

Impact of the first wave of COVID-19 on the health and psychosocial well-being of Māori, Pacific peoples and New Zealand Europeans living in aged residential care

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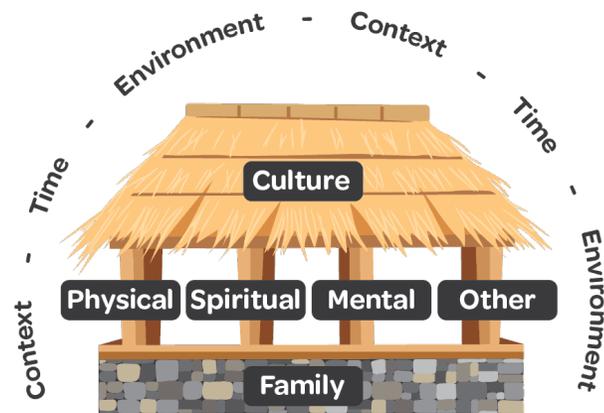
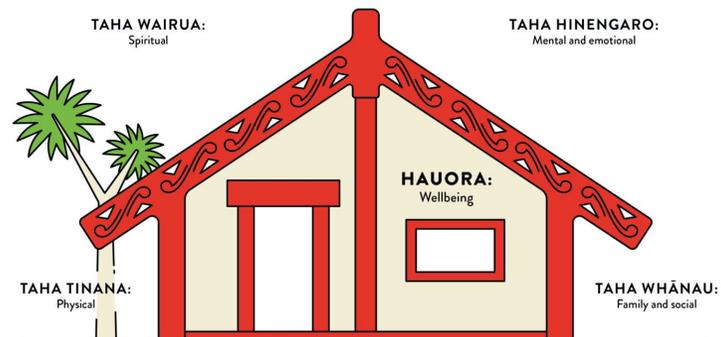
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**MEDICAL AND
HEALTH SCIENCES**

- International studies suggest ARC residents were often emotionally distressed, and felt disconnected and socially isolated during COVID-19 lockdown

Māori and Pacific Peoples

- Family relationships are particularly important in determining the health and well-being among Māori and Pacific Peoples, with the family forming the foundation of the **Te Whare Tapa Whā** and **Fonofale** (holistic models of health)



Background

- We hypothesised that strict isolation and restricted family visiting could have a negative effect on the health and psychosocial well-being of Māori and Pacific peoples living in aged residential care (ARC)
- Study Aims:
 - To investigate the impact of NZ first wave of COVID-19, which included a nationwide lockdown, on the health and psychosocial well-being of Māori, Pacific peoples and NZ Europeans in ARC

TABLE 1 Timeline of the events and responses during the first wave of COVID-19 in New Zealand in 2020

Date	Alert levels	Comments
28 February 2020	First confirmed COVID-19 case	
21 March 2020	Alert Level 2: Reduce	The disease is contained, but the risk of community transmission remains
23 March 2020	Alert Level 3: Restrict	High risk, the disease is not contained
25 March 2020	Alert Level 4: Lockdown	Likely, the disease is not contained
27 April 2020	Alert Level 3: Restrict	High risk, the disease is not contained
13 May 2020	Alert Level 2: Reduce	The disease is contained, but the risk of community transmission remains
8 June 2020	Alert Level 1: Prepare	The disease is contained in New Zealand

Sources: New Zealand Doctor <https://www.nzdoctor.co.nz/timeline-coronavirus> and Ministry of Health <https://covid19.govt.nz/alert-levels-and-updates/about-the-alert-system/>

Methods

- Mandatory interRAI assessments of Māori, Pacific peoples and NZ Europeans (aged 60+) completed between 21/3/2020 and 8/6/2020 were compared with assessments of the same ethnicities during the same period in the previous year (21/3/2019 to 8/6/2019).
- Physical, cognitive, psychosocial and service utilisation indicators were included in the bivariate analyses

Results

FIGURE 1 Number of interRAI assessments per week from 21 March to 8 June in 2019 and 2020. *This is not a weekly total but is from 6 June to 8 June

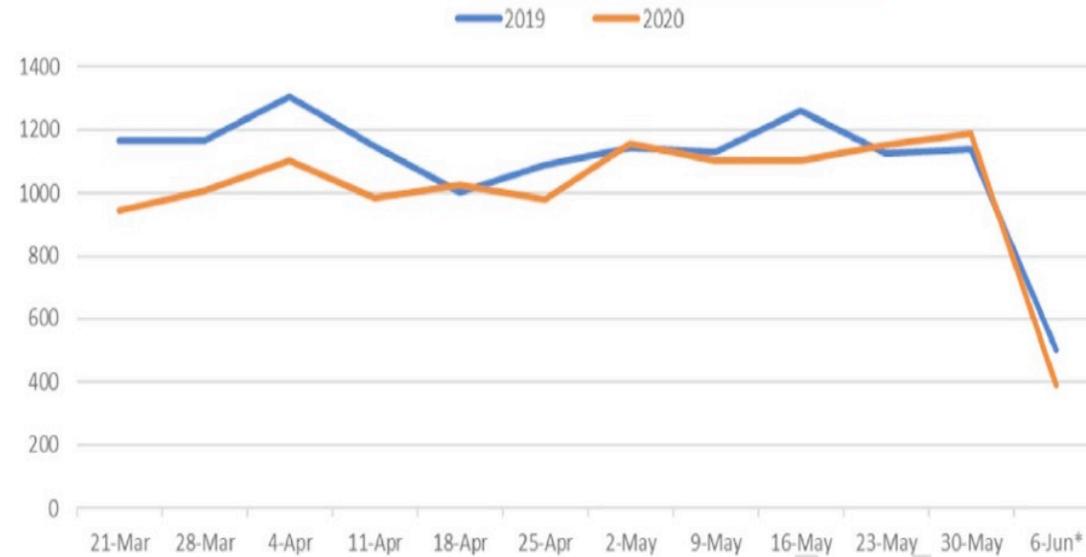


TABLE 2 Comparison between the health and psychological well-being of Maori, Pacific, New Zealand European populations in long-term care during the first wave of COVID-19 in 2020 and the same time period in 2019

	Māori			Pacific peoples			New Zealand Europeans		
	2019 <i>n</i> = 549 <i>n</i> (%)	2020 <i>n</i> = 538 <i>n</i> (%)	<i>p</i> -Value	2019 <i>n</i> = 248 <i>n</i> (%)	2020 <i>n</i> = 276 <i>n</i> (%)	<i>p</i> -Value	2019 <i>n</i> = 12,367 <i>n</i> (%)	2020 <i>n</i> = 11,322 <i>n</i> (%)	<i>p</i> -Value
Age									
60–69	106 (19.3)	107 (19.9)	0.927	47 (19.0)	45 (16.3)	0.389	622 (5.0)	551 (4.9)	0.613
70–79	212 (38.6)	198 (36.8)		89 (35.9)	118 (42.8)		2371 (19.2)	2206 (19.5)	
80–89	188 (34.2)	192 (35.7)		91 (36.7)	88 (31.9)		5462 (44.2)	4922 (43.5)	
90+	43 (7.8)	41 (7.6)		21 (8.5)	25 (9.1)		3912 (31.6)	3643 (32.2)	
Sex ^a									
Female	331 (60.3)	313 (58.7)	0.600	136 (54.8)	155 (56.2)	0.761	8177 (66.1)	7387 (65.7)	0.489
Male	218 (39.7)	220 (41.3)		112 (45.2)	121 (43.8)		4188 (33.9)	3856 (34.3)	
Marital status ^a									
Married/Civil Union/ De facto	91 (16.6)	100 (18.8)	0.346	76 (30.6)	82 (29.7)	0.816	2955 (23.9)	2780 (24.7)	0.138
Other	458 (83.4)	433 (81.2)		172 (69.4)	194 (70.3)		9410 (76.1)	8463 (75.3)	

	Māori			Pacific peoples			New Zealand Europeans		
	2019	2020	<i>p</i> -Value	2019	2020	<i>p</i> -Value	2019	2020	<i>p</i> -Value
	<i>n</i> = 549 <i>n</i> (%)	<i>n</i> = 538 <i>n</i> (%)		<i>n</i> = 248 <i>n</i> (%)	<i>n</i> = 276 <i>n</i> (%)		<i>n</i> = 12,367 <i>n</i> (%)	<i>n</i> = 11,322 <i>n</i> (%)	
Self-rated health									
Excellent	23 (4.2)	24 (4.5)	0.960	7 (2.8)	3 (1.1)	0.574	295 (2.4)	260 (2.3)	0.285
Good	288 (52.5)	292 (54.3)		118 (47.6)	141 (51.1)		5878 (47.5)	5495 (48.5)	
Fair	98 (17.9)	90 (16.7)		45 (18.1)	47 (17.0)		3116 (25.2)	2804 (24.8)	
Poor	20 (3.6)	17 (3.2)		6 (2.4)	9 (3.3)		805 (6.5)	672 (5.9)	
Could not (would not) respond	120 (21.9)	115 (21.4)		72 (29.0)	76 (27.5)		2273 (18.4)	2091 (18.5)	
ADL hierarchy scale^b									
0 (independent)	152 (27.7)	159 (29.6)	0.792	53 (21.4)	45 (16.3)	0.332	2909 (23.5)	2623 (23.2)	0.659
1–2 (mild to moderate dependent)	194 (35.3)	186 (34.6)		72 (29.0)	85 (30.8)		4300 (34.8)	3914 (34.6)	
3+ (severe dependent)	203 (37.0)	193 (35.9)		123 (49.6)	146 (52.9)		5157 (41.7)	4785 (42.3)	
Falls in last 30 days									
No falls	461 (84.0)	470 (87.4)	0.111	211 (85.1)	238 (86.2)	0.707	9876 (79.9)	8935 (78.9)	0.074
≥1 fall	88 (16.0)	68 (12.6)		37 (14.9)	38 (13.8)		2491 (20.1)	2387 (21.1)	
Cognitive Performance Scale (CPS)									
0–1(intact)	69 (12.6)	53 (9.9)	0.365	26 (10.5)	27 (9.8)	0.568	1520 (12.3)	1367 (12.1)	0.842
1–2 (borderline or mild cognitive impairment)	241 (43.9)	244 (45.4)		105 (42.3)	106 (38.4)		5789 (46.8)	5293 (46.7)	
3+ (moderate-to-severe cognitive impairment)	239 (43.5)	241 (44.8)		117 (47.2)	143 (51.8)		5058 (40.9)	4662 (41.2)	

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Depression Rating Scale									
0–2 (no-to-minimal)	437 (79.6)	428 (79.6)	0.197	205 (82.7)	218 (79.0)	0.322	9527 (77.0)	8564 (75.6)	0.028^d
3–5 (moderate)	79 (14.4)	89 (16.5)		37 (14.9)	45 (16.3)		2061 (16.7)	1973 (17.4)	
6+ (severe)	33 (6.0)	21 (3.9)		6 (2.4)	13 (4.7)		779 (6.3)	785 (6.9)	
Says or indicates that he / she feels lonely ^c									
No	506 (92.2)	514 (95.5)	0.021	236 (95.2)	261 (94.6)	0.758	11,509 (93.1)	10,555 (93.2)	0.632
Yes	43 (7.8)	24 (4.5)		12 (4.8)	15 (5.4)		855 (6.9)	765 (6.8)	
Aggressive Behaviour Scale									
0 (nil)	289 (52.6)	272 (50.6)	0.787	134 (54.0)	140 (50.7)	0.490	8289 (67.0)	7468 (66.0)	0.218
1–4 (mild aggressive behaviour)	209 (38.1)	213 (39.6)		84 (33.9)	107 (38.8)		3200 (25.9)	3031 (26.8)	
5+ (moderate-to-severe aggressive behaviour)	51 (9.3)	53 (9.9)		30 (12.1)	29 (10.5)		878 (7.1)	823 (7.3)	
Hospitalisation in last 30 days									
No	489 (89.1)	498 (92.6)	0.046	225 (90.7)	248 (89.9)	0.737	11,204 (90.6)	10,407 (91.9)	<0.001
Yes	60 (10.9)	40 (7.4)		23 (9.3)	28 (10.1)		1163 (9.4)	915 (8.1)	

Discussion

- No immediate negative impact, other than depression in NZ Europeans, during the first wave of COVID-19
- NZ experienced one of the lowest cumulative COVID-19 case counts, incidence and mortality in its first wave of COVID-19 due to rapid escalation of national COVID-19 suppression strategies
 - reduction of influenza and other respiratory viral infections in 2020, which could have led to better health status and explained the reduction in hospitalisation in Māori and NZ Europeans

NZ COVID literature (1)

- Adults aged 18–90 years during lockdown in April 2020 found higher levels of moderate-to-severe psychological distress than prepandemic national health survey in all age groups (Every-Palmer et al. 2020)
- Adults aged 65–74 years had a significantly higher level of depressive symptoms than prepandemic normative data (Gasteiger et al. 2021)
 - the level of depressive symptoms in the 75+ age group was not statistically significantly different from prepandemic normative data.

NZ COVID literature (2)

- An increase in the quantity and quality of interactions between the staff and residents, a reduction in falls and improved mood in residents (Moir et al. 2021)
- ‘Silver linings’ with improved social and community cohesiveness, with reference to the strong government public health messaging as a potential positive contributor (Jenkins et al., 2021)

Limitations

- 1) 2 separate cross-sectional samples (2019 & 2020)
 - 5266 residents appeared in both time periods
 - Within-subject study design not used because 47.4% of them had a diagnosis of dementia
 - Not every NZ ARC resident would have had an assessment during our 2 study time periods
- 2) Sample sizes of Māori and Pacific Peoples much smaller than New Zealand Europeans
- 3) Asians not included, the 3rd largest ethnic group that had interRAI assessments in NZ
- 4) Higher workload and/or work-related stress adjusting to the pandemic and the COVID-19 specific guidelines could have impacted on the quality of interRAI assessments.

Conclusion

- We found a lower rate of loneliness in Māori but a higher rate of depression in NZ European ARC populations during the first wave of COVID-19.
- Further research, including qualitative studies with ARC staff, residents and families, and different ethnic communities, is needed to explain these ethnic group differences.
- Longer-term effects (including the second wave) from the COVID-19 pandemic on ARC populations should also be investigated.

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