Mental Health in Pacific Peoples
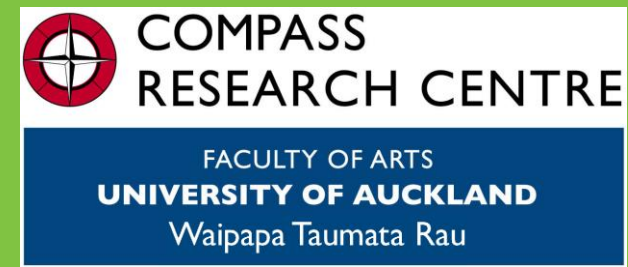
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COMPASS Colloquium
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Project Team

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Background

- Partnership between the Ministry for Pacific Peoples and the Better Start Big Data Team to explore the characteristics of Pacific peoples' mental health.

- It is the first time since Te Rau Hinengaro that there has been in-depth insight into mental health at a population level for the Pacific population.

- This study focusses on both adults and children using the New Zealand Health Survey (accessed through the Integrated Data Infrastructure, IDI).

- A joint venture to explore Pacific mental health in alignment with Better Start's wider objectives and the Ministry's Lalanga Fou goals.

DISCLAIMER

Access to the data presented was managed by Statistics New Zealand under strict micro-data access protocols and in accordance with the security and confidentiality provisions of the Statistics Act 1975. Our findings are not Official Statistics. Opinions, findings, recommendations, and conclusions expressed are those of the researchers, not Statistics NZ, or the University of Auckland.
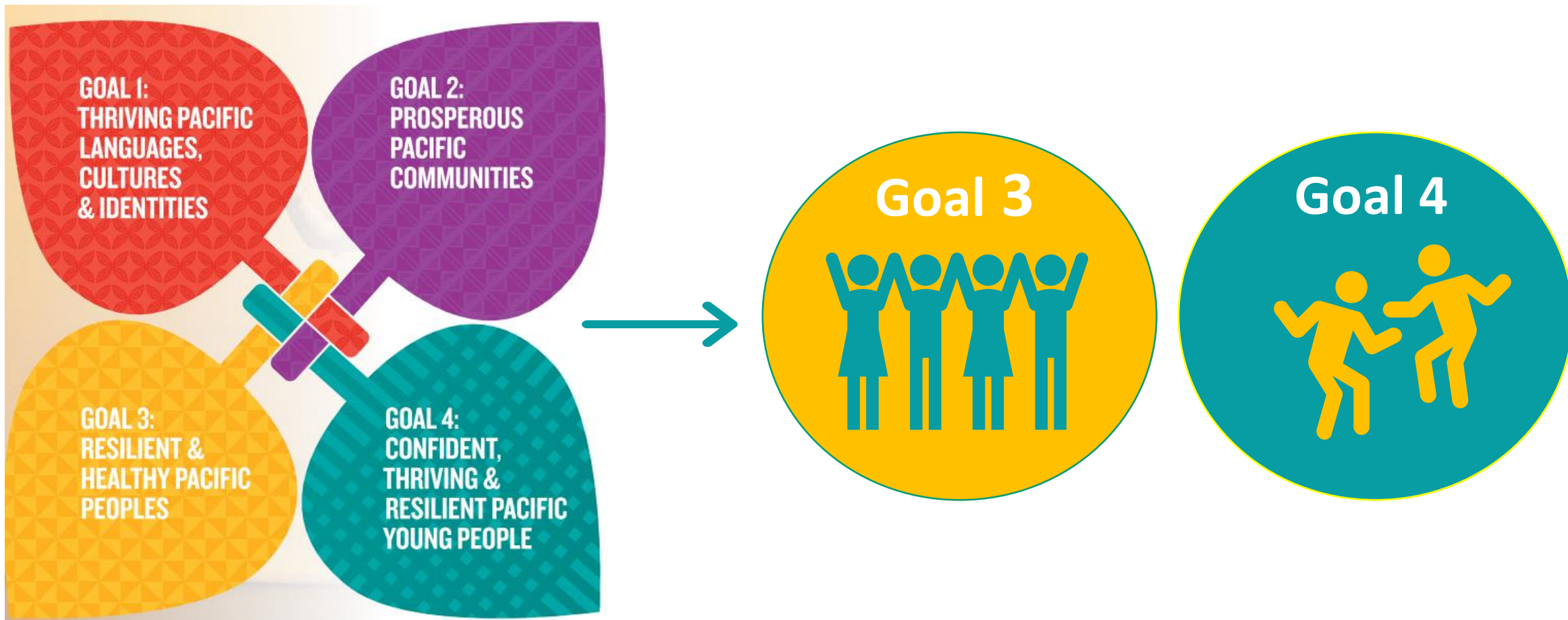
Background

- A Better Start (E Tipu E Rea) National Science Challenge
  - Healthy weight
  - Resilient Teens
  - Successful Learning
  - Big Data
  - Vision Mātauranga
- Big Data (Barry, Jesse, Others) analyses whole population data to answer research questions relevant to the other themes
  - A key objective: Use Big Data to answer questions relevant to Pacific Peoples
  - Focus on Resiliency (Mental Health), while investigating associations with Learning (Education)

Background
Pacific Peoples

- Popn 381,642 (2018)
- 41% multi-ethnic
- Median age 23.4, 1/3 under 15
- 2/3 in Auckland
- 2/3 born in NZ
- High unmet health need
- Socioeconomically challenged

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Samoan	Tongan	Cook Islands Māori	Niuean	Fijian	Tokelauan	Tuvaluan	i-Kiribati	Tahitian	Papua New Guinean	Ni Vanuatu	Rotuman	Indigenous Australian	Solomon Islander	Hawaiian	Pitcairn Islander	Nauruan	Other[10] (N/A)
	182721	82389	80532	30867	19722	8676	4653	3225	1737	1131	990	981	795	777	429	216	135	3060
	47.9%	21.6	21.1%	8.1%	5.2%	2.3%	1.2%	0.8%	0.5%	0.3%	0.3%	0.2%	0.2%	0.2%	0.1%	0.05%	0.03%	0.8%

Background
Pacific Mental Health

- Early studies (1990s) indicate high level of psychological distress

- Immigration experiences (living conditions, discrimination, adaptation) contributed to mental and physical distress

- Diagnosis lower – admission rates half of non-Pacific

- Te Rau Hinengaro (2003–4) n~13,000, adults, including n = 2,374 Pacific
  - Higher psychological distress, higher alcohol and drug use, lower service access. Why?
    - Unfair treatment in health settings
    - Access barriers & health literacy
    - Stigma and preference
  - Higher rates of distress/diagnoses among NZ-born vs Pacific born

1. Do Pacific people with mental health conditions differ from the overall Pacific population in their age, ethnicity, gender?

2. Do Pacific people who deal with issues related to mental health differ in their educational status, financial situation (income, labour force status, housing tenure), household overcrowding, and deprivation from the overall Pacific population?

3. What are the prevalence trends for adult and child mental health outcomes from 2011–2021 for the Pacific populations?

4. Is there evidence for an impact of Covid (from 3)?

A tailored Tivaivai research framework:

- Developed by Teremoana Maua-Hodges (2018)
  - Futter-Puati, D., & Maua-Hodges, T. (2019). Stitching tivaevae: a Cook Islands research method. AlterNative: An International Journal of Indigenous Peoples, 15(2), 140–149. https://doi.org/10.1177/1177180119836788.
  - 5 Steps
- Modified by Jesse Kokaua and others (2020)
  - Kokaua, J., Jensen, S., Ruhe, T., Camp, J., Jensen, W., Sorensen, D., Lucas, A., & Richards, R. (2020). An Application of a Tivaivai Research framework to a quantitative Pacific health research project using New Zealand's Integrated Data Infrastructure: Tivaivai framework for quantitative Pacific research. Pacific Health Dialog, 21(5), 206–215. https://doi.org/10.26635/phd.2020.621
  - 6 Steps
- Refined for this specific project
  - Teremoana Maua-Hodges & Jesse Kokaua, December 2022
  - 8 Steps

A tailored Tivaivai research framework:

1. Te Orama
   - Having a vision for the tivaivai, including the resources, style, representation etc
   - Planning, shaping & forming the project and team

2. Akaruru
   - Considering the design of the tivaivai, including colour, material, pattern etc
   - Design and methodology - selection of appropriate frameworks, IDI datasets, tools, tests etc

3. Patoki
   - Cutting the pattern/patches for the tivaivai
   - Selection of indicators and variable construction – what we want to look at from the IDI data

4. Tamoumou
   - Making sure the pattern/patches are what you want it to look like
   - Analysis & review of the analysis

5. Atuitui
   - Sewing the patterns together
   - Interpretation of the data & key findings

6. Akamanea
   - Tidying up the tivaivai - beautifying it
   - Verifying and summarising the findings & their interpretation. Articulating conclusion & recommendations

7. Ariki'anga
   - Making the final touches on the tivaivai
   - Validation of findings through a peer review process

8. O'ora
   - Revealing what has been done
   - Share findings & recommendations with Pacific communities & consider their feedback

- New Zealand Health Survey
  - Accessed through Integrated Data Infrastructure (IDI) with link to Census Variables (2011–2019)
  - Also through NZHS Data Explorer (2011–2022) https://minhealthnz.shinyapps.io/nz-health-survey-2021-22-annual-data-explorer/_w_1e2490ff/#!/home
- For adult population: Dr-diagnosed Depression & Anxiety, Self-reported Psychological Distress
- For Pacific children: The Strengths and Difficulties Questionnaire (SDQ) scales
  - 2012, 2014, 2015, 2016
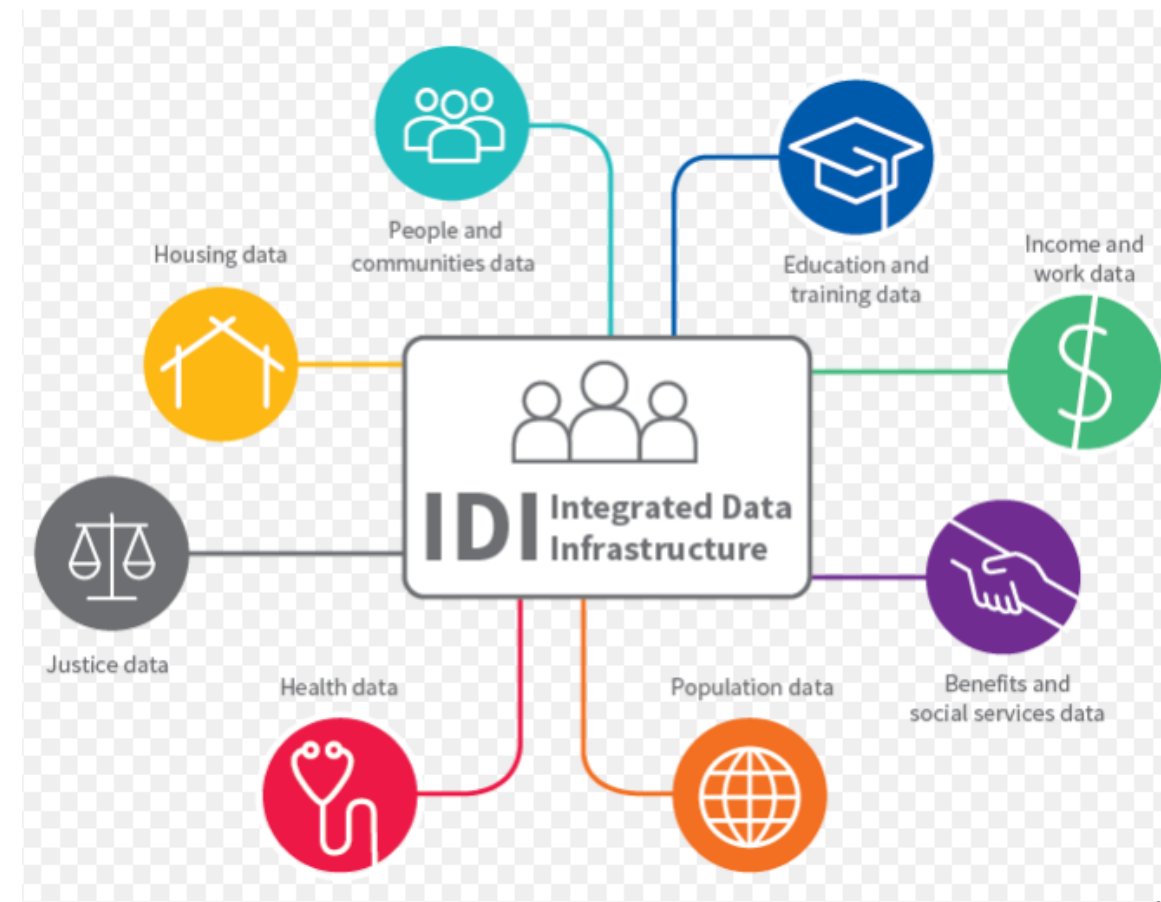
NZHS Sample size from 2011 to 2022

Year (fiscal)	Total adults	Pacific adults	Total children	Pacific children
2011/12	12,370	938	4,478	730
2012/13	13,009	780	4,485	630
2013/14	13,309	802	4,699	677
2014/15	13,497	885	4,754	689
2015/16	14,781	838	4,721	693
2016/17	13,598	843	4,668	671
2017/18	13,859	921	4,723	710
2018/19	13,752	846	4,503	643
2019/20	9,699	613	3,290	491
2020/21	9,709	606	2,954	429
2021/22	4,434	222	1.323	145

Year	Total Pacific	Linked Pacific	Difference	% of Pacific linked in the IDI
2011/12	938	690	248	74%
2012/13	780	645	135	83%
2013/14	802	642	160	80%
2014/15	885	720	165	81%
2015/16	838	711	127	85%
2016/17	843	753	90	89%
2017/18	921	822	99	89%
2018/19	846	789	57	93%

Trends and correlates of mental health and obesity using New Zealand Health Survey Data

ADULTS
- Depression
- Anxiety
- Psychological distress

CHILDREN
- Emotional problems
- Peer problems
- Hyperactivity-inattention
- Conduct problems
- Prosocial behaviour

Pacific mental health

3 investigations

Investigate mental health in Pacific peoples to determine the characteristics of Pacific adults and children with mental health problems.

Investigate associations between mental health and education, socioeconomic measures, and housing among Pacific adults and children.

Assess trends in mental health in adults and children across the whole population, and for Pacific trends indicate that covid-19 may have exacerbated mental health outcome in New Zealand.

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- Demographic (RQ1)
  - Age: Children = 2–4 yrs, 5–9 yrs, 10–14 yrs; Adults = 15–24 yrs, 25–34 yrs, 35–44 yrs, 45–54 yrs, 55–64 yrs, 65+
  - Ethnicity: Samoan, Tongan, Cook Islands Māori, Niue, European, Māori
  - Gender (Sex): Female, Male
  - Place of birth: New Zealand, Overseas
  - Geographical location (DHB): Waitemata, Auckland, Counties Manukau, Rest of North Island DHBs, South Island DHBs
- Socioeconomic (RQ2)
  - Level of education (by highest level): No qualification, Secondary, Post-secondary, Tertiary
  - Income: median household income
  - Labour force status: Employed, Unemployed, Not in labour force
  - Home ownership: Rent, Own home
  - Household crowding: <=1 ppl/bedroom (Not crowded), 1–2 ppl/bedroom (Moderate crowding), >2 ppl/bedroom (Overcrowded)
  - Level of deprivation: Quintile 1 or 2 (least deprived), Quintile 3, Quintile 4, Quintile 5 (most deprived)

Ministry for Pacific Peoples

Te Manatū mō ngā Iwi ō te Moana-nui-ā-Kiwa

National SCIENCE Challenges

A BETTER START

E Tipu e Rea

Depression

- Affects 24,000 Pacific Peoples (1 in 12), 2021/22
- **Lower** prevalence than non-Pacific
- 0.2 percentage point increase per year
- 1.5 times more common in women than men
- Twice as common in NZ born than overseas born
- Highest in mid-adulthood (25–54)

Anxiety

- Affects 25,000 Pacific Peoples (1 in 11), 2021/22
- **Lower** prevalence than non-Pacific
- 0.7 percentage point increase per year
- 1.5 times more common in women than men
- Twice as common in NZ born than overseas born
- Highest in ages 45–54

Psychological Distress

- Affects 38,000 Pacific Peoples (1 in 7), 2021/22
- **Higher** prevalence than non-Pacific
- 1.3 percentage point increase per year
- 1.25 times more common in women than men
- **No difference** between NZ born and overseas born
- Similar rates across ages

Ministry for Pacific Peoples
Te Manatū mō ngā Iwi ō te Moana-nui-ā-Kiwa

National SCiENCE Challenges
A BETTER START
E Tipu e Rea

Depression
- No education gradient
- Lower income
- More likely to be unemployed
- Lowest among those living in overcrowded houses
- No deprivation gradient

Anxiety
- No education gradient
- Lower income
- Lowest among those living in overcrowded houses
- Highest among those living in **least** deprived areas

Psychological Distress
- **Decreases** with **increasing** education
- Lower income
- More likely to be unemployed
- Higher among those renting
- No deprivation gradient

Emotional problems
- Not changing over time
- No gender difference
- Increases with age

Peer problems
- Not changing over time
- Higher among boys
- Higher in Counties-Manukau

Hyperactivity-inattention
- Not changing over time
- Higher among boys
- Higher among very young children

Conduct problems
- Not changing over time
- Higher among boys
- Higher among very young children

Prosocial behaviour
- Not changing over time
- Higher among girls
- Increases with age

Total problems
- Not changing over time
- Higher among boys
- Higher among very young children

Emotional problems
- No deprivation gradient

Peer problems
- Increases with increasing deprivation
- Higher for children in rented homes

Hyperactivity-inattention
- Increases with increasing deprivation

Conduct problems
- Increases with increasing deprivation

Prosocial behaviour
- **Decreases** with increasing deprivation

Total problems
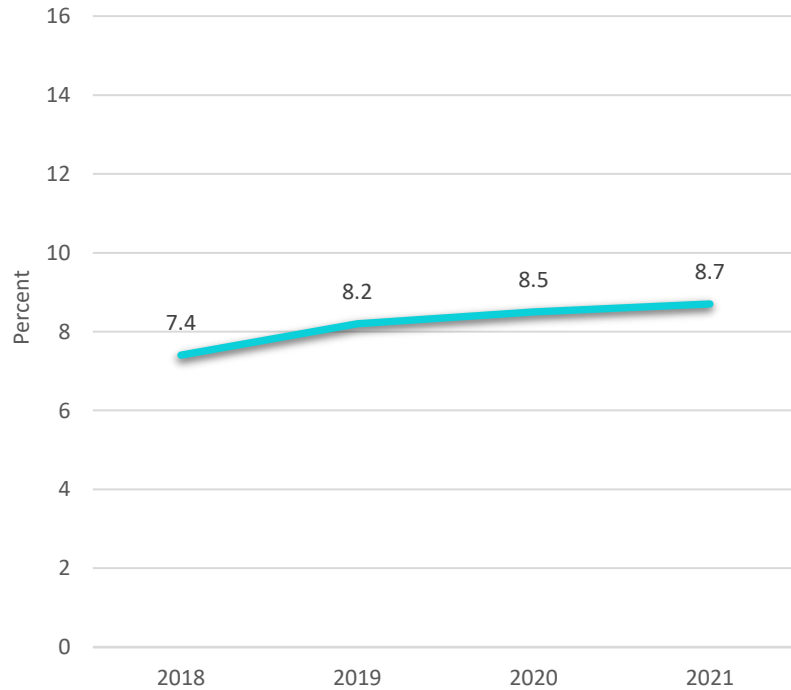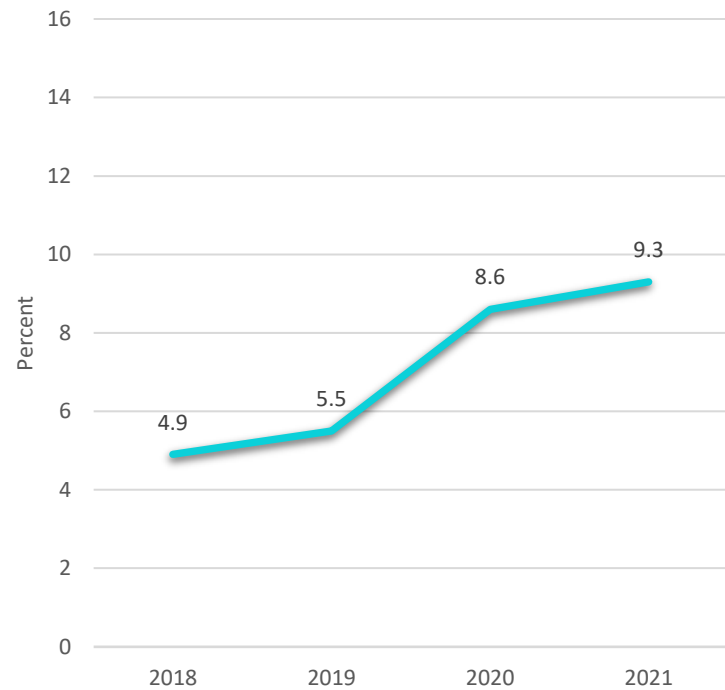- Increases with increasing deprivation
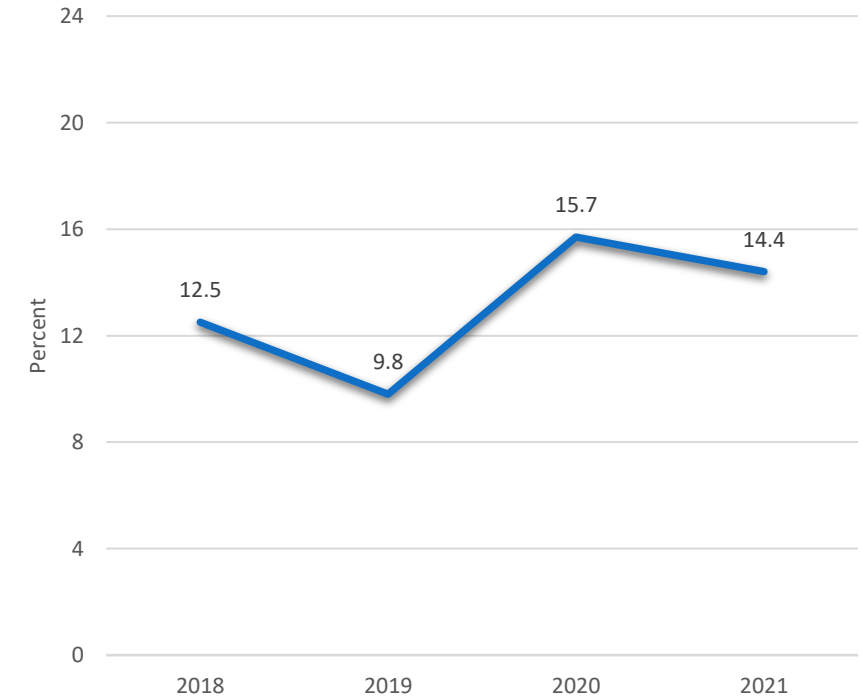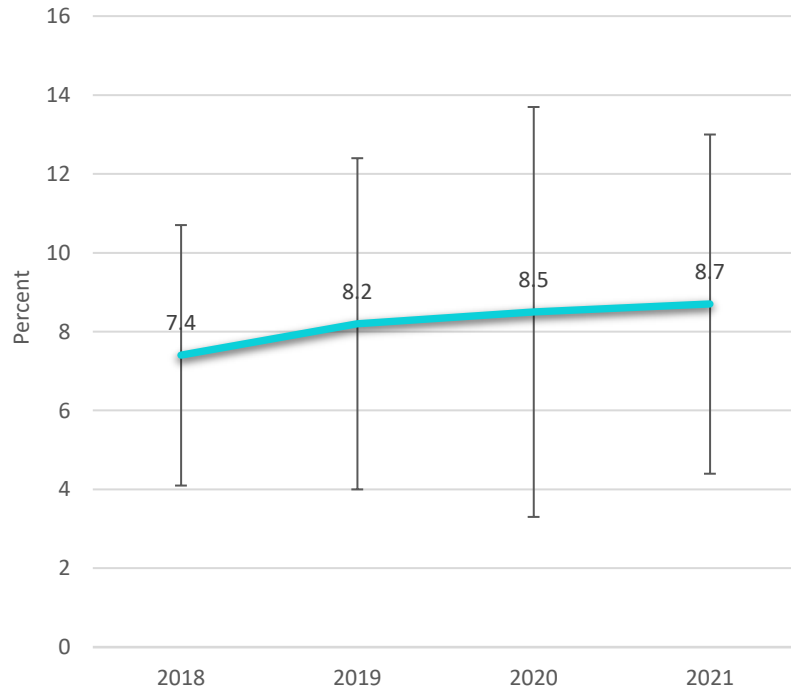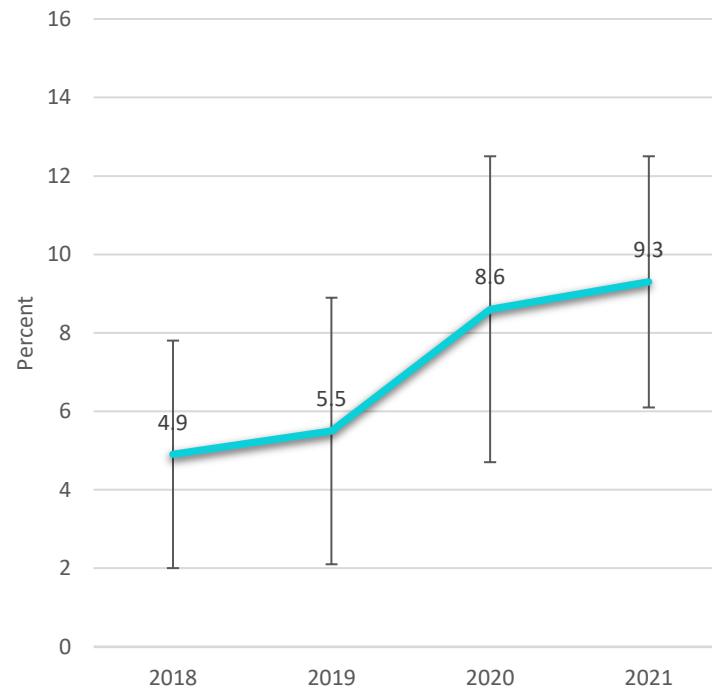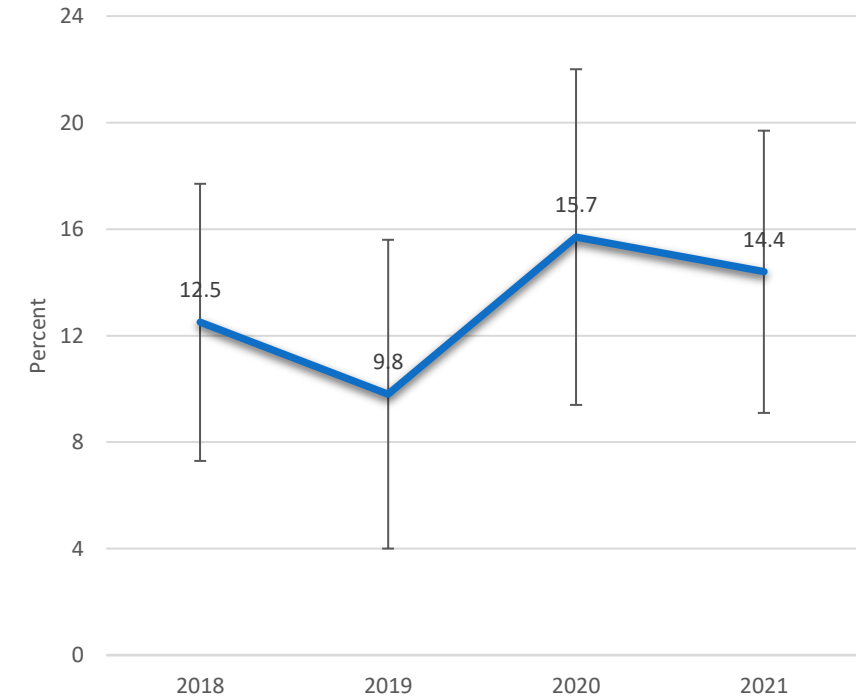
- **Lower** prevalence of Dr-diagnosed depression and anxiety, but **higher** prevalence of self-rated psychological distress
  - Access barriers?
  - A consistent finding over 30 years
- Socioeconomic correlates largely as expected, though affluence sometimes associated with higher rates of Dr-diagnosed depression and anxiety
  - Better access?
- NZ born report more Dr-diagnosed depression and anxiety
  - Better access?
- Child behaviour steady over time; demographic and socioeconomic patterns as expected
- No evidence for Covid impact, but not well-powered to detect one

- Policy implications

- Implications for Mental Health workforce

- Implications for Pacific data/research

  - NZHS is not well placed to investigate correlates (or trends) of low-prevalence outcomes among minority population groups

    - Oversampling could address this, which has cost implications but it will be cheaper than a devoted Pacific mental health survey (or a devoted full population mental health survey)
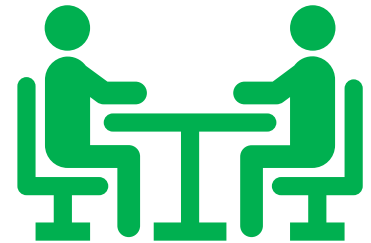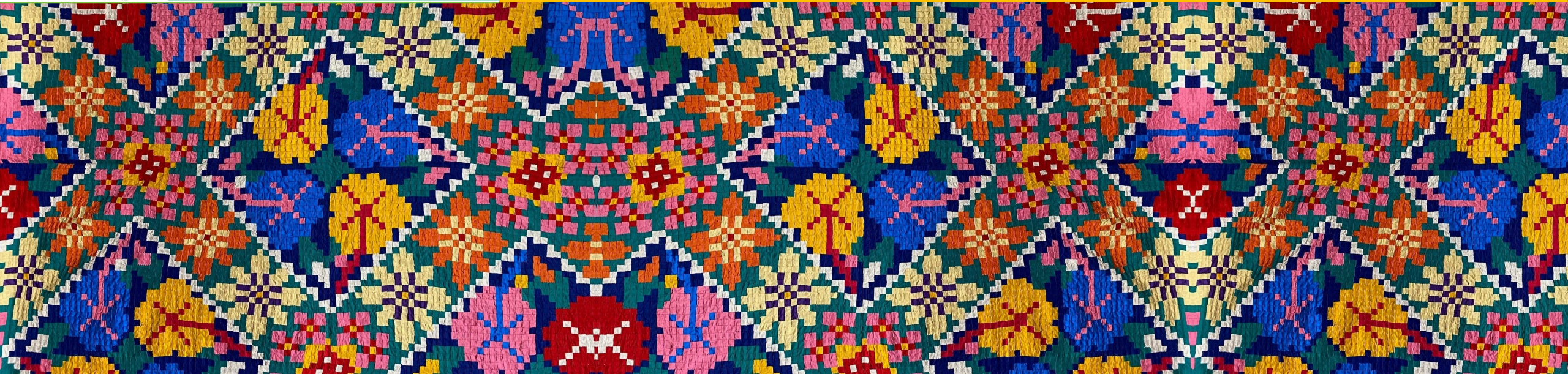
Ministry for Pacific Peoples

Te Manatū mō ngā Iwi ō te Moana-nui-ā-Kiwa

National SCiENCE Challenges

A BETTER START

E Tipu e Rea

Thank you

Meitaki ma'ata

K10 Test

These questions concern how you have been feeling over the past 30 days. Tick a box below each question that best represents how you have been.

1. During the last 30 days, about how often did you feel tired out for no good reason?

1. None of the time	2. A little of the time	3. Some of the time	4. Most of the time	5. All of the time

2. During the last 30 days, about how often did you feel nervous?

1. None of the time	2. A little of the time	3. Some of the time	4. Most of the time	5. All of the time

3. During the last 30 days, about how often did you feel so nervous that nothing could calm you down?

1. None of the time	2. A little of the time	3. Some of the time	4. Most of the time	5. All of the time

4. During the last 30 days, about how often did you feel hopeless?

1. None of the time	2. A little of the time	3. Some of the time	4. Most of the time	5. All of the time

5. During the last 30 days, about how often did you feel restless or fidgety?

1. None of the time	2. A little of the time	3. Some of the time	4. Most of the time	5. All of the time

6. During the last 30 days, about how often did you feel so restless you could not sit still?

1. None of the time	2. A little of the time	3. Some of the time	4. Most of the time	5. All of the time

7. During the last 30 days, about how often did you feel depressed?

1. None of the time	2. A little of the time	3. Some of the time	4. Most of the time	5. All of the time

8. During the last 30 days, about how often did you feel that everything was an effort?

1. None of the time	2. A little of the time	3. Some of the time	4. Most of the time	5. All of the time

9. During the last 30 days, about how often did you feel so sad that nothing could cheer you up?

1. None of the time	2. A little of the time	3. Some of the time	4. Most of the time	5. All of the time

10. During the last 30 days, about how often did you feel worthless?

1. None of the time	2. A little of the time	3. Some of the time	4. Most of the time	5. All of the time

SDQ items

	0 Not true	1 Somewhat true	2 Certainly true
Considerate of other people's feelings (PRO)			
Restless, overactive, cannot stay still for long (HYP)			
Often complains of headaches, stomach-aches or sickness (EMOT)			
Shares readily with other children, for example toys, treats, pencils (PRO)			
Often loses temper (COND)			
Rather solitary, prefers to play alone (PEER)			
Generally well behaved, usually does what adults request[a] (COND)			
Many worries or often seems worried (EMOT)			
Helpful if someone is hurt, upset or feeling ill (PRO)			
Constantly fidgeting or squirming (HYP)			
Has at least one good friend[a] (PEER)			
Often fights with other children or bullies them (COND)			
Often unhappy, depressed or tearful (EMOT)			
Generally liked by other children[a] (PEER)			
Easily distracted, concentration wanders (HYP)			
Nervous or clingy in new situations, easily loses confidence (EMOT)			
Kind to younger children (PRO)			
Often lies or cheats[b] (COND)			
Picked on or bullied by other children (PEER)			
Often volunteers to help others (parents, teachers, other children) (PRO)			
Thinks things out before acting[a] (HYP)			
Steals from home, school or elsewhere[c] (COND)			
Gets along better with adults than with other children (PEER)			
Many fears, easily scared (EMOT)			
Good attention span, sees work through to the end[a] (HYP)			

PRO = Prosocial behaviour
HYP = Hyperactivity-inattention
EMOT = Emotional symptoms
PEER = Peer problems
COND = Conduct problems
[a] These items are reverse coded.
[b] In 2-4 year-old children this item is "Often argumentative with adults".
[c] In 2-4 year-old children this item is "Can be spiteful to others".

Pacific adults

DEMOGRAPHIC AND SOCIO-ECONOMIC VARIABLES	ANXIETY	DEPRESSION	PSYCHOLOGICAL DISTRESS	TOTAL PACIFIC POPULATION
Gender	**Pacific women** are more affected 5.0% / 3.2%	**Pacific women** are more affected 8.7% / 5.4%	**Pacific women** are more affected 12.7% / 10.0%	**More Pacific men** in the total Pacific population 49.9% / 50.1%
Age	Higher prevalence in working age group **45 – 54 years** 15-24 years: 3.1% 25-34 years: 4.44% 35-44 years: 5.05% 45-54 years: 5.50% 55+ years: 3.25%	Higher prevalence in working age group **25 – 54 years** 15-24 years: 3.4% 25-34 years: 7.5% 35-44 years: 9.4% 45-54 years: 9.4% 55-64 years: 8.9% 65+ years: 5.50%	No difference by age 15-24 years: 11.1% 25-34 years: 10.5% 35-44 years: 12.1% 45-54 years: 13.5% 55-64 years: 11.4% 65+ years: 10.0%	Higher numbers in youth population Under 15 years: 33.6% 15-29 years: 37.2% 30-64 years: 33.9% 65 years and over: 5.3%
Ethnicity	Pacific/European are more affected Pacific/European: 8.7% Pacific/Māori: 7.6% Niue: 6.4% Cook Islands Māori: 4.9% Tongan: 3.6% Samoan: 3.4%	Pacific/European are more affected Pacific/European: 14.1% Pacific/Māori: 11.3% Cook Islands Māori: 9.1% Niue: 7.6% Samoan: 6.0% Tongan: 5.5%	Cook Islands Māori are more affected Cook Islands Māori: 13.0% Pacific/Māori: 12.6% Tongan: 11.7% Pacific/European: 11.4% Samoan: 11.3% Niue: 8.9%	More sole-Pacific ethnic makeup Pacific peoples only: 65% Pacific peoples/European: 13% Pacific peoples/Māori: 9% Pacific peoples/Asian: 2% Pacific peoples/other ethnicity: 0.2%
Place of birth	Higher prevalence in New Zealand born 5.5% NZ born / 2.7% Overseas born	Higher prevalence in New Zealand born 9.0% NZ born / 4.6% Overseas born	No difference by place of birth	The majority of the total Pacific population are New Zealand born 66% NZ born / 34% Overseas born
Geographical location	Higher prevalence in South Island residents South Island DHBs: 8.5% Rest of North Island: 5.6% Waitemata DHB: 3.9% Auckland DHB: 3.7% Counties Manukau DHB: 3.1% Hutt and Capital Coast: 3.2%	Lower prevalence in adults living in Counties Manukau DHB area Rest of North Island: 10.1% South Island DHBs: 9.4% Auckland DHB: 7.4% Hutt and Capital Coast: 6.9% Waitemata DHB: 6.0% Counties Manukau DHB: 5.0%	No difference by geographical location Auckland DHB: 12.3% Rest of North Island DHBs: 12.1% Counties Manukau DHB: 11.9% Hutt and Capital Coast DHB: 11.1% Waitemata DHB: 10.9% South Island DHBs: 8.0%	Most live in the North Island 92% live in the North Island
Income	Lower income for adults with anxiety $30,100 Adults without anxiety $39,300	Lower income for adults with depression $29,500 Adults without depression $39,600	Lower income for adults with psychological distress $30,600 Adults without psychological distress $40,000	Total mean income $24,300

Pacific adults

DEMOGRAPHIC AND SOCIO-ECONOMIC VARIABLES	ANXIETY	DEPRESSION	PSYCHOLOGICAL DISTRESS	TOTAL PACIFIC POPULATION
Labour force status	**Higher prevalence for adults not in the labour force** Not in the labour force: 5.4% Unemployed: 5.0% Employed: 3.4%	**Higher prevalence for adults unemployed or not in the labour force** Unemployed: 9.8% Not in the labour force: 7.9% Employed: 5.9%	**Higher prevalence for adults unemployed or not in labour force** Unemployed: 16.9% Not in the labour force: 13.9% Employed: 9.0%	**Higher prevalence in full time employment** Employed full time: 49.7% Employed part time" 12.6% Unemployed: 7.1% Not in the labour force: 30.6%
Home ownership	**No differences by home ownership** Rented homes: 4.3% Own homes:3.8%	**No differences by home ownership** Rented homes: 7.1% Own homes: 6.6%	**Higher prevalence live in rented homes** **Rented homes** **12.8%** Own home **8.8%**	**The majority live in rented homes** **Pacific people who live in a home they do not own or hold in family trust** **79%** **Pacific people who own a home** **21%**
Household crowding	**Higher prevalence for people living in ideal non-crowded homes** Ideal: 6.1% Moderate: 4.0% Overcrowding: 2.3%	**Higher prevalence for people living in ideal non-crowded homes** Ideal: 9.9% Moderate: 5.7% Overcrowding: 4.7%	**No difference by household crowding** Overcrowded: 12.2% Ideal: 10.3% Moderate: 9.9%	**Higher prevalence for those living in moderately crowded homes** 1 spare bedroom (ideal):20.4% 2 or more bedrooms spare (ideal): 9.9% No extra bedrooms required (moderate): 31.2% 1 bedroom needed (crowded): 20.5% 2+ bedrooms needed (severely crowded):18.8%
Level of Education	**No difference by education** No qualification: 5.0% Secondary: 4.0% Post secondary: 5.0% Tertiary: 4.0%	**No difference by education** No qualification: 8.0% Secondary: 6.0% Post secondary: 8.0% Tertiary: 7.0%	**No difference by education** No qualification: 12.0% Secondary: 10.0% Post secondary: 11.0% Tertiary: 9.0%	**Higher prevalence have a secondary qualification as their highest** No qualification: 21% Secondary: 44% Post secondary: 12% Tertiary: 9%
Level of Deprivation	**Living in privileged areas** Dep 1 or 2 (privileged areas): 5.8% Dep 3: 5.4% Dep 4: 4.4% Dep 5 (poor areas): 3.3%	**Living in privileged areas** Dep 1 or 2 (privileged areas): 8.5% Dep 3: 7.7% Dep 4: 7.7% Dep 5 (poor areas): 5.9%	**No difference by level of deprivation** Dep 1 or 2 (privileged areas): 9.9% Dep 3: 12.5% Dep 4: 11.7% Dep 5 (poor areas): 11.5%	To be inserted

Pacific children behavioural and emotional problems group scores – compared with under 15 years Pacific population

DEMOGRAPHIC AND SOCIO ECONOMIC VARIABLES	EMOTIONAL PROBLEMS	PEER PROBLEMS	HYPERACTIVITY-INATTENTION	CONDUCT PROBLEMS	PROSOCIAL BEHAVIOUR	TOTAL BEHAVIOURAL PROBLEM	TOTAL GENERAL PACIFIC POPULATION UNDER 15 YEARS (%)
Gender	No difference by gender ♂♀	Boys ♂	Boys ♂	Boys ♂	Girls ♀	Boys ♂	More girls than boys ♀ Boys: 48.5% Girls: 51.5%
Age	Higher levels of emotional behaviour problems in **older children (10-14 years)** 2-4 years: 1.5 5-9 years: 1.7 10-14 years: 2.0	No difference by age	Higher levels in **younger children (2-4 years)** 2-4 years: 3.6 5-9 years: 33. 10-14 years: 3.0	Higher levels of conduct problems in **younger children (2-4 years)** 2-4 years: 2.5 5-9 years: 1.7 10-14 years: 1.5	Prosocial behaviour **increases with age** 2-4 years: 7.8 5-9 years: 8.2 10-14 years: 8.4	Higher levels of total problem behaviours in **younger children (2-4 years)** 2-4 years: 9.7 5-9 years: 8.9 10-14 years: 8.5	Higher numbers in **5-9 years age group** 0.4 years: 33.0% 5-9 years: 35.5% 10-14 years: 31.5% Under 15 years: 33.6%
Ethnicity	No difference by ethnicity	More peer problems for **Pacific/European children** Samoan: 2.1 Cook Islands: 2.3 Tongan: 2.3 Niue: 1.9 Pacific/European: 1.6 Pacific/Māori: 2.0	No evidence to support difference by ethnicity	More conduct problems for **Cook Islands Māori children** Samoan: 1.8 Cook Islands: 2.2 Tongan: 1.7 Niue: 1.8 Pacific/European: 1.6 Pacific/Māori: 1.8	No difference by ethnicity	More total problem behaviours **for Cook Islands Māori children** Samoan: 9.0 Cook Islands: 9.9 Tongan: 9.0 Niue: 8.7 Pacific/European: 7.9 Pacific/Māori: 8.9	**More Pacific only ethnic makeup** Pacific peoples only: 16.7% Pacific peoples/European: 13.2% Pacific peoples/Māori: 4.6% Pacific/Asian: 1.8% Pacific/Other: 0.2%
Place of birth	No difference by place of birth	No difference by place of birth	No difference by place of birth	No difference by place of birth	No difference by place of birth	No difference by place of birth	Higher proportion are **New Zealand born** New Zealand born: 91.0% Overseas: 9.0%
Geographical location	No difference by geographical location	More peer problems for children living in **Counties Manukau DHB area** Waitemata DHB: 1.8 Auckland DHB: 2.0 Counties Manukau DHB: 2.4 Rest of North Island: 2.1 Hutt and Capital Coast: 1.9 South Island DHBs: 1.6	No difference by geographical location	No difference by geographical location	No difference by geographical location	No difference by geographical location	Population is **highest in North Island** Waitemata DHB: 33% Auckland DHB: 29% Counties Manukau DHB: 34% Rest of North Island: 39% Hutt and Capital Coast: 31% South Island DHBs: 35%
Home ownership	No difference by home ownership	More peer problems for **children living in rented homes** Rented homes: 2.3 Own homes: 1.9	No difference by home ownership	No difference by home ownership	No difference by home ownership	No difference by home ownership	The majority **live in rented homes** Do not own houses: 79% Own homes: 21%
Level of Deprivation	No difference by level of deprivation	**Higher** for children **living in privileged areas** Dep 1 (privileged areas): 1.7 Dep 2: 1.4 Dep 3: 1.8 Dep 4: 2.0 Dep 5 (poor areas):2.4	**Higher across all deprivation areas** Dep 1 (privileged areas): 1.7 Dep 2: 2.5 Dep 3: 2.8 Dep 4: 3.1 Dep 5 (poor areas):3.4	**Higher** for children **living in poor areas** Dep 1 (privileged areas): 1.1 Dep 2: 1.6 Dep 3: 1.5 Dep 4: 1.70 Dep 5 (poor areas): 2.0	**Lower** for children **living in poor areas** Dep 1 (privileged areas): 8.7 Dep 2: 8.2 Dep 3: 8.6 Dep 4: 8.4 Dep 5 (poor areas):8.0	**Higher** for children living in **poor areas** Dep 1 (privileged areas): 7.2 Dep 2: 7.2 Dep 3: 8.3 Dep 4: 8.5 Dep 5 (poor areas): 9.6	

Pacific children