD student, Belal Alsinglawi, recognised that their modelling skills could contribute to the global research effort.

The management of a global pandemic is immensely complex, as COVID-19 has shown. One tool that scientists and policymakers use to aid decision making is computer modelling, which provides insights into levels of risk for different population groups, and can predict the possible outcomes of containment

strategies such as lockdowns and social distancing.

Mubin's team has published six high-profile papers, including two in the *Journal of Medical Internet Research (JMIR)* and *Scientometrics*, on modelling different aspects of COVID-19, from case studies analysing impacts of the virus on different regions, to evaluating the effectiveness of contact tracing apps from different countries.

"We had never focussed on disease trajectories or risks before. Our experience is in social robotics and machine learning for education and health applications," says Mubin. "However, we understood that forecasting is a true asset in a rapidly changing situation such as COVID-19. Prediction tools can buy governments valuable

NEED TO KNOW

- An international team, including Western researchers, pivoted from modelling human-computer interaction to instead modelling the spread of COVID-19.
- Their model has been used to advise on a pandemic response strategy.

time, even a few days can make a real difference to hospitalisation numbers and mortality rates."

"Our projects quickly grew, and we combined forces with epidemiologists, medical experts, and computing and statistics experts across the globe in a multidisciplinary effort to keep pace with the evolving situation," says Alsinglawi.

The team used a case study approach, developing models that compared different regions. One key collaborator, Fady Alnajjar, an AI and robotics specialist at the United Arab Emirates University, was part of a taskforce assigned by the UAE University to provide advice on COVID-19 management in the country.

Mubin, Alnajjar, and co-workers conducted a case study comparing the spread of COVID-19 and hospitalisations in the United Arab Emirates with the state of Victoria, Australia. They also built a risk assessment model that could forecast estimated cases, basic reproduction numbers (or R-numbers), potential hospitalisations, the impact on the healthcare system and the efficacy of different social restrictions.

Their model was well-received by the UAE University taskforce, which used it to advise on a pandemic response strategy.

"The model informed key decisions, such as which hospitals should be mobilised and when," says Alnajjar. "Our research continues, although now it has shifted to managing life with COVID-19. For example, we are following patients who have long COVID closely, and keeping track of those people who have been infected multiple times."

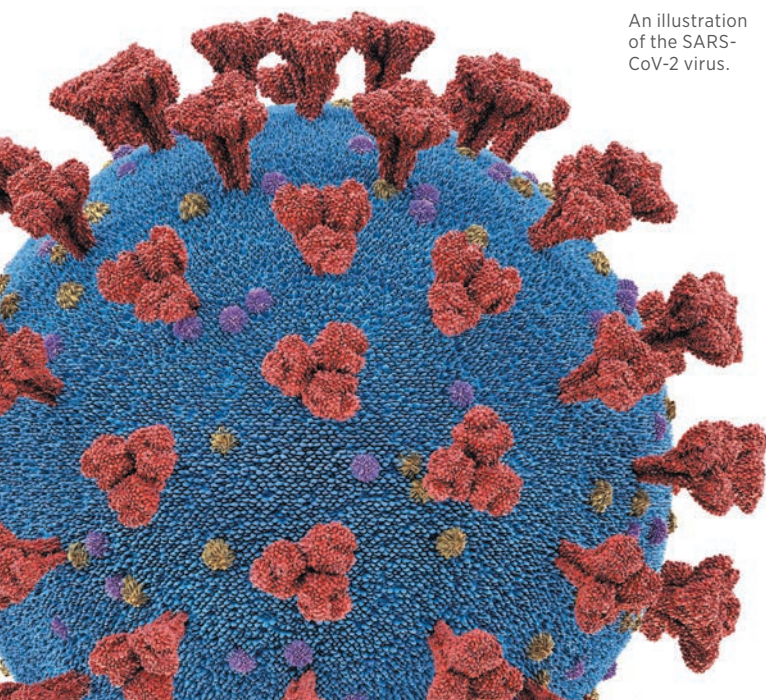
These earlier models did not include vaccination data, because no vaccines were available at the time. Their results, published in *Frontiers in Public Health*, confirmed that stringent lockdown measures did not necessarily correlate to a country's level of risk. The highest risk remained in those countries with ageing populations. Vaccines have transformed the trajectory of COVID-19 in many countries, notes Mubin, and the models are being updated to reflect this.

One silver lining of the pandemic is that COVID-19 has provided scientists with big data which they can use to train AI and machine learning algorithms for modelling future pandemics.

"Integrated, richer datasets lead to improved insights and higher preparedness," says Alsinglawi. "We will continue to analyse data on the ramifications of this pandemic for years to come."

"Whatever the need of the hour is, we will work to address it," says Mubin. "We will be involved in studies examining mental health following COVID-19, long COVID patient care, and we'll contribute to the management of life with COVID in Australia and beyond." ♥

An illustration of the SARS-CoV-2 virus.



PASIFIKA VACCINATION CAMPAIGN SUCCESS

How a project pivoted from diabetes to COVID-19 vaccines in Western and South Western Sydney Pasifika communities.

3 GOOD HEALTH AND WELL-BEING



Western Sydney University's Pasifika Preventing Diabetes Programme (PPDP), led by Distinguished Professor David Simmons from the School of Medicine, was about to start data collection at the start of 2020 when the pandemic forced it to pause.

Within months the programme was pivoted from preventing diabetes via face-to-face activities, to supporting COVID-19 vaccination efforts, led by Freya MacMillan from the School of Health Sciences, also a PPDP chief investigator.

Kate McBride, another PPDP chief investigator, and School of Medicine Senior Lecturer in population health, was already involved in the Western Sydney and South Western Sydney Local Health Districts (LHDs) COVID-19 efforts. Through her conversations with contact tracers, it quickly became clear that official public health messaging wasn't effectively reaching the area's large Pasifika community despite best efforts.

So McBride connected the LHDs with the PPDP team, who had already established contacts with Pasifika community members and leaders.

"By June 2020, we were starting to get out and engage with the community to find out what

the barriers were and how to overcome them," MacMillan said.

They found documents issued by the government were very information-dense, and directly translated written materials didn't quite hit the mark, according to lead PPDP community activator Ronda Thompson.

"Our languages are not straightforward languages for translation. We translate by meaning, and not so much word-for-word," Thompson, who is Samoan, said.

The team provided guidance on simple, culturally specific written resources and also distributed leaflets via church leaders and as text message attachments. Then at the end of 2020, Thompson and her colleague Shopna Bag began



A vaccination hub set up for the Pasifika community in Western Sydney.

interpreting public health orders on Samoan radio and social media videos, reaching more than 7,000 listeners and viewers.

"That visual of not just myself as a community member who speaks Samoan fluently, but having representation from our key health professionals had a huge effect. Community members felt valued," Thompson said.

The biggest barrier, MacMillan said, was getting community members to come forward for vaccination. This was partly due to a lack of official, culturally effective information about vaccine safety at a time when anti-vaccination misinformation was rife, but also due to practical hurdles, such as navigating the long, text-heavy online vaccine registration system, Thompson said: "I read English, but I struggled with the registration system."

Thompson, Bag and others spoke with church leaders about the importance of vaccination, set up vaccination hubs at churches and community centres, and registered community members.

So successful were their efforts that 300 recipients registered for a vaccine within five days. Within the first 10 weeks, 1,239 Pasifika people had received two doses.

During this time, Thompson and her colleague, Maleketa Felila from Western Sydney LHD, were information sources for the community to call, should they have questions or concerns about COVID or vaccines.

"We were able to create that sense of relief in our community, so next time they need a vaccine or booster they might think, I can make an appointment and it's not necessarily something to fret about," Thompson said.

That team of two has since expanded to a network of community activators and volunteers who continue vaccination support at the hubs.

And as for the diabetes programme? It's back on, MacMillan said, and has incorporated elements of the vaccination hubs, such as arranging large, drop-in community centres, which has sped up data collection. ■

NEED TO KNOW

- Western researchers have been working on a diabetes prevention project for Pasifika in Western Sydney.
- During the pandemic, the project pivoted to support COVID-19 vaccination efforts.
- Within 10 weeks of vaccination hubs being set up, 1,239 Pasifika people had received two doses of the vaccine.

FIXING FOOD INSECURITY

Providing a snapshot of the situation during the pandemic helps foster action in Tasmania.

2 ZERO HUNGER



With its rich soils, clean air and water, Tasmania has ideal agricultural conditions and is sometimes referred to as the 'Food Bowl of Australia.' The island is a utopia for food lovers, renowned for its quality meats, wines, fruit and vegetables. Its second city, Launceston was designated a 'City of Gastronomy' by UNESCO in 2021.

Despite this bounty, about one in four Tasmanians struggled to put healthy, nutritious food on the table during the pandemic, as Katherine Kent, a lecturer at Western's School of Health Sciences, and her collaborators discovered during a recent survey.

"Tasmania is a very large food producing state," says Kent. "But that doesn't mean people living there have access to that healthy food."

FOOD ON THE TABLE

Kent, a nutritionist by training, began studying the issue of food security a few years back while working at the University of Tasmania's Centre for Rural Health. Food security, says Kent, boils down to a single question: "Do people have the capacity to put healthy food on the table every day?"

It is a fundamental human right, she says, yet "even in a high-income country like Australia, we have problems with food insecurity."

Before the pandemic, an estimated 6% of Tasmanian households were considered food insecure — a level similar to the national average in Australia and in other developed nations. But when COVID-19 hit, Kent and her colleagues at the University of Tasmania were curious to find out how people's food purchasing and eating patterns had shifted.

To study this, Kent partnered with The Tasmania Project to create a set of survey questions and invited people to send in

When household earnings were reduced by

MORE THAN A QUARTER,
the chance of food insecurity
DOUBLED.



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Food insecurity leads to reduced consumption of fresh fruits and vegetables.

their answers online, promoting the questionnaire via social media and various community groups. The response they received was encouraging, with more than 1,000 people participating between May and June 2020.

UNPRECEDENTED HIGHS

The findings, however, were concerning. “Our analysis at the beginning of COVID-19, during the first Australian lockdown period, showed that 26% of households in Tasmania were food insecure,” says Kent, who continued working on the project after she moved to Western at the beginning of 2021. Of this group, 14% regularly went without food.

Certain people, they found, were at a particularly high risk of food insecurity. These included people living with a disability, families with dependents, and people living in rural areas. Those between 18 and 25 were also more likely to face difficulties sourcing healthy food.

The strongest predictor of food insecurity, however, was a reduction in household income. When earnings were slashed by more than a quarter, for instance, the odds of food insecurity doubled. “This wasn’t just limited to those in economically vulnerable households,” says Kent, “but a loss of income at any level above 25%.”

This translates to families consuming fewer fresh foods, such as fruit and vegetables, says Kent’s collaborator, Sandra Murray, a nutritionist and dietitian at the University of Tasmania. “What usually happens is that people start to rely on tummy fillers, for example lots of bulky, highly-processed foods

NEED TO KNOW

- Food security is defined as the capacity to put healthy, nutritious food on the table every day.
- COVID-19 raised the number of food insecure households in Tasmania to 26%, up from pre-pandemic levels of just 6%.
- Food insecurity remains high, but investing in sustainable community-based solutions can help alleviate the situation.

such, as pasta and rice.”

She recalls meeting an unemployed parent with two young children, who was struggling to make ends meet after their partner died. “The parent was relying on getting hampers of pies and pastries from the local bakery so that their children could take lunch to school and seem normal,” says Murray.

Kent chimes in with another story of a parent who admitted to eating less on most days “so the kids can have more,” as well as another who said her family began skipping one meal a day, up to five times a week, when COVID-19 hit.

“In the short term, it’s probably fine,” says Murray. “But in the long run, you’re going to become malnourished, and you can get quite sick, if you miss out on your core food groups.”

Food insecurity doesn’t just cause people to suffer physically, but mentally as well due to

“that feeling of inadequacy and the stigma of having to rely on charity” she adds.

In 1948, Australia was one of the first countries to sign the United Nations’ Universal Declaration of Human Rights — a historic agreement outlining the rights and freedoms all people are entitled to and was enshrined in law. “The right to food access is one of those rights,” says Murray. “So people should have dignity and be self-sufficient and able to make their own choices about how they access food.”

LINGERING EFFECTS

To understand what food security looked like on the ground level, the researchers dug deeper into their findings. Apart from having less money available for food and consuming less fresh produce, food insecure households also reported finding it more difficult to get to the shops and shopping less frequently due to the restrictions in place and a lack of transport options.

When they did make it to the supermarkets, they noticed there were fewer food choices and that what was offered was “of a much poorer quality and that it went off more quickly,” says Kent. Consequently, families were less likely to have food stored at home and roughly 40% of respondents said they had begun growing more of their own food.

When the team repeated the survey a few months later, in September 2020 and May 2021, they found that food insecurity levels dipped — but only slightly to 20% and 23%, respectively. “We thought it was going to return to pre-COVID levels after the restrictions started



People rely more on bulky, highly processed foods rather than vegetables during food insecure periods.

easing, but that wasn’t the case,” says Kent.

This partly coincided with the government withdrawing some financial support, including the JobKeeper and JobSeeker Payments. But nonetheless, the prevalence of food insecurity has “remained very, very high, and that’s a worry,” says Murray.

“FOOD INSECURITY IS A PROXY FOR ECONOMIC HARDSHIP.”

TOWARDS FOOD RESILIENCE

One piece of good news, however, is that their report appears to be making waves. The team’s findings were included in the World Health Organization’s

recent call for governments to address the social determinants of health. Closer to home, the research has informed multiple reports to the Tasmanian Premier’s Economic and Social Recovery Advisory Council. It was cited in the state’s 2021–2024 food security strategy *Food Relief to Food Resilience*.

“We believe this research added evidence the state government could not ignore, and led it to act on the issue,” says Charlie Burton, a policy manager at the Tasmanian Council of Social Service (TasCOSS). “It’s been crucial to the advocacy work that TasCOSS and other stakeholders have done in the last 18 months on food insecurity in Tasmania, and really highlighted the scale of the issue and the groups most at risk of experiencing this.”

Importantly, the team’s research has helped increase funding for emergency food

relief, as well as for more sustainable long-term solutions, such as community-based gardens, food hubs, social enterprises and other initiatives.

“There are a lot of problems with the emergency food relief sector,” explains Kent. For instance, people can feel embarrassed to use such services, with only 5% of food insecure Tasmanians doing so, preferring instead to buy food on credit or to borrow from family and friends.

Another reason to tackle food insecurity is that it will also help address its underlying cause. “Food insecurity is really a proxy for poverty and economic hardship, as well as other factors like housing stress,” says Murray.

“If we can address those root issues to do with the social determinants of health, then we can enact change for food security,” says Kent.

“I think we can absolutely end hunger in Australia.” ♥

PANDEMIC BLUES: HOW ISOLATION HIT THE YOUNG

COVID-19 isolation measures has increased the mental health risks for a vulnerable age group.

3 GOOD HEALTH AND WELL-BEING



Researchers from Western's Translational Health Research Institute who had been investigating the determinants of adolescent health and well-being seized on a unique chance presented by the COVID-19 pandemic.

When physical distancing interventions were suddenly introduced in March 2020, Sithum Munasinghe and his colleagues, Sandro Sperandei and Andrew Page, had to think on their feet; they recognised that the unprecedented circumstances brought an opportunity. "No-one could pre-plan this type of research," Munasinghe explained. "As we had captured well-being data before and after physical distancing measures

were implemented, we were able to examine the mental health implications of these measures on young people."

Funded by the Australian Prevention Partnership Centre, the project used social media to recruit approximately 600 teenagers aged between 13 to 19, from the Western Sydney area — in the 2021 census about 7.7% of the Western Sydney LGA population were between aged 12-17 years. Data collection involved obtaining daily, weekly, and monthly data on diet, physical activity, sedentary behaviour, and psychological well-being using short questionnaires and sensor measurements; all using smartphones. "We were able to use Ethica's sensor-based app installed on participants' smartphones to capture movement-related data; for example, whether someone was walking or running," says Munasinghe.

"The most difficult part of data collection in longitudinal studies is the follow-up," explained Sperandei. "We were able to send follow up surveys to the participants' smartphones using the app, making it very convenient and negating the need for cumbersome mail-out processes."

The researchers used these data in combination with information on hospital presentations reported by their partner research agency, the Mental Health Service at the Western Sydney Local Health District. "We had a significant increase in young people coming to hospital, more than any other age group," explained Vlasios Brakoulis, Director of the Western Sydney Local Health District Mental Health Service.

The data showed clear changes in behaviour among adolescents before and after the enforcement of COVID-19 physical distancing policies. "We saw a significant decrease in self-reported fast food consumption, physical activity and happiness levels after physical distancing policies were put in place," says Munasinghe. "On the other hand, internet use, time spent on social media, and time in solitude had significantly increased."

These findings, published in the *Journal of Adolescent Health*, illustrate that physical distancing measures had negative impacts on adolescent mental health. "Social isolation is considered a risk factor for developing mental health conditions," Munasinghe stated. "Teenagers need activities that keep them socially engaged, connected and physically active."

Importantly, the research findings prompted the government to increase funding in mental health services for young people. "The findings picked up a

NEED TO KNOW

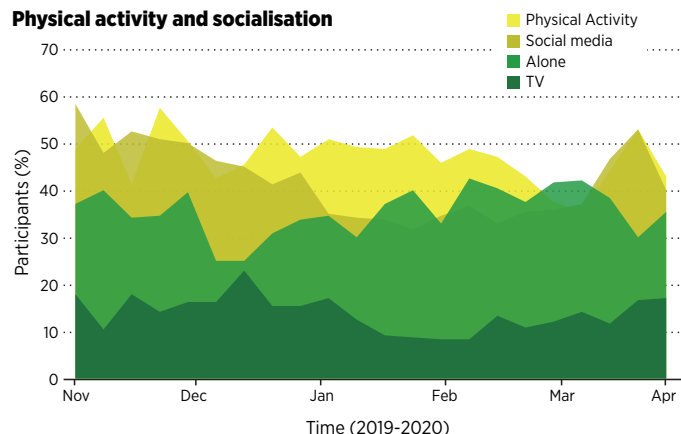
- Adolescent behaviours provide useful indicators of longer term well-being.
- Physical distancing as a result of COVID-19 significantly increased social isolation and decreased happiness levels among Sydney adolescents.
- Sensor-based measurements via smartphones proved to be a convenient data collection approach.

strong signal that young people are experiencing the most distress during this crisis, and gives us some hints as to why this might be the case," says Brakoulis. "It demonstrates that we needed to improve support services for young people, and that's exactly what we've done."

The research team are seeking to extend this study to determine participants' mental health trajectories and subsequent hospital admissions related to self-harm. However, Brakoulis notes that we all have a role to play in safeguarding young people's mental health. "It's important that we keep an eye out for our young people, check on them regularly, support them where you can and refer them for help, such as the mental health services available, if you think they're not coping."

Sperandei is also hopeful that this data collection method will be adopted in other studies, "We are attempting to use this method with other projects, using wearable devices." ♥

Physical activity and socialisation



CARING FOR THE MOST VULNERABLE

Hastily applied pandemic restrictions let down those with intellectual and developmental disabilities.

10 REDUCED INEQUALITIES



“While everyone lost freedoms during the pandemic, and certain things that we take for granted, I don’t think we lost as much as the most vulnerable in the community,” says Nathan Wilson, an associate professor of nursing at Western Sydney University.

Wilson is an expert on the intersection between intellectual

disability, social inclusion, and the nursing workforce. He has long been interested in research that can improve the lives of people living with disabilities. “People with intellectual and developmental disabilities are some of the most marginalised Australians, and suffer more social exclusion than any other group,” he adds. Just under 3% of Australia’s population have an intellectual or developmental disability, and this is similar across all Western countries.

So when SARS-CoV-2 struck, and brought with it stay-at-home restrictions, visitor restrictions in health and aged care facilities, staffing shortages and the need for everyone to wear personal protective equipment, Wilson was immediately concerned about how these measures would affect people with intellectual disabilities.

“In many cases they’ve got very few friends, very few

meaningful relationships beyond mum, dad, brother, or sister that might come and visit,” he says. When stay-at-home restrictions were declared, they lost that vital connection to family, they lost the routines of excursions and activities, and there was nothing to take their place.

A LOSS OF AGENCY

To learn more about the effect of pandemic restrictions on this vulnerable group, Wilson contributed to an international study led by Melissa Desroches, an expert in community health nursing from the University of Massachusetts, Dartmouth in the USA. Collaborators included nurse disability researchers from the USA, Canada, the UK, Ireland, New Zealand, and Australia.

“We have a segment of people with developmental disabilities that don’t really have family and were institutionalised” Desroches says. “In many cases, their nurses and carers are the people who know them best and can speak to their experiences.”

The study, which was published in the *Journal of Policy and Practice in Intellectual Disabilities*, surveyed 369 nurses from across North America, Europe, and Australasia about the challenges they faced caring for people with intellectual and developmental disabilities, such as Down syndrome, during the pandemic, how they attempted to overcome those challenges, and the support they received.

A key finding from the study was how people with intellectual and developmental disabilities experienced a major loss of opportunities for activity and socialisation during lockdowns. “Self-determination for this group of people is a challenge, and a lot of time and effort goes into enhancing their self-determination,” Wilson says. But stay-at-home restrictions effectively brought an end to that, and nurses surveyed ranked the challenge of ensuring appropriate day programming or educational services as the greatest issue they faced, closely followed by barriers to enabling socialisation with family and friends.

“Something as simple as a daily visit to a play area for a swing, or a walk through a park, can make the world of difference when it comes to managing the well-being of someone with intellectual and developmental disabilities,” says Wilson.

Yet that choice was largely removed without consideration for the consequences in this group.

This unilateral decision-making wasn’t just a failing of the Australian system: “For people with developmental



NEED TO KNOW

- People with intellectual and developmental disabilities are some of the most marginalised people in society.
- The COVID-19 lockdowns and restrictions disproportionately affected them.
- An international collaboration, including a Western researcher, says that people with intellectual and developmental disabilities and their carers should be included in planning for future health crises.

Socialisation with family and friends makes a world of difference for people with intellectual and developmental disabilities.



disabilities that decision was made for them through state systems and bureaucracy, regardless of country,” adds Desroches.

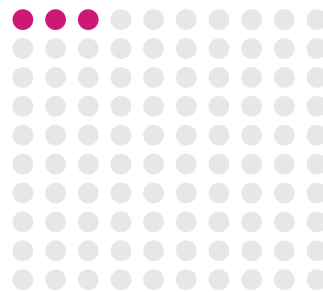
One of the effects of this loss of agency was an increase in mental health issues. Nurses in the survey observed that there was also an increase in pharmacological treatments, such as psychotropic medications, for mental health in those they cared for.

Nurses also said that pandemic public health guidelines for those working with people with intellectual and developmental disabilities were complex, conflicting and often unclear. They also sometimes failed to take into account the unique needs of

this group, and nurses faced the additional challenge of trying to communicate public health guidance to their patients.

WORKING TOGETHER

Wilson argues that not enough attention or effort was put into engaging with people with intellectual and development disabilities and their carers, to enable them to have more say and participation in decision-making around their wellbeing. “It’s about creating some way of acknowledging them as people with rights, that have a right to meaningful relationships, as opposed to viewing them as ‘we have to protect them at all costs, and it’s going to be good for them,’” he says.



To that end, Wilson, Desroches and other researchers are working towards building an international collaboration of researchers in the disability nursing space. Their hope is to produce more research that can inform a more tailored, targeted and dignified approach to public health measures for people with intellectual and development disabilities.

JUST UNDER 3% OF AUSTRALIA'S POPULATION

have an intellectual or developmental disability

“As we plan for future public health crises, whatever they may be, we know that people with developmental disabilities have been disproportionately impacted,” Desroches says. “We really need them and their carers, whether family members, nurses, or direct support professionals, to be involved in that planning as well.” ■

The experiences of pregnant women and midwives during the COVID-19 pandemic were examined in two large research projects.



HOW PREGNANCY CARE WAS HIT BY THE PANDEMIC

The critical role of midwives in ensuring continuity of care of pregnant women during the pandemic has been demonstrated by Western researchers.

3 GOOD HEALTH AND WELL-BEING



As COVID-19 lockdowns and harsh restrictions separated people in Australia,

researchers across disciplines rallied to examine the impacts. Two teams from Western Sydney University's School of Nursing and Midwifery wanted to find out how pregnant women, midwives and midwifery students were faring.

"There were huge concerns among midwives," says Hannah Dahlen, professor and an associate dean of research at Western. "Everything was shutting down. Women were losing contact with their midwives. Everything was moving to telehealth. And there were some worrying practices, like separating mothers with confirmed or suspected COVID-19 from their babies, despite a lack of evidence that this was a benefit. I realised we were

heading for a really big problem."

"Midwives were having to quickly adapt," adds Virginia Stulz, associate professor of midwifery at Western. "We believe that continuity of midwifery care is the gold standard. We wanted to see how midwives were providing woman-centred care during the pandemic, because we had heard it was really difficult with the restrictions."

And so, two large research projects were born.

Dahlen received initial funding from Maridulu Budyari Gumal — the Sydney Partnership for Health, Education, Research and Enterprise (SPHERE) — to establish the Birth in the Time of COVID-19 (BITTOC) study. This was followed by grants and support from Western, Charles Darwin University, the Canadian Institutes of Health Research and the Michael Smith Foundation for Health Research, Canada. A 15-strong team of researchers from six universities, including three international collaborators,

developed surveys to measure the impacts of the pandemic on pregnant women and their babies, and also on midwives and midwifery students.

Stulz led 10 members of the Trans-Tasman Midwifery Education Consortium to conduct a qualitative interpretive descriptive study based on in-depth interviews with midwives working in all modes of care

across Australia. The results were published in an article in *Women and Birth* in September 2022.

A tremendous amount of data has been generated by both studies with interesting results so far.

WHY EXPERIENCES VARY

Dahlen and her team developed a national survey that asked women who were pregnant during the pandemic, or had babies since the March 2020 lockdown, a series of questions to assess what was happening in their lives, and what their levels of stress were. The survey, performed in 2020 and repeated in 2021, asked more than 6,000 women about their experience of giving birth during the pandemic, their mental health, and infant care. These women are now being followed up with surveys assessing child development and maternal health at two, six, 12 and 24 months. Additional questions were added to the follow-up surveys to examine evolving issues such as vaccine

NEED TO KNOW

- Continuity of midwifery care is regarded as a gold standard.
- The COVID-19 pandemic disrupted the level of support women received during pregnancy.
- Two studies by Western researchers have examined the effect of this on both midwives and pregnant women.

hesitancy and the compounding impacts of the pandemic, and eastern Australia floods, on maternal mental health.

Her team's first published study was based on the positive aspects of the experiences of 635 pregnant women and 1,021 women who had given birth. The team found that some women appreciated the move towards telehealth services, partners working from home, and fewer visitors in the postnatal period.

"At first, fewer visitors made me sad, but then I realised things were less rushed and we could just focus on baby, and also my husband worked from home so I had more support," wrote one woman in her questionnaire.

These findings come with a caveat. "The story was different for women in unhealthy relationships, having their first baby, or who had family living at a great distance," explains Dahlen.

The second study published by Dahlen's team, was based on responses from 1,219 pregnant and 1,419 postnatal women. It reports a higher likelihood of elevated perinatal depression in women who lived in Victoria, which witnessed some of the most stringent pandemic restrictions, and among women with lower education, past or current mental health problems, were over the age of 35, or experienced greater family discord or less social support from friends. A third study showed women who had good resilience and tolerance of uncertainty managed pandemic stress better and were less likely to have postpartum anxiety.

"I wouldn't wish pregnancy in a pandemic on anybody," wrote a respondent. "It honestly made me never want to be pregnant again."

Despite many challenges, the



Virginia Stulz, an associate professor of midwifery (left) and Hannah Dahlen, a professor of midwifery and associate dean of research (right), both at Western.

studies are finding that midwives have been strong advocates for women during the pandemic and the model of care matters.

KEEPING THINGS NORMAL

Stulz's team conducted in-depth interviews with 26 midwives working in all models of care (private/public hospitals, group practice and privately practicing) in all states and territories of Australia, with data collected between May and August 2020. The research found that midwives focused on keeping the woman at the centre of care, which meant sometimes pushing boundaries and bending rules.

"I have just tried to keep everything as normal as possible in everything that I do," one midwife said in an interview. "I will not lose sight or focus; my job is the same. I am a midwife."

This was not easy at a time of chaotic and often-changing managerial and governmental decisions.

"Managers at maternity hospitals could have made decisions based on evidence, but they were just making it up as they went along," explains Stulz. "That's why midwives stood up and said

we're not doing that because it's not evidence-based."

An example is a decision by some practices to wash babies immediately after birth. "Babies are not normally washed for 24 hours because the vernix on their skin builds up immunity," says Stulz. Also, some practices banned water births or imposed short 15-minute postnatal midwife visits at 1.5-metre distances. Many midwives objected to these decisions, saying water births actually allowed for more social distancing, while distancing during postnatal visits made breastfeeding help difficult and did not make sense if the midwives had just spent 12 hours with the mother during labour.

"The midwives said they didn't want COVID-19 to be the centre of care. They wanted the woman to be the centre of care," says Stulz.

In addition to acting as advocates for their women, midwives also found ways to navigate the system and help midwifery students complete their requisite continuity of care experiences as part of their midwifery degree. Some hospitals had placed restrictions on their involvement.

NEXT STEPS

Even outside a pandemic, midwives face significant challenges. "What we know now is that many midwives feel burnt out," says Dahlen. "Many are traumatised. They are often not well supported and the chaos of the pandemic with policy being made up on the run has had an impact. There are a lot of things we could do better to keep midwives within the workforce. If we value women, we need to value the midwives."

Dahlen and her colleagues are now investigating the factors that lead to burn out among midwives and what drives them away from the profession. Her team is also collating more data from the BITTOC surveys to examine the impacts of maternal stress during pregnancy on infant development, and how the model of care may have a protective effect. "What is really fascinating is that we're starting to see the impacts on neurodevelopment at six months," she says. Further results will also be published on the BITTOC surveys of midwives and midwifery students.

"The next question will be: We've had floods, we've had fires, we've had a pandemic. We're heading into a world that is going to have to deal with some really tough times. What can we do in emergency situations to bolster women and protect their mental health and in doing so protect infant development?" asks Dahlen.

Midwifery is one of the oldest professions on Earth, says Dahlen. Researchers at Western are finding ways to nurture this profession and the pregnant women at its centre. ■



ENGINEERING SAFE AND SUSTAINABLE PROTECTION

Empowering flood-prone communities to co-design their own early warning systems.

A villager in Afghanistan clearing mud and debris from his home after a flash flood in 2020.

11 SUSTAINABLE CITIES AND COMMUNITIES



“Engineers tend to make things and send them out

without collaborating with the communities who use them. I decided this needed to change,” says Spyros Schismenos, a humanitarian engineer from Western Sydney University. Guided by members of rural riverside communities in Greece and Nepal, Schismenos and an international team of researchers are developing a renewable-energy-based, flood-warning system that could provide power and protection to remote and vulnerable populations.

The increasing intensity of storms is a worrying prospect for the 1.47 billion people already living at risk of severe flooding, who often have the fewest resources. “In rural communities worldwide, around a billion people have no access to electricity,” says Garry Stevens, a member of the team and a clinical psychologist from Western’s School of Social Sciences. “And of those in flood-risk areas, very few have an evacuation plan.” This is



A surging river in Aggitis, northern Greece.

particularly problematic in areas with a large number of elderly and frail people, who need more time to get to safety. An early warning system is essential.

“Flash floods come fast, and the traditional warning systems — a stake in the river or water lines painted on a rock — may not alert an entire community in time,” says Stevens. “Plus, they only work during the day. Half a village could be lost while people are asleep, so you need a really loud warning system.”

Hydropower for Disaster Resilience Applications, or ‘HYDRA’, is one of a rising number of humanitarian engineering projects that prioritise local knowledge and opinions in the design of sustainable solutions. Humanitarian engineering involves working with local communities to build disaster resilience within a sustainable development framework. “It gives people the capacity to protect their progress and assets,” says Stevens.

As Dimitrios Emmanouloudis, Schismenos’ co-author and director of the UNESCO Chair on

Conservation and Ecotourism of Riparian and Deltaic Ecosystems, points out, flood warning systems across Europe and beyond tend to focus on large areas. “While these predict extreme weather events most times, they cannot detect small scale events like flash floods,” he says. “This project has brought the focus to a local level, making the research more precise and reliable, and international organisations such as UNESCO are keen to see this kind of work continue.”

HYDRA POWER

The idea for HYDRA occurred to Schismenos during his master’s degree in disaster management at the International Hellenic University in Greece, when he observed both hydropower and early warning systems in action, but were never used together. He also noted that renewable energy is rarely used in disaster management, and a combined system seemed like an obvious solution. However, he was wary of foisting something on a community without first finding

out what people want and need.

When Schismenos joined Western as a PhD student and began working with Stevens, who was already leading research on sustainable development in water resources and disaster management, HYDRA was transformed from a kernel of an idea to an exciting international collaborative research initiative.

Working with their colleagues overseas, Schismenos and his team selected two remote communities that fitted the vulnerability criteria. Aggitis, a small village in northern Greece has fewer than 100 residents, many of them elderly, and relies on farming and ecotourism for income. Floods are frequent, especially in spring due to snow melt from nearby mountains. A few renewable energy systems are in place, including a small hydropower station and solar panels on some homes. By contrast, Dhuskun, in central Nepal, has more than 3,000 residents and a much lower income from its farming activities and trade. The town has a small hydropower station that is often

NEED TO KNOW

- Severe flooding disproportionately affects those with the fewest resources.
- A Western team is working with communities in Greece and Nepal to design an early warning system called HYDRA.

put out of action by landslides or floods, which are common during spring and the monsoon season.

The team selected local participants with diverse perspectives, from residents and business owners, to emergency workers and academics. Participants, through two rounds of individual, open interviews conducted in their local languages, confirmed that flood risk and energy supply were a priority. “We then created an evidence-based catalogue of solutions,” says Schismenos, “and asked which people preferred.” Options included solar panels, hydropower, standalone flood warning systems (sirens and SMS), or combinations of the two. The combined hydropower flood siren system was a clear favourite, getting 15 of the 16 votes.

AN INTEGRATED SYSTEM

“Under normal conditions, hydropower generates energy for the community, but when a flood is coming, sensors detect a change in the water flow, and

the system becomes an alarm,” explains Schismenos. It would also be rigged up to lights along the evacuation routes and in shelters. The energy is stored in batteries, so if the hydropower unit fails during the floods, there should be 12 hours of power backed up. “The system is all automated, low-tech, low-cost, and DIY,” says Schismenos. “We work with the community so they know how to build and maintain it.”

“One major challenge is debris,” says Stevens. “The system must be set up so that it is protected, and if it does fail, the batteries must have enough power backed up to assist the evacuation and keep people safe.” In DhukuSun, participants suggested the hydropower unit should be designed to float above the flowing tide of debris.

Through discussions with locals, conducted remotely due to COVID-19, the team gained insights (later published in the journal *Geosciences*) that could help shape disaster planning. All participants highlighted the importance of community

cohesion, and that people would always help vulnerable friends, family or neighbours to evacuate. While older respondents still preferred siren systems, everyone agreed that mobile phones were essential in an emergency.

Many locals were worried that the system would be too expensive, but the team are confident they will have funding. “Local governments are interested in supporting this, as it will provide power and save money,” says Schismenos. “It will also attract tourists who want to see sustainable development in action.” And the benefits of



1.47
BILLION
people live at
risk of
severe flooding

HYDRA are not limited to low-income countries. “Supplementary energy systems have appeal in high-income countries, as hydropower can top up and protect their power supply,” adds Stevens.

The project has attracted a lot of international interest, including from Guatemala, Taiwan, Brazil, and particularly from regions in protected areas. In Thailand, for example, floods regularly devastate rural areas and big cities alike. Wasi Phul, a civil engineer working for the Thai government, thinks that HYDRA could help by bringing disaster management down to a local level. “People won’t have to wait for a text alert from the national warning system, which could arrive too late,” he says.

In the lab at Western, which funded the work between 2019 and 2022, the team are in the middle of R&D and have been testing their hydropower system to find the best turbines and to measure response to turbulence. They are now working out how to shield it from debris, which could present obstacles, but they hope to be running site tests using their prototype in Agattis in 2023. Once the system is working well in the field, the team will take it to Nepal.

The cross-disciplinary project addresses the UN Sustainable Development Goals, including those on Affordable and Clean Energy (7), Industry, Innovation and Infrastructure (9), and Sustainable Cities and Communities (11), as well as the Sendai Framework on Disaster Risk Reduction. “The challenge is how to address all of these goals in an efficient way at a small and local level,” says Schismenos, “which is why we must keep engaging with communities.”



Schismenos at the River Simulation Facilities at the International Hellenic University, Greece.



“SOME OF
THE REPORT’S
FINDINGS
WERE
HEART-
BREAKING.”

Globally, one in
seven people
live with a
disability.

DISABILITY IN TIMES OF COVID

Special journal volume examines how people with disabilities coped with COVID-19 restrictions.



As a child growing up in Bangladesh, Sharin Naomi quickly observed that people with disabilities were considered “outcasts and objects of shame, hidden and isolated from vibrant public life, their parents and relatives often stigmatised as sinners.”

Her worldview, however, was transformed after attending a graduate course taught by Karen Soldatić, a professor at Western’s School of Social Sciences. “Karen’s way of teaching and research inspired me to research in collaboration with people living with disabilities,” says Naomi, who is now an assistant professor at the Asian University for Women in Chittagong, Bangladesh.

So when Soldatić, an expert in global welfare regimes, reached out to her to work on a special pandemic project, Naomi jumped at the chance.

Soldatić wanted to document how COVID-19 was impacting people living with disability. She was interested in the situation

within South Asia, specifically in Afghanistan, Bangladesh, India, Nepal, Pakistan and Sri Lanka.

“We wanted to create a special journal issue that would take a step forward in countering the global dominance of Northern representations of the disability experience during COVID-19,” says Soldatić. “Also, South Asia was one of the regions most badly hit by the Delta variant.”

The goal was to compile a series of research papers for the journal *Disability and the Global South*, with each paper focusing on a particular country. Soldatić and her co-editor, Nilika Mehrotra, a professor of Social Anthropology at India’s Jawaharlal Nehru University, tapped into their network of collaborators across the region, including Naomi.

The aim was to gather information that might inform future policies to “ensure persons with disabilities are included in state responses to the ongoing pandemic, and future ones, for their long-term wellbeing,” says Soldatić

DENIED INFORMATION

Globally, one in seven people live with some type of

disability, many are neglected, vulnerable, and continue to face discrimination on a daily basis. Moreover, most South Asian countries don’t have very disability-friendly policies, says Mehrotra, whose research focuses on social anthropology, gender, and disability.

COVID-19, as the researchers discovered, has only served to exacerbate existing inequalities.

Arpeeta Mizan, a collaborator based in Bangladesh, agrees. “The pandemic has pushed people with disabilities further into the margins of society,” says the assistant professor of law at the University of Dhaka. Many, for instance, struggled to get information during the pandemic because of their disabilities. Mizan recounts how the Bangladeshi government made the most of their announcements about relief aid via loudspeakers on the main roads. “The lack of use of sign language and braille materials, and focus on main streets meant that the announcements often didn’t reach persons with disabilities — especially those with hearing and visual problems,” she says.

Her collaborators in Nepal and India report similar stories.

But matters were compounded further in those two countries because of the multiple languages used — more than 120 in each, as compared to roughly 38 in Bangladesh. “Information was not disseminated properly nor available in an accessible format or in local languages,” says Pratima Gurung from Nepal’s Tribhuvan University, who contributed to the special report. This left people “confused and terrified ... with no answers” to help them understand the situation.

Gurung recounts speaking to a woman with a severe spinal cord injury in a remote part of the country. The woman, who lived alone, didn’t receive any information and was unaware of local relief distribution efforts. Even if she did, Gurung says, she wouldn’t have access to it because she didn’t have formal identification, “cannot walk to the place where relief is distributed, and speaks only her local language.”

As the journal co-editor Mehrotra notes: “Some of the report’s findings were heartbreaking.”

FREEDOMS CURBED

Additionally, people with disability struggled to access various essential services due to the COVID-19 curfews and movement restriction orders in place, the researchers discovered.

Healthcare was one area that was affected in all the countries studied. “Many people requiring regular services like dialysis and physiotherapy have been left untreated and families couldn’t arrange home-based treatment,” says Mizan. “Many people with disabilities were also deprived of caregivers

NEED TO KNOW

- 15% of the world’s population lives with a disability.
- They have long faced discrimination in South Asia and in other parts of the world.
- Karen Soldatić and her collaborators studied how people with disabilities fared during COVID-19, in hopes of enacting future policy change.

due to restricted movement during lockdown.”

The restrictions also meant curbs to the independence previously enjoyed by people with disability. “Historically in South Asia, women with disabilities often go shopping with a family member or support person,” explains Soldatić. But this was impeded during the pandemic because many countries limited daily excursions to those with certain identification numbers, so some people with a disability couldn’t travel without the support they needed “to navigate poor street designs, or to go about in public in safe ways.”

Women with disabilities often had to rely on family members to purchase personal hygiene products, such as sanitary napkins, for them, “taking away autonomy to decide on deeply personal matters, such as personal hygiene,” says Soldatić.

The restrictions on movement also negatively impacted people’s livelihoods. For instance, Binendri Perera,

a lecturer at the University of Colombo, and one of Soldatić’s collaborators, interviewed Nisha, a wheelchair user, in Sri Lanka’s second largest city, Kandy. Nisha described how her business was failing as she was forced to limit her opening hours in line with the operating times of the city’s trishaws — the only public transport available during the pandemic.

From their interviews, the researchers also observed higher levels of isolation, a deterioration in mental health and reports of domestic violence during COVID-19, particularly against women with disabilities.

SILVER LININGS

Soldatić, however, cautions against pigeonholing the pandemic experiences of people with disabilities. “While there were quite a lot of similarities, there were also distinct differences in each of the places — not just country differences, but even within specific country sites as there is such diversity across each place.”

These varied, for example, depending on whether an individual lived in a rural or urban area, and the class, ethnic or religious group she belonged to. Gender was also an important factor. “Women with disabilities were particularly vulnerable,” says Soldatić.

But it wasn’t all bad, she says. In countries with a strong disability movement, people with disabilities did receive some help from the government. In India, for instance, food was delivered to people’s doorsteps right from the beginning of the pandemic, says Mehrotra. There were also helplines that women facing abuse were encouraged to call.

People found ways to cope with their ‘new normal,’ such as using social media to stay in touch with their friends and receive news updates, say the researchers. Some adapted well — Naomi says she was particularly impressed by the Afghan women she spoke to. “Their positive thinking, how they wanted to be empowered with inner strength, confidence, and self-love was very surprising and exciting for me.”

BROADER IMPACTS

But overall, COVID-19 has been a step backwards for people living with disabilities, says Soldatić. More than 18 months after their research was first conducted in 2020, things have “improved in some parts,” she says. “But the broader system has deteriorated.”

She and her collaborators were heartened when their research received global attention. “It was received very well in the disability rights community,” says Mehrotra.

Soldatić adds: “I think our work has really started to get local governments and also international NGOs to think about how we respond to situations, like pandemics, that we hadn’t considered before.”

“In these situations, people with disabilities are often the last group to be appropriately responded to,” she says. “But doing so results in a better policy for everyone because it looks at particular vulnerabilities and addresses a whole range of policy vacuums, for example around accessibility, vaccine rollout priority and, community safety when public access orders are in place.”

“And that often has a broader and positive impact on the general population too,” says Soldatić. ♥

LEARNING IN THE MIDST OF A PANDEMIC

The inside view on how school closures affected young Australians.

4 QUALITY
EDUCATION



Susanne Gannon is no stranger to the classroom.

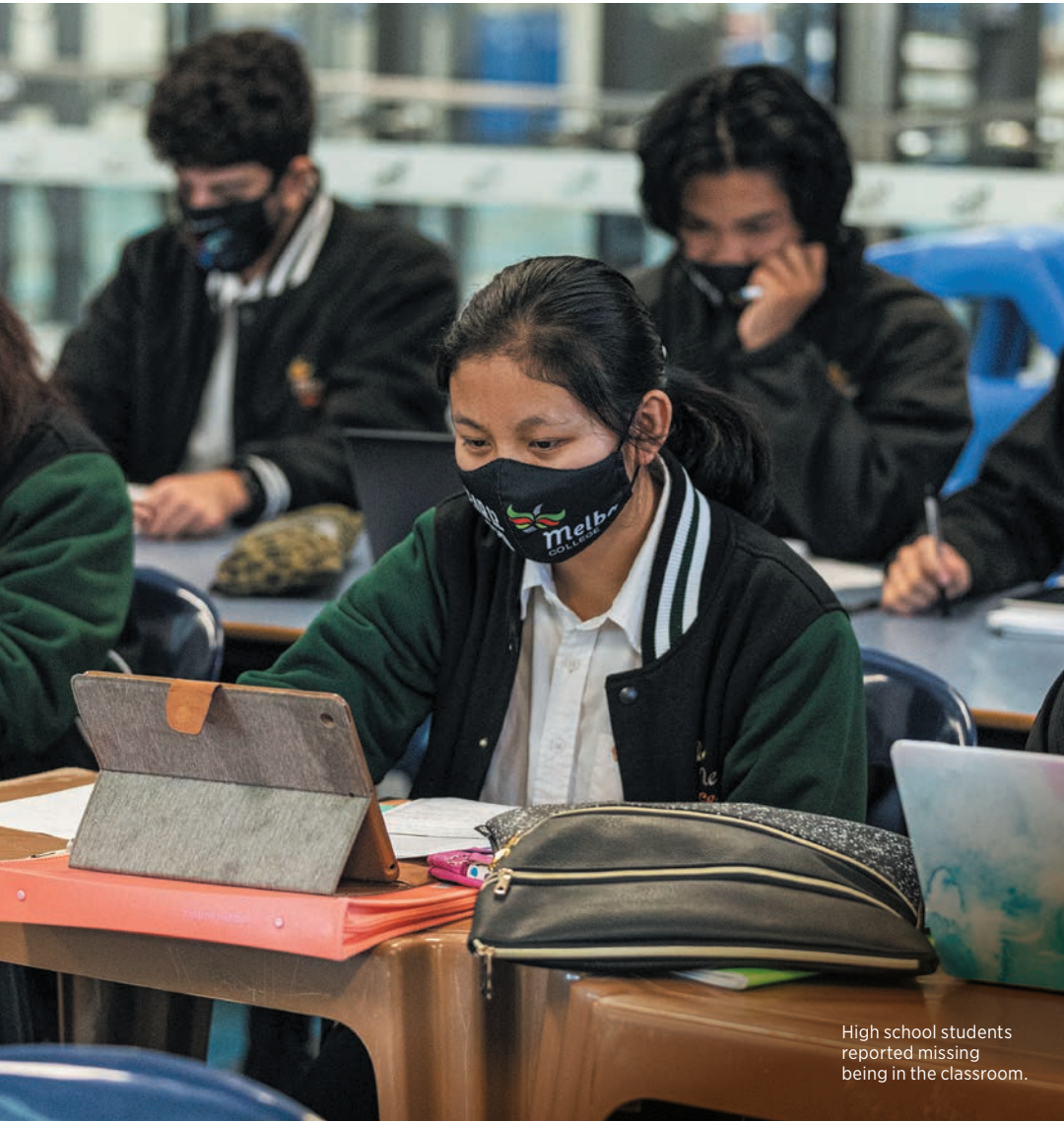
For a long time, she was a high school English teacher, working in less privileged parts of the country where students were grappling with the effects of disadvantage and inequality in addition to their homework. “I’ve always had a very strong interest in social justice and equity issues in school education,” she says.

When the pandemic happened, bringing lockdowns, remote learning, and Zoom classrooms, Gannon, a professor of education at Western Sydney University, realised there was a group in society whose voices and perspectives weren’t being heard: school students. There were plenty of stories about how exhausted parents were having to juggle work and home-schooling, but not much attention paid to young people.

“There was very little about kids and their experience,” Gannon says. “Getting kids to tell us in their own words how it felt to be doing online learning was important.”

One night during a Zoom catch-up, Gannon spoke with Danish researcher, Dorte Marie Søndergaard, from Aarhus University, who mentioned that they were doing research into exactly that question: what effect was the pandemic having on young people?

That conversation inspired Gannon and Western Sydney colleagues, Loshini Naidoo, Jacqueline D’warte, and Rachael Jacobs to set up their own study,



High school students reported missing being in the classroom.

© Daniel Pockett/Stringer/Getty Images News/Getty

using both an online survey and interviews, into the experiences of young Australians during pandemic school closures.

WHEN SCHOOL WENT ONLINE

One of the striking things to come out of the research was just how much high school students missed being in the classroom. It might seem surprising, given popular misperceptions that students generally don't like school, but Gannon and colleagues found the opposite.

"A lot of them said, 'we're surprised at what we miss from school,'" she says. "They talked about the 'absence' of the teacher, even when the teacher's talking to them in an online classroom, because the digital mediation didn't do it."

Even when schools returned to in-person learning, it was a different experience to pre-pandemic learning. "They're not getting the stability now, because pandemic disruptions have continued, staff shortages mean that teachers are being swapped around, classes are being combined and they haven't

gone back to school as it was," she says.

Remote learning was also not experienced equally by all students. It posed particular challenges for those from disadvantaged or marginalised backgrounds, Naidoo says. "Because of the issues surrounding home duties or family responsibilities, cramped living conditions, shared space, and their studying environment, it meant that they became less engaged with the course materials," she says. Many students from lower socioeconomic backgrounds didn't want to activate their video cameras because they were sharing their space with family which meant they became invisible to the teacher and their fellow students.

This not only created a sense of exclusion, but it made it more difficult for educators to understand their students and their needs, and to pick up when students might have been struggling. "They didn't actually know who were the students of different cultural backgrounds, and as a result, they were not able to prepare material that was culturally responsive," Naidoo says.

But it wasn't all bad news. The research team also found that students showed extraordinary resilience during this period of turmoil, and many were able to manage their own learning and take pride in doing their work at their own pace and schedule.

A DISSATISFACTION WITH GOVERNMENTS

The research also revealed changing attitudes and emotions among Australian



school students over time. "The first year they were saying 'governments are showing us they can work together to overcome problems', how about they bring it to climate change?" Gannon says. But as the pandemic wore on, there were more lockdowns — particularly in Melbourne, and the divisions between state and federal governments became more acrimonious. It wore down the students as well, with the surveys showing they were experiencing a loss of trust in authorities, a feeling of being abandoned, ignored, and disempowered.

"There was a real sense of kids being left out; many students experienced fear and disappointment about futures they would not be able to

control," Gannon says. One student said 'my peers and I fear for the future, and for our careers', she recalls.

There was also frustration with how authorities pushed for a rapid resumption of high stakes assessments such as the HSC and VCE, despite the lengthy lockdowns. One interviewee commented 'they don't care about our wellbeing — no exam is more important than our wellbeing.'

This was one area where the sentiments expressed by Danish students and Australian students differed, says Søndergaard. Her colleague, Penille Rasmussen, says Australian students expressed much more dissatisfaction with how the governments

NEED TO KNOW

- Western researchers collaborated with Danish colleagues to examine how the pandemic affected school students.
- Students missed in-person learning, and remote learning was not experienced equally by all.



Earlier this year, the in-classroom experience hadn't yet reverted to pre-pandemic norms.

were handling the pandemic. “They were, in Denmark too, dissatisfied with the way things were handled, but they were more focused on how to make their lives work under those circumstances,” Rasmussen says. “They were not as critical of the government.” This may also have been a function of Denmark’s government, which Søndegaard says was very engaged in explaining the necessity of every decision they made at every stage of the pandemic.”

PARTNERS IN LEARNING

Denmark and Australia were useful countries to compare because of their similarities, but a global collaboration of education researchers — including the team at

Western Sydney University — is expanding the scope to include other nations such as Brazil, Morocco, France and Belgium.

“THERE WAS A REAL SENSE OF KIDS BEING LEFT OUT”

The hope is that these studies will not only give a voice to a neglected group during the pandemic, but enable a greater understanding of how the pandemic has affected this generation of students and

how those impacts might be reduced in future.

The pandemic has highlighted some fault-lines in many education systems that have led to some students being excluded from that goal.

“I think it’s about changing the dynamic and viewing students as partners in learning,” Naidoo says.

If anything, she adds, the challenges of the pandemic have revealed the extraordinary resilience of young people faced with a situation that demanded they take charge of much of their own learning. That should be built on, rather than discarded in the return to business as usual.

Gannon says their research suggests that going back to

an education system exactly as it was structured before the pandemic is not necessarily the best way forward. “Every country is a case study in how existing inequities and gaps and problems in education and health sectors have been exacerbated by pandemic conditions,” she says.

Addressing those gaps and inequities means listening to the very people most affected by them. Young people are rarely part of that conversation, and Gannon argues they should be. “They’re always the last to be consulted about anything to do with education,” she says. “Kids have a lot to say, and they are intelligent participants in our democracy.” ♥

ASSESSING THE IMPACT OF THE PANDEMIC

A survey sent to all WSU staff members reveals how COVID-19 affected teaching, research, and staff wellbeing at Western Sydney University.

Western Sydney
University's
Campelltown campus.

© Sally Tsoutas

The pressures of delivering an excellent educational experience

for students at tertiary level and conducting world-class research are hard enough in normal times. Amid a global pandemic that caused two lockdowns, forcing staff and students to stay at home for extended periods, how did university staff cope? A survey of Western Sydney University staff in 2020 sought to find out.

The results of the survey, based on 142 questions about all aspects of academic life, paint a detailed picture of how more than 2,300 Western academic and professional staff (a response rate of 86%) adjusted their work practices to the conditions imposed by the pandemic. “The COVID-19 pandemic profoundly affected research and teaching at very short notice,” notes Kevin Dunn, Pro Vice-Chancellor Research at Western.

A QUICK PIVOT TO TEACHING ONLINE

Almost overnight in March 2020, lockdown forced classes to go online. “Our staff were required at very short notice to pivot to online delivery of their teaching to provide continuity of learning for our students,” says Simon Bedford, Pro Vice-Chancellor (Learning Futures). “They made a rapid transition at some cost in terms of their time, their research and other commitments.”

The research team assembled for this project were experts in work and education, and in innovative teaching and learning. One of the major findings of the survey was the divergent views on the success of online teaching, with 56% of teaching staff saying that this mode of delivery had worked well for them. This

proportion was higher for staff with dependent children, perhaps because it allowed more flexibility for them to care for their children. However, only 44% of staff thought that online teaching had worked well for their students.

Bedford notes that the pandemic fast-tracked a pre-existing trend towards adopting online education. “There is no doubt that the pandemic has caused the education sector to make a technological leap forward in terms of online education,” he says. “We had been progressing steadily in terms of building digital staff capability and capacity in online teaching and student learning, but this was a rapid acceleration in our ability to do that.”

“IT WAS
EMOTIONALLY
AND
PHYSICALLY
TAXING,
BUT A LOT WAS
ACHIEVED.”

EFFECT ON RESEARCH

Not surprisingly, laboratory work was greatly disrupted by the lockdowns, with almost 75% of lab researchers acknowledging that the impact had been negative or very negative. Those in the STEM disciplines and health were most affected since these areas are most reliant on experiments involving physical equipment, Dunn says. The survey results highlight the need to make it easier to conduct experiments remotely, where possible. “We need to

build our labs and laboratory information systems better so that we can provide for remote user access,” says Dunn. “That will future-proof our facilities against other disruptions, and plus we will be able to open them up to wider use.”

But research benefited in other ways. For example, 61% of researchers agreed or strongly agreed that videotelephony reduced barriers to attending meetings and conferences. “Staff recognised the benefits that videotelephony afforded to maintain things like meetings with research collaborators, and people became quite adept at online conferencing,” comments Dunn. However, this is tempered by the fact that 74% of study participants reported negative or very negative impacts of COVID-19 on conference and seminar presentations. This might indicate that despite their convenience, something is lost when conferences are held online, such as informal networking opportunities and conversations over coffee. “The world needs to continue to think about how we do conferences,” says Dunn. “This is a live debate at the moment.”

STAFF WELLBEING

Possibly the most critical aspect surveyed was how the pandemic lockdown of 2020 affected staff wellbeing. Overall, the results were good, with 91% agreeing they felt safe conducting their role and 73% reporting they had coped well with disruptions caused by the pandemic. About half of staff agreed that their wellbeing had improved while working remotely. But Danielle Tracey, a professor in the School of Education notes that the results varied according to the life

NEED TO KNOW

- The March 2020 lockdown forced teaching and research to move online almost immediately.
- Western researchers conducted a survey to find out how staff were affected.
- The survey data will also be available for researchers to use for academic purposes.

situation of staff. “It was intense for staff members who had young children and were homeschooling them at the same time as they were trying to do their jobs,” she says. “It is likely that those staff continued to struggle in the longer 2021 lockdown.” In total, 75% of those surveyed agreed they were able to meet family responsibilities while working.

University management scored well for its handling of the crisis. “Central to addressing the situation was a cross University team working with collegiality and agility, while providing analyses and integrated solutions during the dynamic public health crisis” says Jo-Anne Chuck, associate professor and Head of Teaching and Curriculum. Communication was rated highly, with 95% of staff agreeing that it was clear and timely and 85.4% agreeing that executive management had made effective decisions in their response to COVID-19. But it wasn’t easy to manage. “On some days, I had more than a dozen back-to-back Zoom meetings, and I remember having blurred vision by the end of



The School of Medicine at the Campbelltown campus.

some days,” recalls Dunn “It was emotionally and physically taxing, but a lot was achieved.”

RECOMMENDATIONS AND FURTHER ANALYSIS

The report’s conclusion notes that the pandemic dramatically transformed how staff worked, and while participants’ responses about their work and life were largely positive, there was considerable variation across demographic characteristics, namely gender, and academic versus professional roles regarding the impacts of these changes. The report authors recommend

conducting further research to gauge staff perception regarding the adoption of innovative practices such as remote teaching and videotelephony for research.

Dunn notes that there have already been changes to working conditions at the university. “Academic staff have even more flexibility than they used to have in terms of working from home. But that flexibility is much more profound for our professional and administrative staff than used to be the case,” he says. “I think that’s a very positive thing and it has allowed the University to take a leap of faith in terms of trust of its



73%
OF WSU STAFF
reported
they had coped well
with disruptions
caused by
the pandemic

staff.” “It also resulted in reflection of the daily commute on work-life balance but also on environmental sustainability,” said Chuck.

The survey results won’t be solely used for informing Western’s staffing policy; 62% of respondents gave permission for their responses to be used for research purposes. “Because we knew we would collect a substantial amount of data that would have global importance, we obtained ethics clearance to use the survey data for research purposes,” explains Dunn. “And we’re making the data available for our researchers to use.” ♥

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