



COVID-19

Experiences of the pandemic and young people's wellbeing

Caroline Walker, Ben Fletcher, Jane Cha, Karen E. Waldie, Susan Morton, Elizabeth R. Peterson, Pat Bullen, Kate Prickett, Kane Meissel, John Fenaughty, Sarah-Jane Paine.

What do we know about the COVID-19 pandemic and how it impacts wellbeing?

The initial public health response to COVID-19 in New Zealand involved some of the most stringent restrictions on movement and access to non-essential services (1). The elimination strategy required people to stay within their household “bubble” and only travel within their local communities. This meant that children and young people were unable to interact with their peers or support systems outside of their households (2). These restrictions resulted in a low burden of disease relative to other countries (3). However, they placed additional stressors on families, including job and income loss, lack of access to services, the requirement to home school children, and in many cases, the need to undertake remote work (4). New Zealand's move away from the elimination strategy and the opening of schools and other non-essential services brought both positive and negative effects for young people and their families. For example, although the availability of vaccines and the requirement of face mask use and physical distancing provided some protection against infection, there was still anxiety associated with these changes, as well as uncertainty about future restrictions and/or outbreaks (5).

In Aotearoa, the pandemic has been associated with greater depression and anxiety compared to population norms (6) and worry about COVID-19 has been correlated with anxiety, depression, and stress (7). However, few studies have examined the wellbeing of young New Zealanders. Internationally, several studies have reported the negative effects of the pandemic on young people's wellbeing (8, 9). A recent systematic review reported that the pandemic has significantly contributed to paediatric anxiety, while other studies have reported worse quality of life compared to pre-pandemic levels (10).



The impact of the pandemic has widened existing inequities for New Zealand young people and their families

Ethnicity

COVID-19 has highlighted various health disparities, including ethnic and racial disparities (11). In New Zealand, Māori and Pacific people experienced the highest infection, hospitalisation, and mortality rates, as well as experiencing a higher burden of risk factors associated with these outcomes (12, 13). Additionally, vaccine coverage has not been equitable (14).

Gender

There have been several reports of differences in perceptions or impacts of the pandemic by gender. A recent study reported that the pandemic had a greater impact on transgender and gender diverse youth than cisgender youth (15).

Deprivation

There are significant factors at the societal level that contribute to observed disparities, such as socioeconomic position (16). Varying levels of vulnerability between people and places have important consequences on individual and community responses to the pandemic (17). For example, living in poor housing conditions (18) or high-deprivation areas were associated with an increased prevalence of COVID-19 infections (16).

What can *Growing Up in New Zealand* add?

Concerns have been raised about the potential effects of COVID-19 on New Zealand children's wellbeing. Longitudinal studies like *Growing Up in New Zealand* can provide unique, timely evidence of the health burden associated with the COVID-19 pandemic (19).

Growing Up in New Zealand has previously reported on "Life during Lockdown" for the cohort at the start of the pandemic in 2020 (20). The 12-year data collection wave (DCW) was completed from September 2021 to the end of July 2022 by 4624 young people, of which, 4500 were residing in Aotearoa, New Zealand. During this time, the Delta and Omicron outbreaks occurred, and there were varying restriction levels across Aotearoa.

In this topic, we explore the association between ethnicity, gender and deprivation and worry due to COVID-19 and how this relates to young people's wellbeing.

Measuring wellbeing

Three measures of wellbeing were used in this report: Self reported depression symptoms, anxiety symptoms and health related quality of life (QOL) using standard short form questionnaires.

- Depression symptoms were measured using the 10-item Centre for Epidemiologic Studies Depression Scale for Children (CES-DC-10) (21).
- Anxiety symptoms were measured using the 8-item Patient-Reported Outcomes Measurement Information System (PROMIS) Paediatric Anxiety - Short Form 8a (Item Bank v2.0) (22).
- QOL was measured using the 10 item KIDSCREEN questionnaire which assesses subjective health and psychological, mental and social wellbeing (23).



Key findings

- Two-thirds of young people worried at least sometimes about missing out on schoolwork due to COVID-19.
- Almost half of young people never worried about their families’ finances or how people in their home were getting along.
- Transgender or non-binary young people reported more worries and fears about COVID-19, followed by cisgender girls and cisgender boys.
- Pacific and MELAA young people reported more worries and fears about COVID-19.
- Young people living in the most deprived areas had more worries and fears about COVID-19 than those living in the least deprived areas.
- Young people with supportive parent-child relationships had fewer worries about COVID-19.
- Young people who live in a sole parent, extended family, or households with non-kin reported more worries and fears about COVID-19 than those living in two-parent households.
- Worries and fears about COVID-19 among young people was significantly associated with their wellbeing, and increasing worry was associated with worse depression, anxiety, and quality of life scores.

Worries and fears about COVID-19 at age 12

It was uncommon for young people to report that they worried often or always about COVID-19 (Table 1.) However, two-thirds of young people ($n = 2887$, 65.2%) worried at least sometimes about missing out on schoolwork due to COVID-19. Fewer young people were worried about their family finances or how people in their home were getting along, with 45.8% ($n = 2029$) of young people never worrying about their families' finances and almost half of all young people ($n = 2181$, 49.2%) never worrying about how people in their house were getting along.

Table 1. Frequency of worry about the COVID-19 pandemic at age 12 years

Worried about...	Never		Sometimes		Often		Always		Don't know		Total N
	n	%	n	%	n	%	n	%	n	%	
Missing school work	1446	32.6	1910	43.1	655	14.8	322	7.3	98	2.2	4431
Family finances	2029	45.8	1350	30.5	447	10.1	180	4.1	425	9.6	4431
People getting along at home	2181	49.2	1348	30.4	432	9.7	163	3.7	307	6.9	4431

Who was most worried about COVID-19 at age 12?

The COVID-19 pandemic has disproportionately and unequally impacted marginalised communities due to existing structural inequities (24-28). However, most studies examining inequities in the impact of the pandemic have focussed on adult populations, with few studies investigating the impact on young people. *Growing Up in New Zealand* provides a unique opportunity to examine experiences of the pandemic for different communities of young people at age 12 regarding how worried they were about COVID-19 on their lives.

Therefore, to better understand who was most worried about the COVID-19 pandemic, the association between these worries and gender, ethnicity, and deprivation were examined.

COVID-19 worries and fears by gender

Growing Up in New Zealand data from the 12-year DCW is consistent with the literature, with transgender or non-binary young people reporting most worry due to COVID-19 (Table 2).

Table 2. COVID-19 worries and fear by gender

Worried about...	Never		Sometimes		Often		Always		Don't know		Total N
	n	%	n	%	n	%	n	%	n	%	
Missing school work											
Cisgender boy	815	40	805	40	262	13	99	5	45	2	2026
Cisgender girl	435	26	777	47	273	16	151	9	33	2	1669
Transgender/non-binary/ don't know	196	27	328	45	120	16	72	10	20	3	736
Family finances											
Cisgender boy	1045	52	574	28	167	8	65	3	175	9	2026
Cisgender girl	729	44	534	32	157	9	66	4	183	11	1669
Transgender/non-binary/ don't know	255	35	242	33	123	17	49	7	67	9	736
People getting along at home											
Cisgender boy	1069	53	605	30	178	9	57	3	117	6	2026
Cisgender girl	827	50	504	30	157	9	53	3	128	8	1669
Transgender/non-binary/ don't know	285	39	239	32	97	13	53	7	62	8	736

Overall, transgender or non-binary young people ($n = 618$, mean = 2.9, median = 3) were most worried, followed by cisgender girls ($n = 1392$, mean = 2.5, median = 2.0) when compared to cisgender boys ($n = 1767$, mean = 2.0, median = 2.0) (Figure 1).

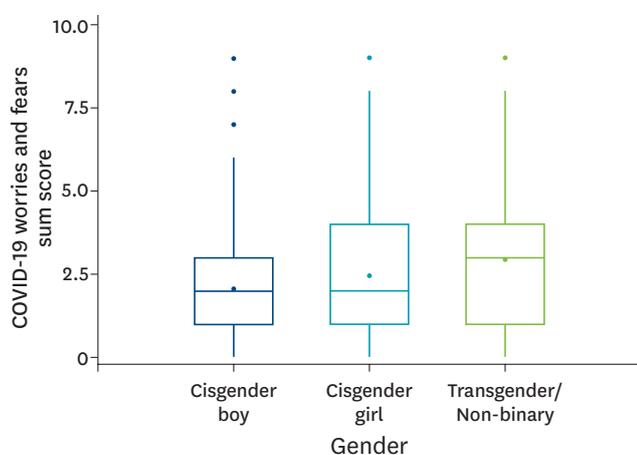


Figure 1. Worries and fears due to COVID-19: Sum score of all three questions by gender
See [Supplementary material](#) for more information on the sum score.

COVID-19 worries and fears by ethnicity

At the 12 year DCW, worry due to COVID-19 differed by ethnicity with the pattern of responses differing for each question when examined by the main ethnic groupings represented in our cohort (Table 3).

Table 3. COVID-19 worries and fears by ethnicity

Worried about...	Never		Sometimes		Often		Always		Don't know		Total
	n	%	n	%	n	%	n	%	n	%	N
Missing school work											
Māori	360	37.2	394	40.7	138	14.3	62	6.4	13	1.3	967
Pacific	196	27.4	291	40.6	123	17.2	88	12.3	18	2.5	716
Asian	150	23.5	271	42.5	132	20.7	62	9.7	22	3.5	637
MELAA/Other	38	25.3	71	47.3	26	17.3	13	8.7	<10	1.3	150
Sole European	779	34.7	1000	44.6	287	12.8	130	5.8	46	2.1	2242
Family finances											
Māori	395	40.8	313	32.4	117	12.1	61	6.3	81	8.4	967
Pacific	270	37.7	239	33.4	85	11.9	44	6.1	78	10.9	716
Asian	280	44.0	200	31.4	70	11.0	20	3.1	67	10.5	637
MELAA/Other	61	40.7	44	29.3	22	14.7	<10	4.7	16	10.7	150
Sole European	1135	50.6	645	28.8	195	8.7	74	3.3	193	8.6	2242
People getting along at home											
Māori	467	48.3	290	30.0	100	10.3	43	4.4	67	6.9	967
Pacific	314	43.9	220	30.7	71	9.9	33	4.6	78	10.9	716
Asian	305	47.9	196	30.8	62	9.7	28	4.4	46	7.2	637
MELAA/Other	69	46.0	50	33.3	18	12.0	<10	2.7	<10	6.0	150
Sole European	1156	51.6	687	30.6	212	9.5	70	3.1	117	5.2	2242

Overall, rangatahi Māori ($n = 837$, mean = 2.4, median = 2), Pacific ($n = 580$, mean = 2.8, median = 3), Asian ($n = 535$, mean = 2.6, median = 2) and MELAA ($n = 62$, mean = 2.6, median = 2) young people were more worried due to COVID-19 than young people who identify solely as European ($n = 1957$, mean = 2.2, median = 2).

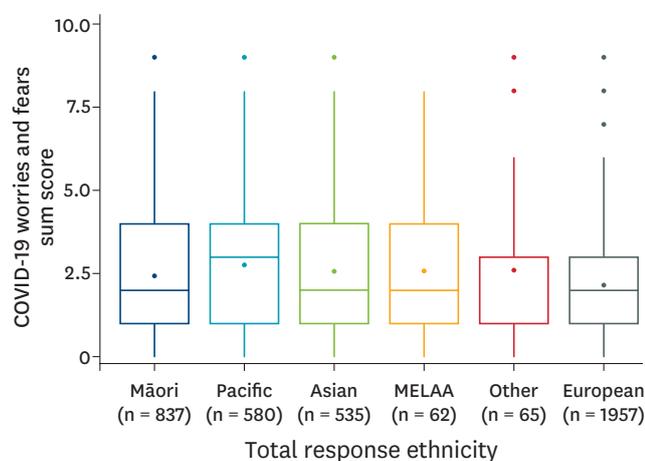


Figure 2. Worries and fears due to COVID-19: Sum score of all three questions by ethnicity. Ethnicity is presented as total response such that participants who selected multiple ethnicities are included in multiple categories. In contrast, European includes only those participants who selected European and no other ethnicity.

COVID-19 worries and fears by area-level deprivation

There was a general trend that for higher deprivation, there was more worry due to COVID-19. However, this trend was most pronounced for worry about family finances due to COVID-19 (Table 4).

Table 4. COVID-19 worry and fear by area level deprivation quintile

Worried about...	Never		Sometimes		Often		Always		Don't know		Total N
	n	%	n	%	n	%	n	%	n	%	
Missing school work											
1	340	32.2	492	46.6	143	13.5	64	6.1	17	1.6	1056
2	323	33.2	427	43.8	133	13.7	62	6.4	29	3.0	974
3	287	34.0	347	41.1	131	15.5	63	7.5	16	1.9	844
4	236	32.9	306	42.7	116	16.2	44	6.1	15	2.1	717
5	232	30.6	307	40.5	119	15.7	81	10.7	19	2.5	758
Family finances											
1	577	54.6	283	26.8	81	7.7	30	2.8	85	8.0	1056
2	441	45.3	314	32.2	90	9.2	34	3.5	95	9.8	974
3	398	47.2	249	29.5	88	10.4	31	3.7	78	9.2	844
4	293	40.9	238	33.2	88	12.3	31	4.3	67	9.3	717
5	287	37.9	237	31.3	88	11.6	53	7.0	93	12.3	758
People getting along at home											
1	560	53.0	336	31.8	92	8.7	28	2.7	40	3.8	1056
2	501	51.4	268	27.5	102	10.5	43	4.4	60	6.2	974
3	408	48.3	275	32.6	73	8.6	32	3.8	56	6.6	844
4	350	48.8	209	29.1	81	11.3	18	2.5	59	8.2	717
5	322	42.5	241	31.8	75	9.9	35	4.6	85	11.2	758

Overall, with increasing area-level deprivation, there were increasing worries and fears due to COVID-19. Young people living in the most deprived areas (quintile 5) had the highest worries and fears score (n = 607, mean = 2.7, median = 3) compared to those living in the least deprived areas (quintile 1, n = 936, mean = 2.1, median = 2).

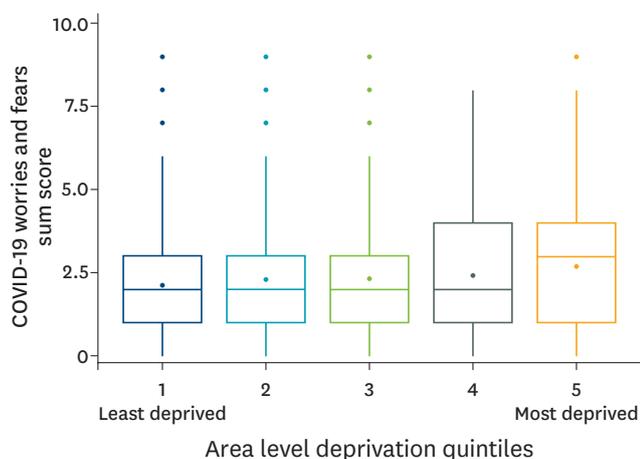


Figure 3. Worries and fears due to COVID-19: Sum score of all three questions by area level deprivation

See [Supplementary material](#) for more information on the sum score.

Factors associated with worries and fears due to COVID-19

Factors that were hypothesised to be associated with worries and fears due to the COVID-19 pandemic were selected based on the literature. These included child demographic factors (child gender, ethnicity), socioeconomic factors (DEP17 total score, mother labour force status), household factors (household structure, residential mobility), relationship factors (child-peer relationship score, child-parent relationship score) and the mother wellbeing factors (worries and fears due to COVID-19, depression). Although all of these factors were significantly associated with worries and fears at the univariate level, after correcting for all factors in a multivariate model, some were no longer significant predictors. Overall, the multivariate model explained a relatively small (8%) amount of the total variability in the COVID-19 worries and fears sum score with demographic factors explaining the largest amount of variation.¹

Gender and ethnicity

Cisgender girls or transgender or non-binary young people had higher scores than those who identified as cisgender boys. Young people who identified as Pacific or Asian had higher scores than those who identified as European.

Socioeconomic factors

Greater deprivation (measured using the DEP-17 score, which measures individual deprivation) was associated with increasing (worse) COVID-19 worries and fears.

Household factors

Household structure was associated with the COVID-19 worries and fears sum score. Young people living in a sole-parent or an extended family household reported higher worries and fear scores than those living in a two-parent only household.

Relationship factors

Young people with more supportive/stronger relationships with their parents were less worried about the impacts of COVID-19. See Snapshot 9 for more information about both the Parent-Child and Peer Relationships measures.

Mother wellbeing factors

The mother's COVID-19 worries and fears sum score was associated with the young person's COVID-19 worries and fears score such that with increasing worry from the mother (higher score) there was increasing worry from their child (higher score).

¹ Full models are reported in [Supplementary material](#).

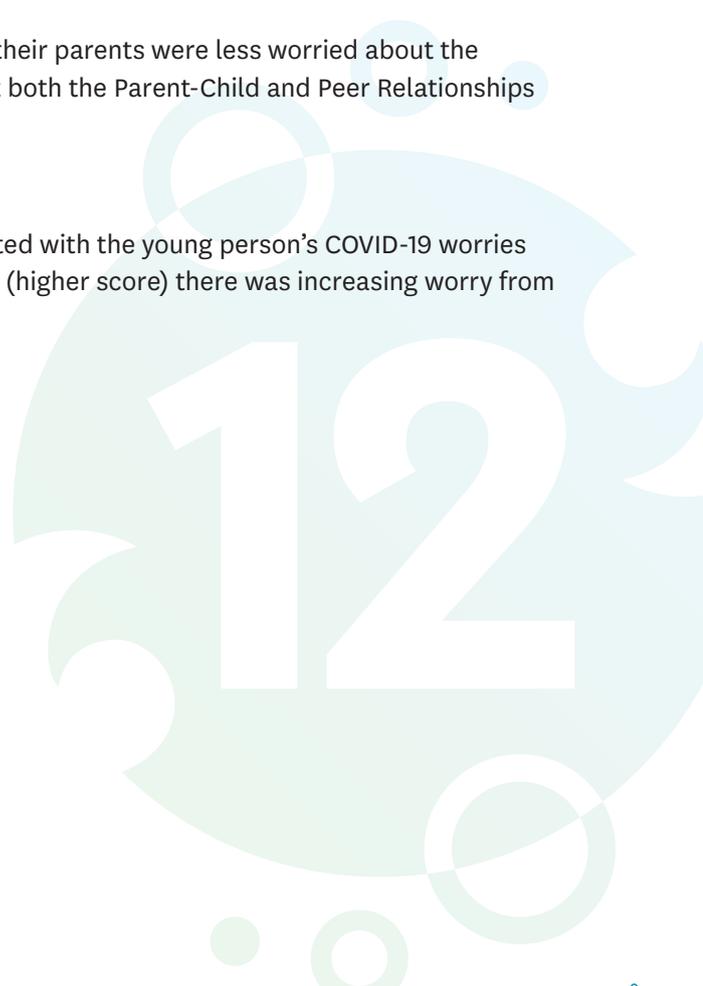


Table 5. Predictors of COVID-19 worries and fears. All items that were significant in univariate analyses were added to a multivariate model. Those items that were no longer significant were removed and a final multivariate model was completed. *n*, mean and standard deviation are provided for categorical variables. Externally prioritised ethnicity was used in the analysis to create exclusive categories.

Worried about...	<i>n</i>	Mean	SD	Univariate		Multivariate	
				beta	<i>p</i> -value	beta	<i>p</i> -value
Gender							
Cisgender boy	1767	2.04	1.68	Reference			
Cisgender girl	1392	2.46	1.82	0.42	<0.01	0.45	<0.01
Transgender/Non-binary	618	2.95	1.96	0.91	<0.01	0.68	<0.01
Ethnicity							
Māori	837	2.44	1.89	0.28	<0.01	0.11	0.18
Pacific	382	2.81	1.83	0.65	<0.01	0.25	0.04
Asian	442	2.54	1.86	0.39	<0.01	0.22	0.04
MELAA	47	2.45	1.59	0.29	0.27	0.25	0.39
Other	31	2.45	1.88	0.29	0.36	0.31	0.34
European	1957	2.16	1.74	Reference			
DEP-17				0.11	<0.01	0.06	<0.01
Household structure							
Two parent	2795	2.21	1.75	Reference			
Sole parent	473	2.66	2.00	0.45	<0.01	0.27	<0.01
Parent(s) living with\extended family	406	2.80	1.88	0.59	<0.01	0.31	<0.01
Parent(s) living with\non-kin	69	2.73	1.80	0.51	0.02	0.16	<0.01
Child-Parent relationship score				-0.06	<0.01	-0.05	<0.01
Mother COVID-19 worries and fears score				0.04	<0.01	0.02	<0.01



How is worry about COVID-19 related to wellbeing in young people?

Three wellbeing indicators were examined in relation to worries and fears due to COVID-19: depression, anxiety, and QOL. These are common proxy markers of wellbeing and have been associated with wellbeing throughout the life course. *Growing Up in New Zealand* has measured depression and anxiety at three time points over the past four years (at 8, 10 and 12 years of age). In this section, we examine the association between worries and fears due to COVID-19 and the three wellbeing measures at 12-years-old and then examine mean values for depression and anxiety from 8 to 12 years of age and how these differ based on worries and fears due to COVID-19.

COVID-19 worries and fears and mental health

The association between COVID-19 worries and fears and depression and anxiety scores was examined for the three COVID-19 worries and fears questions individually, as well as the COVID-19 worries and fears sum score. Overall, with increasing worries and fears due to COVID-19 the depression and anxiety scores were greater. COVID-19 worries and fears were significantly associated with both depression and anxiety scores. When looking longitudinally (8,10 and 12 years of age), depression scores have increased and anxiety has decreased over time with the mean scores differing by the degree of reported COVID-19 worries and fears. The final models explained 41.5% of the variation in depression score and 30% of the anxiety score. For more information on the factors associated with depression and anxiety see [Snapshot 7: Mental Health](#).

Table 6. Association between COVID-19 worries and fears and depression score.* The final model explained 41.5% of the variation in depression scores. In addition to the COVID-19 questions, the final model included: gender, 8 year depression score, bullying score at age 12, child-peer relationship score at age 12, and child-parent relationship score at age 12. The final model explained 41.5% of the variation in age 12 depression score.

Depression at age 12	Summary statistics			Univariate		Multivariate	
	n	Mean	Median	beta	p-value	beta	p-value
Worried about...							
Missing school							
Never	1446	7.9	7	Reference			
Sometimes	1910	8.3	7	0.45	<0.01	0.06	0.69
Often	655	9.4	9	1.48	<0.01	0.48	0.03
Always	322	10.2	10	2.33	<0.01	0.31	0.28
Don't know	98	9.4	8	1.47	<0.01	0.63	0.27
Family finances							
Never	2029	7.1	6	Reference			
Sometimes	1350	9.0	8	1.93	<0.01	0.62	<0.01
Often	447	11.5	11	4.39	<0.01	1.78	<0.01
Always	180	13.0	13	5.86	<0.01	2.46	<0.01
Don't know	425	8.3	7	1.19	<0.01	0.05	0.86
Getting along at home							
Never	2181	7.3	6	Reference			
Sometimes	1348	9.2	9	1.92	<0.01	1.03	<0.01
Often	432	10.8	10	3.47	<0.01	1.52	<0.01
Always	163	12.1	12	4.84	<0.01	1.57	<0.01
Don't know	307	9.0	8	1.74	<0.01	0.92	<0.01

*Further information about factors associated with mental health are reported in [Snapshot 7: Mental Health](#).

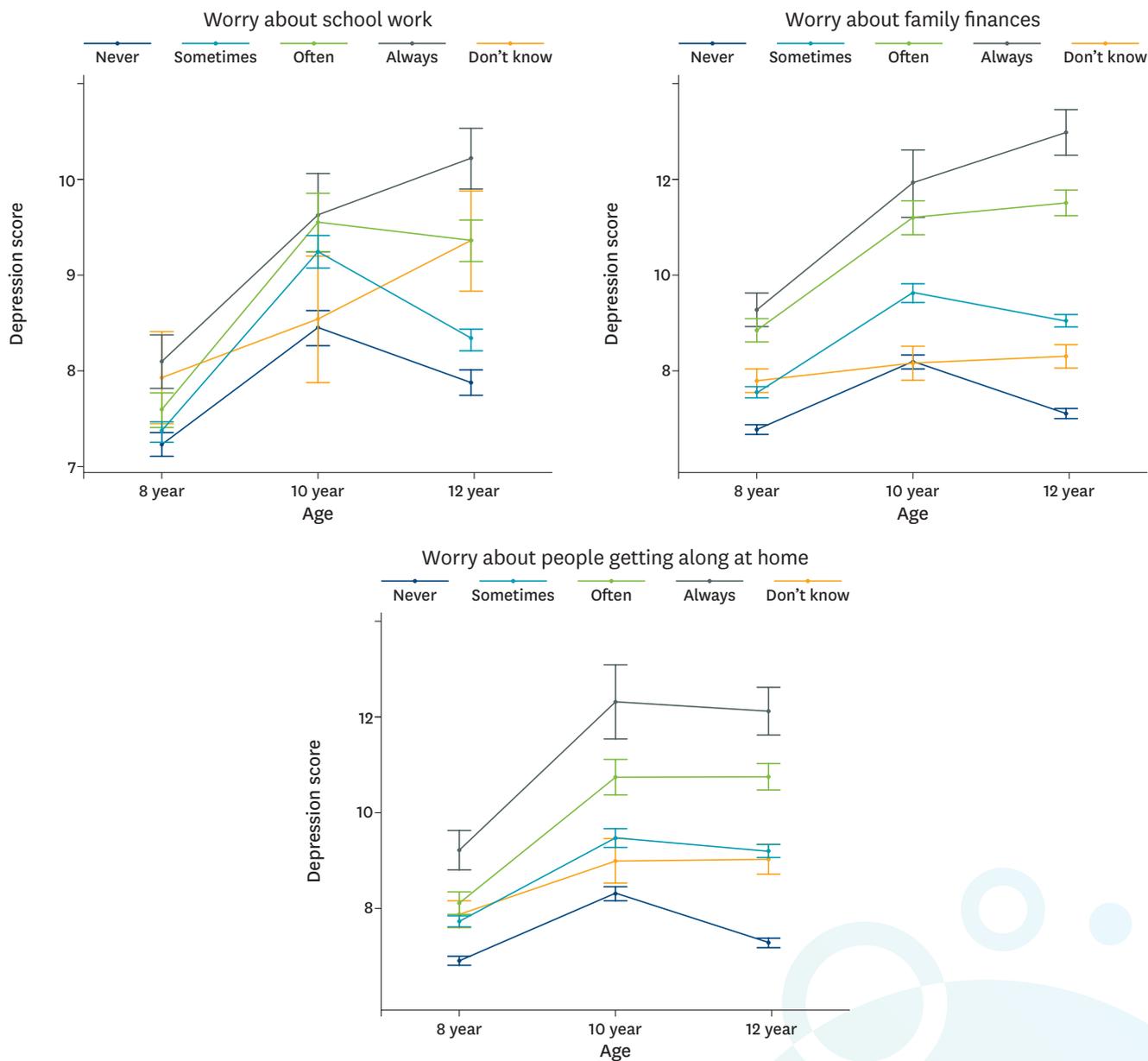


Figure 4. Association between COVID-19 worries and fears and depression score from 8 to 12 years



Table 7. Association between COVID-19 worries and fears and anxiety score.* In addition to the COVID-19 questions, the final model included: gender, ethnicity, anxiety score at age 8, bullying score at age 12, child-peer relationship score at age 12, and child-parent relationship score at age 12. The final model explained 30% of the variation in the anxiety score at age 12.

Anxiety at age 12	Summary statistics			Univariate		Multivariate		
	Worried about...	n	Mean	Median	beta	p-value	beta	p-value
Missing school								
Never	1446	43.25	40.6	Reference				
Sometimes	1910	46.61	46.7	3.36	<0.01	1.83	<0.01	
Often	655	48.74	48.3	5.49	<0.01	2.58	<0.01	
Always	322	49.94	51.2	6.69	<0.01	2.77	<0.01	
Don't know	98	45.11	44.9	1.86	0.09	2.03	0.12	
Family finances								
Never	2029	43.42	40.6	Reference				
Sometimes	1350	47.65	48.3	4.23	<0.01	1.33	<0.01	
Often	447	51.26	52.5	7.84	<0.01	2.09	<0.01	
Always	180	53.65	54.45	10.23	<0.01	3.79	<0.01	
Don't know	425	44.71	43	1.29	0.02	-0.39	0.53	
Getting along at home								
Never	2181	43.20	40.6	Reference				
Sometimes	1348	48.22	48.3	5.02	<0.01	2.80	<0.01	
Often	432	50.89	51.2	7.69	<0.01	3.67	<0.01	
Always	163	54.03	55.1	10.83	<0.01	4.94	<0.01	
Don't know	307	45.56	44.9	2.36	<0.01	1.54	0.04	

* Further information about factors associated with mental health are reported in [Snapshot 7: Mental Health](#).



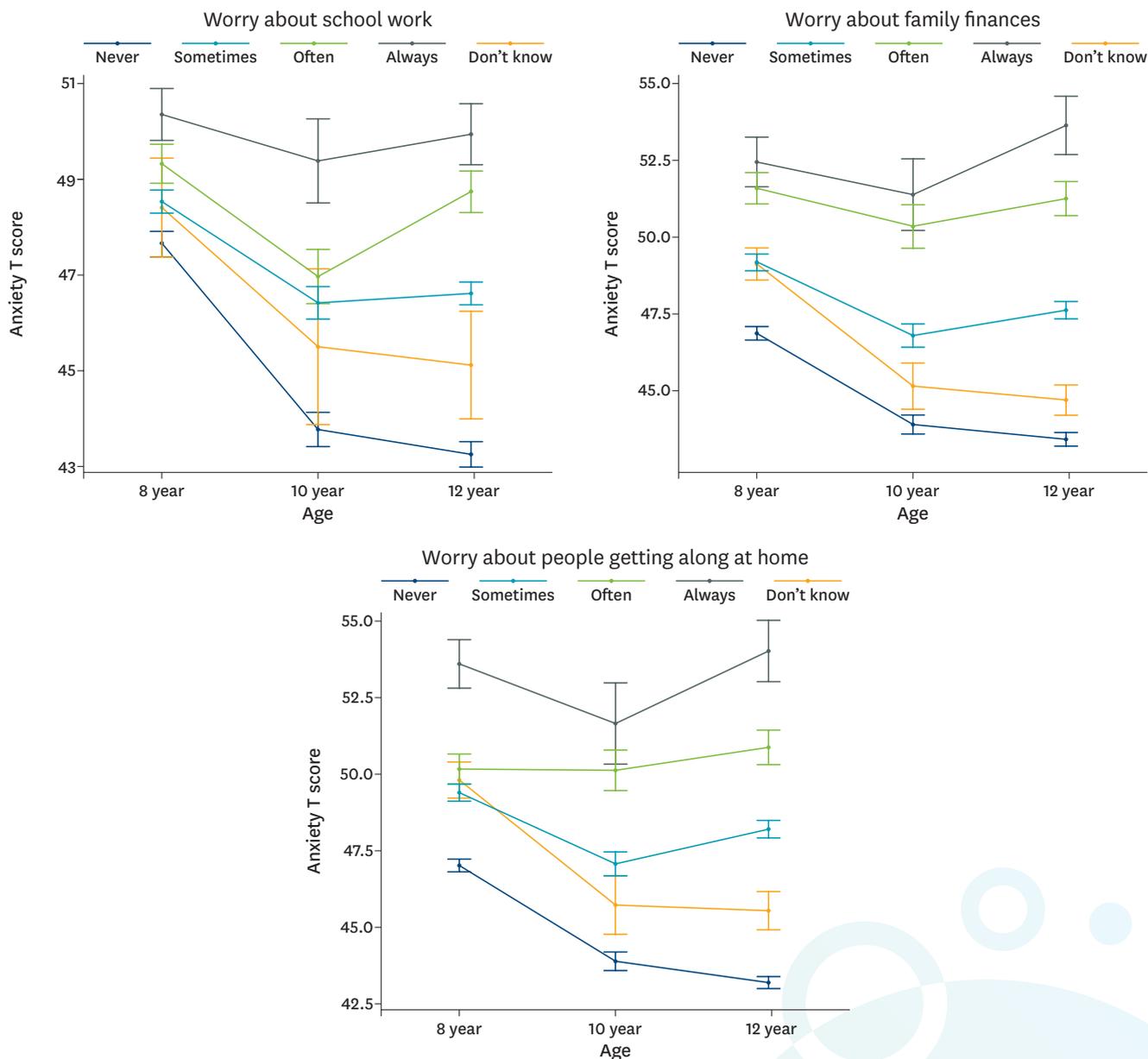
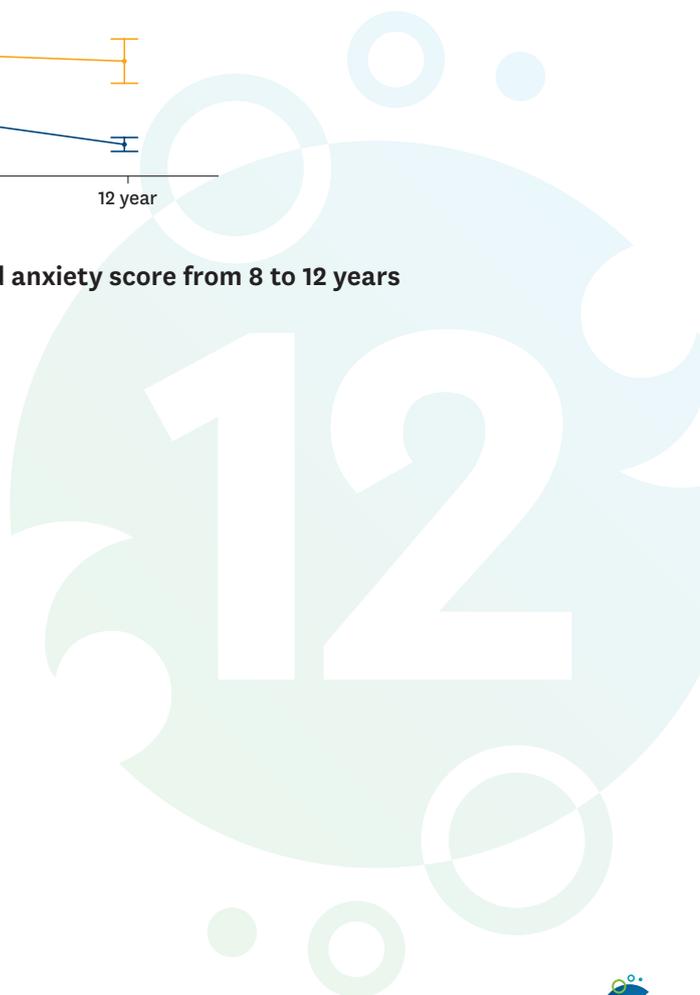


Figure 5. Association between COVID-19 worries and fears and anxiety score from 8 to 12 years



COVID-19 worries and fears and quality of life scores

The association between COVID-19 worries and fears and health-related quality of life (QOL, (23)) was examined for the three COVID-19 worries and fears questions individually as well as the COVID-19 worries and fears sum score. Overall, with increasing worries and fears due to COVID-19 the quality of life score was lower meaning those who were more worried about the impact of COVID-19 had worse quality of life scores.

Table 8. Association between COVID-19 worries and fears and QOL. In addition to the COVID-19 items, the full model included: gender, mothers antenatal perceived stress, bullying score, child-peer relationship score and child-parent relationship score. The final model explained 33.2% of the variability in QOL scores at age 12.

Quality of life at age 12	Summary statistics			Univariate		Multivariate	
	n	Mean	Median	beta	p-value	beta	p-value
Worried about...							
Missing school							
Never	1446	39.67	40.00	Reference			
Sometimes	1910	39.52	40.00	-0.15	0.39	-0.09	0.60
Often	655	39.22	40.00	-0.45	0.06	-0.02	0.92
Always	322	38.96	39.00	-0.71	0.02	0.53	0.08
Don't know	98	37.63	37.50	-2.04	<0.01	-0.41	0.51
Family finances							
Never	2029	40.63	41.00	Reference			
Sometimes	1350	38.84	39.00	-1.80	<0.01	-0.70	<0.01
Often	447	37.11	37.00	-3.52	<0.01	-1.25	<0.01
Always	180	36.66	37.00	-3.97	<0.01	-1.83	<0.01
Don't know	425	39.31	39.00	-1.32	<0.01	-0.41	0.15



Relevance for Policy and Practice

Worrying is a normal response to unknown or concerning situations, such as a global pandemic. However, there are ongoing physical and mental health concerns that have arisen in response to COVID-19(6). This report highlights that worries and fears surrounding COVID-19 had a significant impact on young people's quality of life, depressive symptoms, and anxiety symptoms. *Growing Up in New Zealand* provides evidence for areas of worries and fears related to COVID-19 that could be addressed or mitigated as part of the COVID-19 recovery and any future pandemic planning. For example:

Financial worries and fears

The economic instability that was experienced by parents and families during the pandemic has had an impact on over half of young people. It is critical to consider that the financial implications of COVID-19 affect the entire family, by causing generally higher levels of worries and fear within the household. Therefore, policies that aim to improve young people's quality of life should consider that measures which improve financial stability for households as a whole are likely to be beneficial in improving young people's quality of life, especially in emergencies.

School work worries and fears

Two-thirds of young people worried at least sometimes about missing out on schoolwork due to COVID-19. It is important to consider the ongoing impact school closures during COVID-19 will have on the learning needs of young people. At the policy level, ensuring resources are made available to help mitigate any learning loss, particularly for vulnerable and marginalised groups, will be critical.

Getting along at home worries and fears

Almost half of all young people never or almost never worried about how people in their house were getting along. Although it was less common than other worries, in terms of the impact this worry had on wellbeing, being worried about getting along at home had a similar impact to financial worries and fears.

Demographics

Worries about the impact of COVID-19 on young people was not equally distributed in terms of demographics or the environment in which young people were growing up in. Gender, ethnicity, and deprivation were all associated with worry about the impact of COVID-19. The same groups who experience social, economic, and educational inequities also experienced the most worry about the impacts of COVID-19. This supports previous evidence that COVID-19 has widened the socioeconomic gap in Aotearoa and highlights the need for resources and support for those in greatest need which includes minoritised ethnic groups as well as those living in the most deprived areas.

Gender

Transgender or non-binary young people were most worried about the impact of COVID-19. Given worry about the impact of COVID-19 was significantly associated with wellbeing outcomes, this finding indicates that the stressors associated with COVID-19 may have exacerbated the health and wellbeing inequalities that exist among transgender and non-binary young people. Policy makers should consider this when working to reduce the ongoing impact of COVID-19. A higher proportion of transgender and non-binary participants reported worries about people getting along at home than other groups, suggesting that more supports that meet their needs may be required to support them and their whānau after the COVID-19 pandemic.

Wellbeing

Young people who experienced the most worry about the impact of COVID-19 also experienced the poorest health and wellbeing outcomes. Worry about the impact of COVID-19 was associated with worse depression, anxiety, and quality of life scores. This is not surprising given that worry and fear are part of the symptomatology of these outcomes. However, it is likely that COVID-19 has exacerbated mental health concerns, particularly for the most marginalised and for those who experienced these concerns pre-COVID. This highlights the importance of targeted, youth-friendly and easily accessible mental health care for young people in Aotearoa. This is particularly important for transgender and non-binary young people who were both more worried and experienced poorer wellbeing.

References

1. Cousins S. New Zealand eliminates COVID-19. *The Lancet*. 2020;395(10235):1474.
2. Baker MG, Kvalsvig A, Verrall AJ, Wellington N. New Zealand's COVID-19 elimination strategy. *Med J Aust*. 2020;213(5):198-200.
3. Jefferies S, French N, Gilkison C, Graham G, Hope V, Marshall J, et al. COVID-19 in New Zealand and the impact of the national response: a descriptive epidemiological study. *The Lancet Public Health*. 2020;5(11):e612-e23.
4. Every-Palmer S, Jenkins M, Gendall P, Hoek J, Beaglehole B, Bell C, et al. Psychological distress, anxiety, family violence, suicidality, and wellbeing in New Zealand during the COVID-19 lockdown: A cross-sectional study. *PLoS ONE*. 2020;15(11):e0241658.
5. Jeffs E, Lucas N, Walls T. COVID-19: Parent and caregiver concerns about reopening New Zealand schools. *Journal of Paediatrics and Child Health*. 2021;57(3):403-8.
6. Gasteiger N, Vedhara K, Massey A, Jia R, Ayling K, Chalder T, et al. Depression, anxiety and stress during the COVID-19 pandemic: results from a New Zealand cohort study on mental well-being. *BMJ open*. 2021;11(5):e045325.
7. Siegert RJ, Narayanan A, Dipnall J, Gossage L, Wrapson W, Sumich A, et al. Depression, anxiety and worry in young Pacific adults in New Zealand during the COVID-19 pandemic. *Australian & New Zealand Journal of Psychiatry*. 2022:00048674221115641.
8. Kauhanen L, Wan Mohd Yunus WMA, Lempinen L, Peltonen K, Gyllenberg D, Mishina K, et al. A systematic review of the mental health changes of children and young people before and during the COVID-19 pandemic. *European child & adolescent psychiatry*. 2022:1-19.
9. Hossain MM, Nesa F, Das J, Aggad R, Tasnim S, Bairwa M, et al. Global burden of mental health problems among children and adolescents during COVID-19 pandemic: An umbrella review. *Psychiatry Research*. 2022;317:114814.
10. Lehmann S, Haug E, Bjørknes R, Mjeldheim Sandal G, T Fadnes L, Skogen JC. Quality of life among young people in Norway during the COVID-19 pandemic. A longitudinal study. *European child & adolescent psychiatry*. 2022:1-11.
11. Yancy CW. COVID-19 and African Americans. *Jama*. 2020;323(19):1891-2.
12. McLeod M, Gurney J, Harris R, Cormack D, King P. COVID-19: we must not forget about Indigenous health and equity. *Australian and New Zealand journal of public health*. 2020.
13. Steyn N, Binny RN, Hannah K, Hendy SC, James A, Kukutai T, et al. Estimated inequities in COVID-19 infection fatality rates by ethnicity for Aotearoa New Zealand. *N Z Med J*. 2020;133(1521):28-39.
14. Whitehead J, Carr PA, Scott N, Lawrenson R. Structural disadvantage for priority populations: the spatial inequity of COVID-19 vaccination services in Aotearoa. *NZMA*. 2022;135(1551):1175-8716.
15. Hawke LD, Hayes E, Darnay K, Henderson J. Mental health among transgender and gender diverse youth: an exploration of effects during the COVID-19 pandemic. *Psychology of Sexual Orientation and Gender Diversity*. 2021.
16. Morrissey K, Spooner F, Salter J, Shaddick G. Area level deprivation and monthly COVID-19 cases: The impact of government policy in England. *Social Science Medicine*. 2021;289:114413.
17. KC M, Oral E, Straif-Bourgeois S, Rung AL, Peters ESJPO. The effect of area deprivation on COVID-19 risk in Louisiana. 2020;15(12):e0243028.
18. Bilal U, Tabb LP, Barber S, Diez Roux AVJAoim. Spatial inequities in COVID-19 testing, positivity, confirmed cases, and mortality in 3 US cities: an ecological study. 2021;174(7):936-44.

19. Robinson E, Sutin AR, Daly M, Jones A. A systematic review and meta-analysis of longitudinal cohort studies comparing mental health before versus during the COVID-19 pandemic in 2020. *Journal of affective disorders*. 2022;296:567-76.
20. Walker N, Dubey N, Bergquist M, Janicot S, Swinburn B, Napier C, et al. The GUINZ COVID-19 Wellbeing Survey: Part 1: Health and Wellbeing. . In: *Growing up in New Zealand*, editor. Auckland2021.
21. Andresen EM, Malmgren JA, Carter WB, Patrick DL. Screening for depression in well older adults: Evaluation of a short form of the CES-D. *American journal of preventive medicine*. 1994;10(2):77-84.
22. Irwin DE, Stucky B, Langer MM, Thissen D, DeWitt EM, Lai J-S, et al. An item response analysis of the pediatric PROMIS anxiety and depressive symptoms scales. *Quality of Life Research*. 2010;19(4):595-607.
23. Ravens-Sieberer U, Herdman M, Devine J, Otto C, Bullinger M, Rose M, et al. The European KIDSCREEN approach to measure quality of life and well-being in children: development, current application, and future advances. *Quality of life research*. 2014;23:791-803.
24. Kidd JD, Jackman KB, Barucco R, Dworkin JD, Dolezal C, Navalta TV, et al. Understanding the impact of the COVID-19 pandemic on the mental health of transgender and gender nonbinary individuals engaged in a longitudinal cohort study. *Journal of Homosexuality*. 2021;68(4):592-611.
25. Czymara CS, Langenkamp A, Cano T. Cause for concerns: gender inequality in experiencing the COVID-19 lockdown in Germany. *European societies*. 2021;23(sup1):S68-S81.
26. Oreffice S, Quintana-Domeque C. Gender inequality in COVID-19 times: Evidence from UK prolific participants. *Journal of Demographic Economics*. 2021;87(2):261-87.
27. Deckman M, McDonald J, Rouse S, Kromer M. Gen Z, gender, and COVID-19. *Politics & Gender*. 2020;16(4):1019-27.
28. Xue B, McMunn A. Gender differences in unpaid care work and psychological distress in the UK Covid-19 lockdown. *PloS one*. 2021;16(3):e0247959.





Growing Up in New Zealand

Now We Are Twelve

Life in early adolescence

Further Details

Supplementary material for this snapshot is available to download.

The introduction to the 12-year data collection wave and the methodology used to analyse the 12-year data can be downloaded as a PDF.

About the *Growing Up in New Zealand Now We Are Twelve* snapshot series

The Now We Are 12 Snapshots are accessible summaries of policy-relevant research findings from *Growing Up in New Zealand*, this country's largest longitudinal study of child health and wellbeing.

Other snapshots in this series can be found [here](#). An [introduction](#) to the 12-year data collection wave and the [methodology](#) used to analyse the 12-year data can be downloaded as a PDF.

[Supplementary material](#) for this snapshot can also be downloaded.

Suggested Citation: Walker C.G, Fletcher B.D, Cha, J.E., Waldie, K.E., Morton, S.M.B., Peterson, E.R., Bullen, P., Prickett, K., Meissel, K., Fenaughty, J., Paine, S.J. 2023. Now We Are 12: Experiences of the COVID-19 pandemic and young people's wellbeing. Snapshot 6. Auckland: *Growing Up in New Zealand*. Available from: www.growingup.co.nz

Get in touch

Email: researchgrowingup@auckland.ac.nz

Or visit

www.growingup.co.nz

www.twitter.com/GrowingUpinNZ

www.facebook.com/growingupnz

www.instagram.com/growingupnz