

UNIVERSITY OF CANTERBURY  
CHILD WELL-BEING RESEARCH INSTITUTE  
TE KĀHUI PĀ HARAKEKE

*Nurturing research  
excellence to support  
children's holistic  
well-being.*

YEAR IN REVIEW — 2020



# “Mā te huruhuru, ka rere te manu”

This whakataukī (Māori Proverb) reflects the idea that if you adorn the bird with feathers, it will fly. The feather pattern that is featured throughout this report, acknowledges the korowai that wraps around our most treasured taonga – our tamariki.

Harakeke is inherently part of Te Kāhui Pā Harakeke, Child Well-

Being Research Institute. It inspires our name and it symbolises the relationship of whānau, and the relationship and protection of rito (the child) by awahi rito (parents) and tūpuna (grandparents and ancestors).

The reverence we take from harakeke is seen throughout this report as our visual theme,

along with the whakataukī, “Mā te huruhuru, ka rere te manu”. The harakeke has formed the foundation that ties this document together, from the colour palette, through to the textural elements.

*Paula Rigby (Ngāi Tūāhuriri),  
tēnā koe e te māreikura mō  
o manaakitanga katoa mō  
tēnei kaupapa.*

## TE KĀHUI PĀ HARAKEKE CHILD WELL-BEING RESEARCH INSTITUTE

*Our vision is to advance high quality, multidisciplinary research to enhance the learning success and well-being of children and youth.*

The University of Canterbury Child Well-Being Research Institute (CWRI) is an interdisciplinary centre focused on the well-being of children and young people. We are committed to being a leader in developing a strengths-based discourse around child development, education, health and well-being that speaks to the context of Aotearoa, New Zealand.

The way we achieve this is through our varied and innovative research projects that focus on maternal health, infants, children, and adolescents within the context of their whānau, family and community. Whilst our title says 'child', our understanding aligns with the New Zealand Government – that child and youth development spans 0–25 years.

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## DIRECTOR'S REPORT

Kia ora and welcome to our Child Well-Being Research Institute's annual research review.

What a remarkable year 2020 has been for us all in adapting to the global COVID-19 context and its impact for us in Aotearoa, New Zealand.

Developing resilience in our tamariki, and rangatahi to support them in coping with life's challenges is a critical area of our research endeavour. Leaders and researchers within our Institute are developing significant lines

of inquiry into the barriers and facilitators of children's successful learning and healthy well-being.

Researchers from across disciplines are drawing their expertise and talents together and developing meaningful partnerships with communities to advance the vision of our Institute.

We aim for our research outcomes to inform policy and professional practice nationally and

internationally. We value research that is critical, empowering and that honours Te Ao Māori and Pasifika Talanoa.



*Professor Gail Gillon*

In our 2020 annual review we highlight a few examples of how we are implementing our vision:

Professors Angus Macfarlane and Sonja Macfarlane share their perspective and insights about culturally responsive research practices.

A new study by University of Canterbury (UC) Psychology Professor Julia Rucklidge will test nutrition's impact on mental illness for youth aged 12 to 18 years old.

The Children's University Canterbury Partnership (CUCP) is expanding to add new schools and more than 600 tamariki to the programme.

'Words Can POP!' focuses on oral language development as a key driver for children's social development and literacy achievement.

Recent University of Canterbury (UC) research has made a major step forward in the treatment of sleep problems in children with Autism Spectrum Disorder (ASD).

Child Well-Being Research Institute and Te Rūnanga o Taumutu have partnered together to turn a collection of pūrākau/ legends into resources for New Zealand classrooms.

Professor Philip Schluter and Senior Lecturer Matt Hobbs' research suggests community water fluoridation is associated with reduced prevalence of tooth decay in New Zealand's 4-year-old tamariki.

Dr. Cara Swit has been exploring teachers' and parents' perceptions of bullying behaviour and the struggles adults face in developing intervention strategies.

We are thrilled to announce a number of new grants to undertake or support local research projects directly impacting child or youth well-being.

Dr. Susannah Stevens discusses how CWRI researchers adapted and innovated to allow children to remain engaged and supported during the COVID-19 lockdown.

Collaborative research at University of Canterbury is exploring if their innovative headgear development provides greater protection to younger players.

Researchers from CWRI have developed free, online courses to support children's early reading development.

*Whiriwhiria, kia ora ai te tamaiti. We thank all our partners and funders for the opportunities they provide for us to lead research that is braiding knowledge to make a positive difference in the lives of our tamariki, rangatahi and their whānau.*



PROFESSOR GAIL T. GILLON  
Founding Director, University of Canterbury  
Child Well-Being Research Institute  
<https://www.canterbury.ac.nz/childwellbeing/>

Deputy Director, Better Start National  
Science Challenge E Tipu E Rea  
<https://www.abetterstart.nz/>



A young boy with dark, curly hair is smiling broadly at the camera. He is wearing a blue crew-neck sweater with a red collar. In the background, two other children are visible, one in a black and red shirt and another in a red and white plaid shirt, both looking towards the right. The setting appears to be an indoor space with some artwork on the wall.

*Waiho i te  
toipoto, kaua  
i te toiroa.*

Let us keep  
close together  
not far apart.

# Culturally responsive research supports the well-being of our tamariki

## HIGHLIGHTS

Interview with Professor Angus Macfarlane, Co Director of the Child Well-Being Research Institute and UC Professor of Māori Research and Associate Professor Sonja Macfarlane, Senior Research Fellow (Māori) School of Health Sciences and Pouhikiahurea (Practice and Implementation Adviser: Māori Focus) at the Ministry of Education.

Research into the well-being of our young Māori has, historically, been governed by Western-based frameworks. Professor of Māori Research at the University of Canterbury, Angus Hikairo Macfarlane (Ngāti Whakae) and Sonja Macfarlane (Ngāi Tahu, Ngāti Waewae) explain how we can better understand facilitators of successful learning and well-being for Māori through more culturally responsive research.

Traditional approaches into the research around the well-being of our tamariki, though well intentioned, have at times been detrimental for Māori. Professor Angus Macfarlane says Māori may have negative experiences with researchers who arm themselves with methods that fail to factor in the cultural landscape.

“That experience can be detrimental to mana and affect the willingness to be part of any further research projects. Ideally, research focusing on the well-

being of our young Māori should be guided by those with an understanding of more culturally responsive frameworks such as Kaupapa Māori.”

Kaupapa Māori research and evaluation is carried out by Māori, with Māori and for Māori. It is based on Tikanga Māori, or Māori ways of doing things. At its heart is the acknowledgement that all researchers working with Māori acknowledge Māori ways of being and perspectives in their work.

Essential to Kaupapa Māori is the concept of Whanaungatanga (connection and kinship) – which involves building meaningful relationships before research begins. Associate Professor Sonja Macfarlane says it’s best understood as the ‘three cups of tea’ concept, which is at play in our social connections every day. The idea is that it takes at least three meetings with mutual conversations before we can even begin to understand a person, a group, or a culture.





*Professor Angus Macfarlane*

Although building meaningful relationships is only one part of the equation, it allows both parties to gain a deeper understanding of perspective and culture. It's important for example to frame research questions in surveys or interviews with children's whānau in non-judgmental ways and in ways that seek a more holistic understanding of children's well-being. "A researcher who understands Kaupapa Māori and has built a good relationship with the participants is more likely to ask questions in constructive ways that protect the mana of whānau and their tamariki," Angus and Sonja explain.

"Ensuring we don't shame with our research requires an understanding that we don't assign blame. Causal research models that simplify cause and effect are not helpful in addressing the well-being of young Māori. Instead we need to embrace well-being from a holistic perspective that's mindful of cultural values and context. Culturally responsive research demands a good communicator with an inclusive attitude and realistic expectations. Researchers must also understand the oratory value of Māoritanga and also seek to gain knowledge through respectful conversations.

And whilst a Kaupapa Māori based research model is the ideal, both Angus and Sonja acknowledge that in a multicultural Aotearoa, cultures will intersect. Professor Angus Macfarlane's Braided Rivers model (He Awa Whiria), which he developed with colleagues in 2011 is case in point. Its purpose is to reconcile Te Ao Māori research and evaluation perspectives with other science methodologies. Te Ao Māori research and evaluation perspectives. He Awa Whiria is symbolic of how different cultural knowledge systems can function separately or together, just as the streams of a braided river flow apart or together in their journey to the sea.

Professors Angus and Sonja Macfarlane's mahi also focuses on supporting practitioners develop culturally responsive ways of working with tamariki and their whānau. Their recent publication (2020, NZCER) with University of Canterbury colleagues, Matiu Tai Rātima (Te Whakatōhea; Ngāti Pūkeko) and Jennifer Pearl Smith (Ngāti Whātua) *The Hikairo Schema for Primary*, is a guide for primary teachers to facilitate culturally sensitive and inclusive learning settings for our tamariki.









Building  
children's oral  
language skills  
is fundamental  
to their later  
literacy success.

# Enhancing children's oral language development: Words Can POP!

## HIGHLIGHTS



Professor Brigid McNeill together with Professor Gail Gillon, are leading a new research project called Words Can POP! in partnership with Kidsfirst Kindertans. The project focuses on understanding effective ways to enhance children's oral language development and self-regulation skills to build strong foundational skills for early literacy success.

The need to improve the way in which oral language development is supported in the NZ early childhood education context is a recognised national issue. Oral language development is the key precursor to literacy achievement. It also underpins children's social development and ability to connect with others.

A new research project is underway in the Child Well-Being Research Institute that focuses on enhancing children's skills in oral language development and self-regulation. The longitudinal nature of the project is advancing understanding of the interactions between children's word-learning ability, self-regulation and their early literacy success. "Whānau engagement in their tamariki's learning is a key aspect of the project" explains Project Co leader Professor Brigid McNeill. "Whānau and teachers working together help ensure new learning is embedded

in everyday practices for tamariki at home and in the early childhood centre."

Oral language and self-regulation have been selected due to their strong link with children's resilience, later literacy development, successful transition to school and the particular needs of New Zealand tamariki.

This research is part of the Better Start National Science Challenge E Tipu e Rea <https://www.abetterstart.nz/> funded through the Ministry of Business Innovation and Employment.

This Science Challenge is a 10-year programme of research, hosted by the University of Auckland and is focused on research that supports children, teenagers, and their whānau achieve the best possible start in life. This new project within the Challenge which is being led by the team at the University of Canterbury involves a partnership with Kidsfirst Kindertans. There are 27 early childhood centres participating across Canterbury and 3 from Central Otago with 543 children (aged 3 and 4 years) and their whānau involved in the new study.



The co-lead investigators for the Project, Professor Gail Gillon (Institute Director) and Professor Brigid McNeill (Deputy Head of School of Teacher Education, University of Canterbury), have based the oral language approach on strong research evidence relating to the aspects of oral language that are critical to early literacy and learning success.

The approach, termed Words Can POP!, encompasses a range of oral language abilities that are critical to children's early literacy success. The approach is adapted from the research teams' successful Better Start Literacy Approach that has proven successful in accelerating the early literacy success of 5-6 year old children with lower levels of oral language. The Words Can POP! title describes areas of learning focus as shown in the following diagram.

#### THE APPROACH TERMED WORDS CAN POP! FOCUSES ON:

- WORDS** Word learning:  
vocabulary elaboration techniques
- CAN** Can you keep the conversation going?  
Back and forth high quality conversations
- P** Phonological Awareness:  
awareness of sounds in words
- O** Oral Narrative:  
personal narratives and story retell
- P** Print Awareness:  
relating print to speech



For more detail see <https://www.betterstartapproach.com/>

Through co-funding with Rātā Foundation, the project has been extended to include a strong focus on developing early childhood teachers' knowledge through professional development and learning opportunities.

Lorraine Stuart, professional leader from Kidsfirst explains "When Kidsfirst were approached to partner with UC in their Better Start language research, we saw this as an excellent opportunity with huge benefits for our families and children. Kidsfirst teachers are very aware that children are coming into kindergarten with lower level oral language skills (receptive and expressive) than in the past and they frequently seek out professional development opportunities.

Teacher feedback since the implementation of 'Words Can POP!' has been overwhelmingly positive and many teams have reported beneficial outcomes for their children even after a few weeks of implementation. Teachers report that families are very keen to engage with the approach and to use the strategies at home.

The researchers are moving into the second phase of the project which advances children's skills in self-regulation through language or behavioural activities. Professor Lianne Woodward, Child Well-Being Research Institute leader in Child Development is guiding this aspect of research along with Child Well-Being Research Institute's postdoctoral fellow Dr Sarah Timperley.

Children's growth in language, self-regulation and emerging literacy skills will be monitored throughout the project which will follow children into their first year of school. The impact of the approach on teacher knowledge, teacher practice alongside whānau perception regarding the acceptability and usefulness of the approach is also being tracked.

*“Implementing Words Can POP! has increased teachers’ awareness of how readily they can implement the oral language and print awareness strategies learned into their everyday practice with children.”*

LORRAINE STEWART,  
KIDSFIRST KINDERGARTEN

# Does community water fluoridation contribute to our tamariki's well-being?



New Zealand tamariki are suffering unnecessarily from severe tooth decay that could be prevented, according to research published recently in JAMA Paediatrics, the highest-ranking journal of Paediatrics, Perinatology and Child Health in the world. This research study was led by Professor Philip Schluter, Child Well-Being Research Institute leader in Child Population Health and Head of UC School of Health Sciences.

The nation-wide study, evaluating the link between community water fluoridation and the experience of severe tooth decay in four-year-old New Zealand children, analysed the B4 School Check screening programme data of 275,000 children over a five-year period from 2011 to 2016.

The findings show children who didn't have a fluoridated water supply were 20% more likely to have severe tooth decay.

"Modern dentistry can only do so much to tackle this issue and by the time children receive dental care it's often too late to save their baby teeth, which then affects the development of adult teeth," says Dr Martin Lee, Canterbury's Community Dental Service Clinical Director. "Community water fluoridation is the safest and most cost-effective preventative strategy we have to protect the teeth of all Kiwi kids, and the teeth of all New Zealanders generally."

Nearly one in seven (15%) of four-year-olds who had had a B4 School Check were found to be severely affected by tooth decay. While the rates of severe decay were much higher for Māori and Pacific children and children living in deprived areas, no-one was immune – 7% of NZ/European children and children living in the least deprived areas had severe tooth decay.



Four-year-olds with severe decay frequently need a general anaesthetic for their dental treatment and many of those on hospital waiting lists have chronic toothache and abscesses.

New Zealand has a long-term national policy supporting community water fluoridation, yet only 54% of the population currently receives it. A Bill proposing moving responsibility for this from Councils to District Health Boards, introduced in 2016, has not been progressed since a health select committee report in 2017.

Professor Schluter, says the burden on the dental health of New Zealand tamariki is not shared equally across the country.

“The research shows the current lack of widespread community water fluoridation disproportionately affects children living in the most deprived areas, with Māori and Pacific children more likely to experience worse oral health than pakeha, even after accounting for key sociodemographic factors,” says Professor Schluter.

“We hope that the real-world evidence provided in this research will be used in evidence-based policy-making to combat the woeful oral health burdens carried unnecessarily by so many children in New Zealand.”

The research was undertaken by a team of legal, public health, dental, water quality, and

geospatial specialists: Professor Philip Schluter, University of Canterbury (Population Health expert); Dr Martin Lee (Canterbury’s Community Dental Service Clinical Director); Helen Atkins (Director of Atkins Holm Majurey, New Zealand’s leading specialist environmental law firm; and President-elect, Water New Zealand); Mr Barry Mattingley (Senior Scientist in drinking water quality at ESR, a New Zealand Crown Research Institute); and Dr Matthew Hobbs, University of Canterbury (Senior Lecturer in Public Health with specialist geospatial expertise).

#### HIGHLIGHTS



Nearly one in seven (15%) of four-year-olds who had had a B4 School Check were found to be severely affected by tooth decay. Findings from a recent study led by Child Well-Being Research Institute leader, Professor Philip Schluter, indicate that community water fluoridation is associated with reduced prevalence of tooth decay in New Zealand’s 4-year-old tamariki.

#### DETAILS OF THE RESEARCH CAN BE FOUND ONLINE

Schluter, P. J., Hobbs, M., Atkins, H., Mattingley B., and Lee, M. (2020). Association between community water fluoridation and severe dental caries experience in 4-year-old New Zealand children. *JAMA Pediatrics*, 174(10), 969–976. <https://doi.org/10.1001/jamapediatrics.2020.2201>



*Tufulasi Taleni, Pasifika Kaiārahi*

*“The lockdown period highlighted the importance of continuing to strengthen home-school partnerships to support the learning of Pasifika students in ways that affirm their identity, language and culture.”*

# Learning during COVID-19 lockdown

## HIGHLIGHTS



Dr. Susannah Stevens, Strategy Lead Christchurch Knowledge Commons, summaries initiatives that researchers from the UC Child Well-Being Research Institute were involved in to support tamariki, whānau and university students learn from home as well as research to understand their learning experiences.

A significant, adaptable change in the style of learning during this year was required due to the continuous challenges surrounding child education, health and well-being during 2020's constantly evolving events of COVID-19.

Learning at home under lockdown has tested parents up and down the country as they attempt to support children's online learning, often while juggling work and other demands. Many parents enjoyed sharing books and stories with their children during lockdown. This has proven to be a wonderful way to support young children learning to read.

Researchers from the UC Child Well-Being Research Institute moved quickly during the lockdown period to make their new series of children's readers available online to support both teachers and whānau help children

with their reading at home.

The researchers developed the children's readers as part of the Better Start Literacy Approach following their research into how best to support children's early reading, writing and oral language success "Positive engagement of whānau in their children's literacy learning is just so important," says Professor Gail Gillon, Director of the Institute. These short children's readers are one aspect of the Better Start Literacy Approach which is a comprehensive and culturally responsive approach to support teachers facilitate early reading success for children in their

first year at school. <https://www.betterstartapproach.com/>

While each family had its own challenges during lockdown, many Pasifika families also had additional cultural considerations that were highlighted during this period. A team led by Dr Melanie Riwai-Couch, from Evaluation Associates engaged quickly to explore how home-based, school-led learning was impacting Pasifika and Māori students. Pasifika Kaiārahi at the University of Canterbury and researcher within the Child Well-being Research Institute Tufulasi Taleni, was invited to join the study due to his years of experience



in education and his passion for Pasifika achievement.

The study involved analysing survey responses from 134 parents. There were 32 responses from parents of Pasifika primary or secondary school aged students. The parents of Pasifika students commented that they enjoyed gaining insights into how their children learn and became more familiar with the curriculum content. "One of the main fears Pasifika parents expressed during the lock down was that their children would not meet curriculum expectations and achieve their qualifications," Tufulasi reported. "Many parents were already caught between having very high expectations of their children to achieve at school and fearing the loss of their cultural identity and language." Teachers made incredible efforts to adapt to this unique situation but Tufulasi explained that some parents pointed out the lack of Pasifika cultural content or context in the learning materials sent home. These findings have important implications as we continue to strive for culturally responsive teaching practices in New Zealand. The full report can be accessed online. <https://www.evaluate.co.nz/>

*key-readings/school-led-learning-voices-of-parents-of-maori-and-pasifika-students/*

Naturally, our mental health and well-being needs were also a focus during the lock down period and throughout 2020. The University of Canterbury had a positive holistic approach to supporting the mental health and well-being of its students staff and our community. Our Institute researchers contribute to the University's weekly seminars focusing on differing aspects of well-being. Professor Julia Rucklidge focused on key mental health well-being principles, Health Sciences lecturer Tracy Clelland discussed practical ways to enhance family/whānau relationships whilst working from home and Dr Susannah Stevens spoke about the importance of staying active in ways that work for you and your whānau.

Also stemming from the Child Well-Being Research Institute, the Doctoral Seminar Series was quickly changed to an online platform. The online series supported students to manage the many disruptions to research activities and help keep students in their research endeavours. CWRI Manager and programme

co-ordinator Dr Susannah Stevens, helped provide an online experience every bit as engaging as an in-person experience. The weekly zoom research seminar series during lockdown attracted up to 50 doctoral students. The students commented how much they valued the opportunity to continue to be motivated by the Institute's leading researchers as well as having support to work through their own research adaptations to the COVID-19 context.

The Child Well-Being Research Institute has embraced new learnings from the current COVID-19 global situation. Dr Stevens explains "The Institute has celebrated the way that its research teams have stepped up this year to not only continue its research and support our students learning during unprecedented times but to do so in healthy, beneficial and inspiring ways."

*“The Child Well-Being Research Institute has a positive holistic approach to supporting the learning, mental health and well-being of its doctoral students, staff and our community.”*



*Hannah Berning, PhD Student*



# New study into mood-dysregulated teens' nutrition

According to government reporting, increasing numbers of New Zealand adolescents struggle with mental health issues. In response, a new University of Canterbury study will test whether better nutrition can help ease the burden of mental illness for youth aged 12 to 18.

## HIGHLIGHTS

Professor Julia Rucklidge's new study will test whether better nutrition can help ease the burden of mental illness for youth aged 12 to 18. The research project, A community-based RCT evaluating micronutrients for mood dysregulated teenagers, has received HRC funding for two years. It will be conducted entirely online with the development of a study app, launching in early 2021.

University of Canterbury Psychology Professor and leader within the Child Well-Being Research Institute, Julia Rucklidge, has received a Health Research Council (HRC) Explorer Grant to carry out novel research with a community-based randomised controlled trial.

The research project, titled A community-based RCT evaluating micronutrients for mood dysregulated teenagers, has been funded \$150,000 over two years. It will be conducted entirely online

with the development of a study app, launching in early 2021.

Professor Rucklidge's new study is one of 17 Explorer Grants funded by the Health Research Council.

Professor Rucklidge's Te Puna Toiora: Mental Health and Nutrition Research group aims to find nutritional interventions that are effective in treating psychiatric/psychological illness. In this new study the team will undertake a community-based randomised controlled trial (RCT) to evaluate the benefits of micronutrients for

mood dysregulated teenagers: Professor Rucklidge explains, "There is a growing association between an individual's poor diet and poor mental health. However, it is not always realistic to manipulate diet, particularly in teenagers. Research over a decade has demonstrated efficacy in using micronutrients to treat psychiatric symptoms, but we need to explore whether coupling this approach with technology can expand reach, reduce cost and be a more acceptable way to address mental health problems."



# Children's bullying behaviour impacts teacher and parent well-being

Some parents are not coping with their young children's challenging behaviour, and even experienced teachers are struggling, according to Dr Cara Swit from the University of Canterbury's School of Health Sciences and Child Well-Being Research Institute.

Surprisingly, given the awareness of bullying in schools, Dr Swit is one of a small group of researchers in Aotearoa New Zealand focusing on young children's bullying behaviour and effective early intervention strategies.

Dr Swit has been spending time with parents and teachers, building relationships and knowledge as part of a research pilot for a new three-year longitudinal study. The longitudinal study aims to gather evidence on how young children's challenging behaviour impacts on the health and well-being of parents and teachers. The study was sparked by some worrying trends Dr Swit observed in classrooms.

"Anecdotally what we hear is that young children's challenging behaviours are causing stress and burnout for both teachers and parents. We need to undertake in-depth research to better understand this link and to inform how we can better support children, their whānau and their teachers she says.

We need to start talking about the challenges of parenting, normalising it and recognising that parenting is hard," says Dr Swit. The good news, however, is that when parents use the interventions recommended by Dr Swit, they see positive change. Dr Swit reports that through research informed interventions parents gain confidence. "They have a sense of efficacy, they think, 'I can do this.'"

HIGHLIGHTS



Dr. Cara Swit draws attention to young children's challenging behaviour and effective early intervention strategies.

What can parents do about bullying towards their child, or by their child? Dr Swit recommends resources she has created for the Education Hub such as What is bullying? <https://theeducationhub.org.nz/wp-content/uploads/2020/05/What-is-bullying.pdf>

"Parents need to be clear on what bullying is, what the signs are, and take the time to dispel any myths they have learnt about bullying," she says. "Bullying can be physical, verbal, social or online. We want to support parents to take action in an appropriate way by talking with their child, reporting bullying behaviour if necessary and following up to ensure that interventions have been effective.

# Solving severe sleep problems in children with Autism Spectrum Disorder



University of Canterbury Child Well-Being Research Institute researchers have made a major step forward in the treatment of sleep problems in children with Autism Spectrum Disorder (ASD), in new research recently published in the *Journal of Autism and Developmental Disorders*.

A high proportion of children with ASD have sleep problems such as difficulty with bedtime routines, problems settling to sleep, waking at night and waking too early. This is harmful to the child's development in many areas of life and adds to the stress experienced by parents and siblings," Associate Professor Laurie McLay, a principal investigator in the Good Nights Canterbury Autism and Sleep Project says.

"Before we began our research there was little guidance available to therapists about how to help families in this situation, especially those for whom the problem was severe.

"Our research has now shown that there are a range of strategies therapists can recommend to parents and children that are highly effective in helping children with ASD get a good night's sleep, but

they need to be tailored to each child".

Funded by the Health Research Council (HRC) and the IHC Foundation, the UC research project involved over 40 families with a child aged 3 to 15 years who had received a clinical diagnosis of ASD, and had at least one severe sleep problem. Two-thirds of the children involved were boys.

The participating families came from throughout Aotearoa New Zealand, with those living outside Christchurch taking part by telehealth methods – a combination of email, phone and Zoom/Skype contact.

A nightly sleep diary kept by parents formed the primary source of information, complemented by videos of parent-child interaction and a range of psychological tests that helped researchers understand both the child and the severity of their ASD.

For UC Associate Professor Karyn France, another principal investigator, there was a distinctive feature of the team's approach to therapy for the families.

"We carefully analysed all the factors in the families' circumstances, and the interactions between the child and his or her parents that might have contributed to the sleep problem. This allowed us to create an individualised therapy programme for each child within the context of their whānau. The programme was implemented by the parents with the guidance of the research therapists."

The researchers focused particularly on the role that devices, including smartphones and tablets, played in the sleep problem and took care to involve older children and adolescents in the design of their own therapy programme.

The results found that a majority of the children involved reduced

the severity of their sleep problem(s), with a substantial number, immediately following their treatment, placed in the non-clinical severity range.

The benefits of treatment were maintained at both short-term and long-term follow-up sessions (at 4–6 weeks and again at 12–14 weeks after treatment), with almost all parents reported to be highly satisfied by the therapy, although some noted that it was sometimes effortful and time-consuming.

The researchers concluded that their strategy for developing individually tailored treatments created highly effective therapies and there was little evidence the initial severity of the child's ASD altered the outcome.

#### HIGHLIGHTS



Associate Professor Laurie McLay and her colleagues advance knowledge on solving problems with children with Autism Spectrum Disorder.

THE PUBLISHED PAPER CAN BE ACCESSED AT [HTTPS://DOI.ORG/10.1007/S10803-020-04548-7](https://doi.org/10.1007/s10803-020-04548-7)

McLay, L., France, K., Blampied, N., van Deurs, J., Hastie, B., Carnett, A., Woodford, E., Gibbs, R., and Lang, R. (2020). Function-based behavioral interventions for sleep problems in children and adolescents with autism: Summary of 41 clinical cases. *Journal of Autism and Developmental Disorders*. <https://doi.org/10.1007/s10803-020-04548-7>

For more information about this research, including comments by participating parents, see: <https://www.canterbury.ac.nz/education-and-health/research/good-nights-programme/>





#### HIGHLIGHTS

Much has been done to reduce injuries, including concussions, on the rugby field in recent years through programmes like RugbySmart. Spearheading the research is Professor Nick Draper, of UC School of Health Sciences and the Child Well-Being Research Institute. A seasoned rugby coach, he has a particular interest in exploring whether head injury risks in junior rugby players could be reduced through wearing the right protective headgear.

## Innovation aims to boost safety for young rugby players

While concussion is a recognised problem in contact sports like rugby, it is generally accepted that wearing padded headgear does little to mitigate the risk. Collaborative research at the University of Canterbury is now putting that to the test, with an innovative prototype set to be trialled by young rugby players next year.

Much has been done to reduce injuries, including concussions, on the rugby field in recent years through programmes like RugbySmart. Sports science and engineering researchers at the University of Canterbury, in conjunction with industry, are now testing whether safe protective headgear could also make a difference.

Spearheading the research is Professor Nick Draper, of UC School of Health Sciences. A seasoned rugby coach, he has a particular interest in exploring whether head injury risks in junior rugby players could be reduced through wearing the right protective headgear. Also on the project is Professor Keith Alexander, of UC Mechanical

Engineering and renowned inventor of the Springfree Trampoline, along with UC Civil and Mechanical Engineering lecturer Dr Natalia Kabaliuk.

Extensive testing of existing commercial headgear at UC's Mechanical Engineering Aerodynamics Laboratory indicate that it offers some protection from head-to-head, but not glancing, impacts. Now an innovative prototype – using new materials designed to offer additional protection – has been developed for field testing next year by junior players at Waihora Rugby Club.

Designed at UC and made by sportswear manufacturer Kukri New Zealand, the prototype has exciting potential for boosting safety in the game.

“Keith and Natalia have brought their scientific and engineering expertise to solving a real-world problem,” says Professor Draper. “In addition, we have these great partnerships with New Zealand Rugby, Canterbury and the Crusaders to run field testing and with Kukri to potentially take it forward into the commercial context.”

Participation by junior Waihora players in next year's trial will be optional. Field testing will also involve gathering data from special mouth guards equipped with sensors to measure impact forces.

“We've been conducting validation studies, working with Australian company HitIQ on smart impact detection mouth guards, so we can study how much protection our headgear will provide,” Professor Draper says.

As well, MRI scans will be conducted pre-season, post-season and after any concussive collision as part of the research, supported with a \$30,000 grant from Pacific Radiology.

Angus Gardiner, Crusaders General Manager, reinforces the need for this research: “Rugby is a contact sport and so it can be challenging for some young players to feel safe. If, in time, there's a product that's proven by research to protect the head or give people more confidence to take up the sport that would be a massive positive for everyone.”

*“Rugby is a contact sport and so it can be challenging for some young players to feel safe. If, in time, there's a product that's proven by research to protect the head or give people more confidence to take up the sport that would be a massive positive for everyone.”*

ANGUS GARDINER,  
CRUSADERS GENERAL MANAGER

# A novel approach to inspire lifelong learning

The Children's University Canterbury Partnership (CUCP) programme is expanding to include hundreds more young learners thanks to Rātā Foundation and Riccarton Rotary Youth Trust donations of \$25,000 each.

As a result of this \$50,000 boost, CUCP is adding several new schools to the Children's University network, issuing more than 600 tamariki with a 'Passport to Learning'. This represents tremendous growth from CUCP's commencement in 2019 when 192 children participated in the pilot programme.

The first Children's University in Aotearoa New Zealand, CUCP is a joint initiative between the University of Canterbury (UC) and Lincoln University. This funding will allow more tamariki, particularly from lower decile schools and communities experiencing additional challenges, to discover fun and engaging learning opportunities outside of the classroom.

The Children's University encourages young people to

develop a positive attitude towards learning through exploring different learning opportunities and contexts. The programme has learning locations across Christchurch that include the Canterbury Museum, Christchurch Art Gallery, libraries and University of Canterbury and Lincoln University's campuses to name a few.

"One of the ways the programme is showing children the path to higher learning is by hosting engaging learning experiences for children on campus where they have the opportunity to meet and learn from UC academics," says UC Assistant Vice-Chancellor Professor Catherine Moran.

"The Riccarton Rotary Youth Trust is proud to be supporting the Children's University Canterbury Partnership, which is encouraging

young people to discover their full potential," says Murray Compton, Chair of the Riccarton Rotary Youth Trust. "We're thrilled to help the programme grow to over 600 participating students in 2020 and we look forward to seeing its impact in our community."

"This programme really encourages children to try new things in a safe environment. It's not about being the best, it's about broadening horizons by trying lots of different activities," says Leighton Evans, Chief Executive, Rātā Foundation."

CUCP began in Canterbury in 2019, with 192 children from seven schools and one rūnanga. Most schools involved were lower decile schools and 42% of the cohort identified as Māori. Over 80% of the children reached the minimum number of 30 hours of engagement in additional learning experiences

outside of the classroom. These learning experiences are recorded in their "Passport to Learning" and after 30 hours they can graduate from the programme. Many children surpassed this goal, reaching over 100 hours of extra-curricular learning.

The Child Well-Being Research Institute is supporting this programme through data collection related to tamariki, rangatahi, whānau and teachers' perspectives about the benefits of the approach.

Community groups and businesses who would be interested in providing locations for learning activities or funding to expand the programme are encouraged to contact Amy Underdown on [amy.underdown@canterbury.ac.nz](mailto:amy.underdown@canterbury.ac.nz) to find out more.



# Child Well-Being Research Institute and Te Rūnanga o Taumutu partner to bring legends to New Zealand classrooms

A collaboration between UC's Child Well-Being Research Institute and Te Rūnanga o Taumutu resulted in the development of a collection of pūrākau/legends for use in New Zealand classrooms.

The pilot with Te Rūnanga o Taumutu resulted in the development of three pūrākau and three smaller early readers for use in classrooms and centres. The stories were adapted from longer, more complex traditional pūrākau within the rūnanga, in collaboration with whānau and rūnanga leaders. The images to accompany the text were created by rangatahi/young people within the rūnanga, who were supported by more experienced tuākana/senior advisors. Dr Amy Scott and Professor Gail Gillon oversaw the process, working alongside the rūnanga to ensure stories were captured accurately, images were



of a high quality for print, and the mana of all participants in the process was upheld.

The three pūrākau, The Creation of Tuna, Ruru and the Giant Pouākai and Taniwha and the Rakaia Gorge, are adaptations of traditional pūrākau from Te Taumutu Rūnanga o Ngāi Tahu. Three smaller readers developed to support the books allow children with developing literacy skills to read a simplified version of the story as part of their classroom literacy programme. Both the larger pūrākau and smaller readers incorporate stunning images from the illustration team – Jayda Sitakurima, Olivia Knighton and Toi Ātea.

The pukapuka/books were launched at Taumutu's Tamariki Day in January, and have been enthusiastically received by Ngāi Tahu whānau local schools and early childcare centres in the Taumutu rohe.

The collaboration was funded by A Better Start National Science Challenge to support the development of resources for the Better Start Literacy Approach for New Zealand early childhood centres and primary school classrooms.

# Grants from CWRI to support local research projects

This year, the Institute was excited to support a number of researchers with grants to undertake or support work that was directly impacting local child or youth well-being. Three examples of these projects are highlighted:

Senior Lecturer and Clinical Psychologist Dr Lisa Marie Emerson, will publish a set of research priorities for children and youth with autism that is community led. The research team will work in partnership with end-users in the autism community, including autistic people and their families and whānau, Māori and Pacific peoples, clinicians and researchers, and community organisations. These priorities will serve as a compass for future research that will directly represent the needs of the community.

Dr David Pomeroy, Kay-Lee Jones and Associate Professor Sara Tolbert, UC School of Teacher Education, are challenging the practice of streaming maths classes

in schools based on ability levels. Te Rūnanga o Ngāi Tahu recently identified streaming of classes on ability may be a systemic barrier to success for Māori. Advancing this finding, the research team is collaborating with mathematics departments in schools. The researchers will explore the transition period where the class streaming is removed. New Zealand secondary schools that have made the transition to mixed 'ability' grouping, including schools directly involved in this study, have noted dramatic improvements in achievement and motivation following the transition, including more Merit and Excellence grades and increased retention in senior academic NCEA courses for Māori and Pasifika students.

Professor Ekant Veer and Dr Susannah Stevens, from the UC Knowledge Commons and aligned to the Child Well-Being Research Institute, will support community led research into the experiences of migrant families in Christchurch. The Ministry of Education has identified that many migrant whānau in Ōtautahi would like to learn more about their child's/children's education and feel unrepresented in the New Zealand Education system. In response, the Ministry funded a full-time position in Canterbury to activate specific interventions that will aid migrant populations in the city to gain a better understanding of the NZ Education System and feel more included in their child's/children's learning. The Child

Well-Being Research Institute has funded research assistant support to evaluate this intervention and series of workshops. These workshops bring together teachers from the migrant population's cultural/ethnic background to offer specific tutoring and support for children as well as better network across the city about the needs of people from their cultural/ethnic heritage. The results from the research will likely have significant impact on the well-being of both migrant children and whānau in Ōtautahi, as well as enable the Ministry to support similar interventions for other populations who feel separated from their child's/children's learning.





## Free online courses to support early reading development

Researchers from the CWRI have developed a free, online course for teachers, parents, speech-language therapists and other literacy specialists focused on how to read books in the most effective way to support children's early reading development. It includes a focus on the key foundational skills required for reading success, and evidence-based ways to support children at risk for later reading challenges such as Dyslexia, or children with other challenges to learning, such as speech and language difficulties.

Sign up link: <https://www.edx.org/course/a-better-start-to-reading>



A young child with curly brown hair is smiling warmly at the camera. The child is wearing a dark blue shirt. The background is a classroom with a dark wall featuring a colorful rainbow sticker. In the foreground, there are blurred papers and objects on a table.

Support local,  
national and  
international  
professional  
practice in  
areas of child  
well-being.



## OUR INSTITUTE'S STRATEGIC PRIORITY AREAS

### 1. Advance high quality, multidisciplinary research in child well-being.

- Advocate for the importance and place of evidence-based multidisciplinary research to support understanding, decision-making and policy in child and youth well-being.
- Produce creative, innovative and unique research that advances knowledge in child and youth well-being.
- Execute and disseminate high-quality research that align to our vision and values.
- Support emerging researchers within research teams and projects.
- Implement and grow our Doctoral Student Programme that nurtures future researchers within a cohort support structure that supports research excellence.

### 2. Support local, national and international professional practice in areas of child well-being.

- Actively value, advocate and model Vision Mātauranga.
- Grow and challenge practice of practitioners across disciplines working with children and youth.
- Further enhance our capacity to engage internationally in the global COVID-19 context through online webinars, online conferences and emerging novel online platforms.
- Continue to nourish our relationships with local iwi, kaumatua and kuia in the area of child and youth well-being.
- Collaborate with others nationally to hold annual evidence-based lectures, workshops, symposia or conferences that directly align with our institute values.
- Support local inter-disciplinary initiatives in Canterbury that align with our vision and values.

### 3. Seek and continue internal and external relationships with others to advance inter-professional knowledge in child and youth well-being.

- Actively seek opportunities to work in inter-professional, inter-organisation and inter-disciplinary teams.
- Grow and uphold relationships that nourish Te Ao Māori, and Pasifika Talanoa.
- Actively seek opportunities and partnerships to further our vision and values.

## OUR TEAM

### Leadership Team

Professor Gail Gillon –  
Founding Director

Professor Angus Macfarlane –  
Co-Director

Dr Susannah Stevens –  
Institute Manager (on secondment)

Dr Amy Scott –  
Research Project Manager

Dr Megan Gath – Data Manager

Professor Brigid McNeill –  
Deputy Head of School of  
Teacher Education

Associate Professor Annelies Kamp  
– Head of School of Educational  
Studies and Leadership

Dr Yvonne Crichton-Hill –  
School of Social Work

Professor Letitia Fickel – Pro-Vice  
Chancellor, College of Education,  
Health and Human Development

Professor John Everatt –  
Professor of Dyslexia,  
School of Teacher Education

Professor Julia Rucklidge –  
Professor of Clinical Psychology,  
Director of Mental Health and  
Nutrition Research Group

Associate Professor Laurie McLay  
– School of Health Sciences

Professor Philip Schluter –  
Professor of Public Health, Acting  
Head of School of Health Sciences

Professor Lianne Woodward –  
Strategic Project Lead, School of  
Health Sciences

Associate Professor Misty Sato  
– Head of School of Teacher  
Education

Professor Don Hine –  
Head of School of Psychology,  
Speech and Hearing

### Kaiārahi

Mel Tainui

Tufulasi Taleni

Mary Boyce

### Researchers

We are fortunate to have numerous  
talented researchers, post-doctoral  
fellows and doctoral students  
associated with our many  
research grants.

## KEY RESEARCH THEMES

### Learning success

Theme Leaders:

Professor Brigid McNeill  
Professor John Everatt

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### Nutrition and physical well-being

Theme Leaders:

Professor Julia Rucklidge

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### Social and emotional well-being

Theme Leaders:

Dr Yvonne Crichton-Hill  
Associate Professor Laurie McLay  
Professor Letitia Fickel

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### Child population health

Theme Leaders:

Professor Philip Schluter



*“Our researchers within our Te Kāhui Pā Harakeke Child Well-Being Research Institute are very grateful for the funding support they receive to support their research endeavours”*

## RESEARCH FUNDING AGENCIES AND PROJECT TITLES FOR 2020 INCLUDE:

### **Hikina Whakatutuki Ministry of Business Innovation and Employment**

- Better Start National Science Challenge E Tipu E Rea Successful Learning Theme
- Longitudinal Study in children’s oral language development and self-regulation in Tamariki from 3–6 years
- Word learning across languages: Extension of Better Start Literacy Approach

### **Te Tāhutu o te Mātauranga Ministry of Education**

- Research informed integrated professional support system for teaching of literacy using Better Start Literacy
- Foundational Learning Research: Enhancing early literacy success for all learners.
- Ready to Read Phonics Plus Series
- School entry assessment (SEA) literacy and oracy tools

### **NZ Council for Educational Research: Teaching and Learning Research Initiative**

- Te Tiriti-based Ako framework for socio-emotional well-being in education

### **Te Apārangi Royal Society Marsden Fund**

- Understanding the onset of children’s vernacular reorganisation (in collaboration with UC New Zealand Institute of Language Brain and Behaviour)

### **Health Research Council NZ**

- Establishing End-user Driven Autism Research Priorities in New Zealand
- Lighted Paths: Education and pathways to better health for Pacific families

### **Canterbury Medical Research Foundation**

- Language for Life: Enabling health and wellbeing through literacy success

### **Accident Compensation Corporation**

- Preventing home-based injuries

### **Rātā Foundation**

- Efficacy of Professional Learning and Development for Early Childhood Educators: Oral language and Self-Regulation

### **Brigham and Women’s Hospital, Inc.(Boston, USA)**

- Targeting human milk fortification to improve preterm infant growth and brain development

### **Collaboration with Ngā Pae O Te Māramatanga**

- Collaborative explorations into the contours of wellness: Cultural reflections and contentions

### **Cure Kids Innovation Seed Fund**

- Mindfulness treatment for children and families with attention deficit hyperactivity disorder (ADHD)

*Whiriwhiria,  
kia ora ai te tamaiti.*

Braiding knowledge,  
so the child will flourish.

TE KĀHUI PĀ HARAKEKE | CHILD WELL-BEING RESEARCH INSTITUTE

FOR MORE INFORMATION,  
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