Growing Up in New Zealand


# Tāmaki Makaurau/Auckland regional report

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UNIVERSITY OF AUCKLAND
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**Purpose:** The purpose of this report is to provide descriptive information of the available data from the Extreme Weather Events (EWE) survey conducted by *Growing Up in New Zealand* (GUiNZ) from participants in the Tāmaki Makaurau/Auckland (*n* = 1838) region. This report provides an overview of the utility of the data for future research which can be used concurrently with longitudinal data from GUiNZ to demonstrate the impact of experiencing extreme weather events on young people and their families.

This regional report only highlights some of the available data, for more details please see the *Growing Up in New Zealand* website growingup.co.nz/extreme-weather-survey-2/extreme-weather-survey-overview-list or see the full report here: https://doi.org/10.17608/k6.auckland.25762731.v1

**Acknowledgements:** Most importantly, we would like to acknowledge the young people and families participating in the *Growing Up in New Zealand* study. We are incredibly grateful to our families for their generosity and honesty, and we are indebted to them for sharing their life stories with us. We look forward to our continuing association with them. Their collective information provides us with a record of what it is like to grow up in New Zealand, and the project would not exist without them.

We want to acknowledge the wider *Growing Up in New Zealand* team for their support and input in the Extreme Weather project, from questionnaire development, data collection, data cleaning, to report writing. Many wonderful people made the data collection possible and supported the research team. Specifically, we would like to acknowledge Dr Sarah Gerritsen (GUiNZ senior research fellow and associate research director) and Karl Crosby (GUiNZ research assistant) for their extraordinary input and support. In addition, we thank our Scientific Advisory Group members, our Kaitiaki group members, subject experts, and all the stakeholders, agencies, and ministries with whom we have consulted and who have assisted us in the various stages of this study.

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For further guidance, to provide feedback, or to seek further assistance about utilising the datasets, please contact dataaccess@growingup.co.nz.

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## What are extreme weather events?

Extreme weather events are occurrences of severe weather, such as heat waves, droughts, cyclones, and floods [1]. Extreme weather events can have disastrous impacts on communities and infrastructure [1]. The concentration of greenhouse gases in our atmosphere is increasing, causing changes in climate [2, 3]. In Aotearoa, New Zealand, climate change might look like higher temperatures, rising sea levels, and less snow and ice [2, 3]. Climate change also means that extreme weather events are becoming more frequent and intense [2, 3].

### What were the 2023 extreme weather events in Aotearoa, New Zealand?

Aotearoa, New Zealand, had two extreme weather events at the beginning of 2023: the Auckland Anniversary Weekend Flooding and Cyclone Gabrielle. The long-term (six-month) impact of these extreme weather events on rangatahi/young people and their whānau/families in Auckland is investigated in this report.

## Auckland Anniversary Weekend Flooding

Beginning on the 27th of January 2023, Auckland suffered a 1-in-200 year flooding event, with 245mm of rainfall in under 24 hours [4, 5]. Widespread flooding occurred, particularly in South, West, and Central Auckland and the North Shore [6]. Over 26,000 houses lost power due to the extreme weather [5]. By the 3rd of February, 39 roads were closed and 209 houses were red-stickered (residents can no longer enter the property) [5]. For additional information on the Auckland recovery from extreme weather and natural disasters, please see https://www.aucklandcouncil.govt.nz/recovery-extreme-weather-disasters/Pages/default.aspx.

## Cyclone Gabrielle

Between the 12th and 16th of February 2023, Cyclone Gabrielle arrived in Aotearoa, New Zealand [7]. Cyclone Gabrielle brought severe rainfall, winds, and flooding [7]. The government declared a National State of Emergency on the 14th of February, which was only the third time in New Zealand history [8, 9].

Cyclone Gabrielle affected many North Island regions, including Northland, Auckland, Bay of Plenty, Waikato, Hawke's Bay, and Gisborne [7]. Cyclone Gabrielle caused widespread damage to land and housing as well as put people's lives at risk [7, 8]. In particular, Hawke's Bay and Gisborne experienced devastating consequences from the intensive rainfall and flooding [10, 11]. For additional regional information on extreme weather events, please see https://www.civildefence.govt.nz/find-your-civil-defence-group.

## Why is it important to look at extreme weather events?

Extreme weather events can have negative impacts on important services and property. Infrastructure needed for essential services such as power and water can be badly damaged [12, 13]. Disruption of these services can impact health care and community networks [13]. Extreme weather events can also cause destruction to properties, meaning

that people are forced to evacuate their homes or organise repairs [12]. Multiple relocations following an extreme weather event are common [12]. Furthermore, in Aotearoa, New Zealand, low-income households are disproportionately affected by severe weather [14]. Disadvantaged households more often live in low-cost housing and rent in high-risk areas [14]. These households may not have access to the resources they need to repair or relocate [14].

Extreme weather events can also have negative consequences for mental and physical health. Extreme weather or natural disasters are related to increases in post-traumatic stress symptoms, depression, and anxiety in adults and young people [12, 15-18]. These effects can persist for months or even years [15, 19]. Furthermore, those exposed to severe weather conditions are at risk of injury, disease, and worsening of chronic illnesses [12, 18, 20].

Rangatahi/young people may be particularly vulnerable during an extreme weather event. Important developmental processes occur during adolescence, including biological, hormonal, and brain changes [21, 22]. These changes can mean that young people feel less able to cope with stress and uncertainty [12, 15, 23]. During an emergency, young people may feel they have little control over what is happening around them [15]. Therefore, family and community support are very important during extreme weather events, especially for rangatahi [15, 23].

**If you think you, or someone you know, may be experiencing hardship or poor health, there are several free tools, information guides, or services that can help.**

# Methods

To understand the impact of extreme weather events on the health and wellbeing of rangatahi/young people, New Zealand's largest longitudinal study, *Growing Up in New Zealand*, reached out to 1463 young people and 1443 mothers/primary caregivers in August 2023. During this data collection period, young people in the *Growing Up in New Zealand* cohort were aged 13-14 years, with many living in the areas most severely affected by the floods and/or cyclone, including Auckland, Northland, Hawke's Bay, and Gisborne.

*Growing Up in New Zealand* asked 680 rangatahi/young people and 817 mothers/primary caregivers about their experiences during and after the floods and/or cyclone. These extreme weather events occurred at the start of the 2023 school year, which may have disrupted educational experiences. Damage to infrastructure and housing may have impacted social connectedness and access to health and social services.

## How did we collect data?

The Extreme Weather Survey data was collected from August 1 to September 3, 2023. The Extreme Weather Survey consisted of two online questionnaires; one answered by young people, and one answered by the young person's mother/primary caregiver. Email invitations were issued to all eligible participants. Each eligible young person and mother/primary caregiver received an individualised link within their email invitation. This link directed them to the web-based online survey, accessible on all devices (computer, tablet, and phone). This was complemented by telephone follow up from an experienced

interviewer and/or centralised community support for families requesting assistance. Telephone and text messaging helplines were available between 9 AM – 9 PM 7 days a week for the duration of the data collection.

The young person's questionnaire consisted of 90 questions and took approximately 15 minutes to complete, and the mother/primary caregiver questionnaire consisted of 237 questions and took approximately 30 minutes to complete. Electronic consent and assent forms was completed online by the mother prior to completing the questionnaire.

### How did we report the data?

Here we report descriptively who took part in the Extreme Weather Survey, how prepared people felt for the extreme weather events, housing conditions, evacuation, access to services, schooling and activities. These key themes are reported in relation to how affected people felt by the extreme weather events. Additional information on mental and physical health is available but has not been reported on by region. For information on the total cohort mental and physical health please see https://doi.org/10.17608/k6.auckland.25762731.v1.

Young people and mothers/primary caregivers were asked about changes that may have occurred in their life due to floods and/or cyclone. Young people reported if they were affected by the floods and/or cyclone; "Yes" (Affected), "No, but someone I know was" (Know someone else affected), or "no" (Not affected). Mothers/primary caregivers also reported if they were affected by the weather events; "Yes" (Affected), "No, the area I live in was affected" (Live in an area affected), or "no" (Not affected).

Consequently, some people reported that they were not affected by the extreme weather events despite experiencing some impacts. This is because the extreme weather events may not have changed their everyday life. In this sense, we are able to get a subjective understanding of how people were affected by the extreme weather events. We then report if people were affected by other important factors that typically follow extreme weather events, such as damage to housing, impact on school, transport, services, other activities and mental and physical wellbeing.

## Results

### Who participated in this study?

Families from the *Growing Up in New Zealand* cohort living in regions affected by the 2023 extreme weather events were invited to participate. This report looks specifically at the results for Tāmaki Makaurau/Auckland ($n$ = 1838, 91.5%).

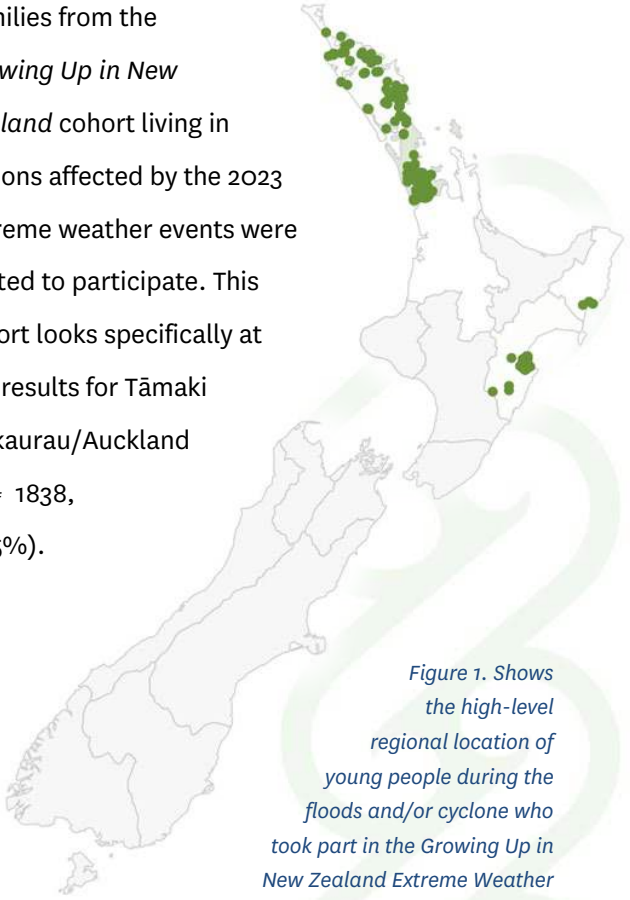

*Figure 1. Shows the high-level regional location of young people during the floods and/or cyclone who took part in the Growing Up in New Zealand Extreme Weather Survey.*

### Who are the cohort?

Overall, 680 young people and 817 mothers/primary caregivers participated in the Extreme Weather Survey (Figure 1). Of this, 562 children and 691 mothers reported living in the Auckland region. From these participants, there were 562 family units, meaning that both the young person and mother/primary caregiver took part in the study. In total, 112 (19.9%) young people reported that they were affected by the floods and/or cyclone, 160 (28.5%) reported that they were not affected but they know someone who was affected, and 290 (51.6%) reported they were not affected.

## Preparing for extreme weather events

Information and resources for preparing for extreme weather events are crucial for response and recovery. This could refer to information about getting your household, work, or school ready before an emergency. Accurate, effective, and timely communication before and during an extreme weather event can help to minimise harm [33, 34].

Important information about extreme weather events and other emergencies can be found on the New Zealand Civil Defence Website (civildefence.govt.nz). Advice on how to prepare for an emergency can be found here and tips on what to do during an emergency can be found here.

*Growing Up in New Zealand* asked primary caregivers about their access to information on how to prepare for extreme weather events.

### Information received

We asked the mothers/primary caregivers if they remember seeing any information or advice about how to prepare for the floods and/or cyclone *before* the events of January/February 2023. Over half ($n$ = 389, 56.3%) reported that they did not see any information or advice leading up to the extreme weather events (1.4% missing).

Mothers/primary caregivers were also asked whether they *generally* received enough useful information about the floods and/or cyclones (not at all, a little information, some information, or all the information needed). Figure 2 shows the number of mothers/primary caregivers who reported that they received no information ($n$ = 202, 29.7%), a little information ($n$ = 176, 25.9%), some information ($n$ = 186, 27.4%), or all the information needed ($n$ = 115, 16.9%). Each level of information (bar) received is categorised by those who were (dark blue; $n$ = 159, 23.0%), live in an area that was affected (light blue; $n$ = 202, 29.2%), or were not affected (green; $n$ = 330, 47.8%) by the extreme weather events.

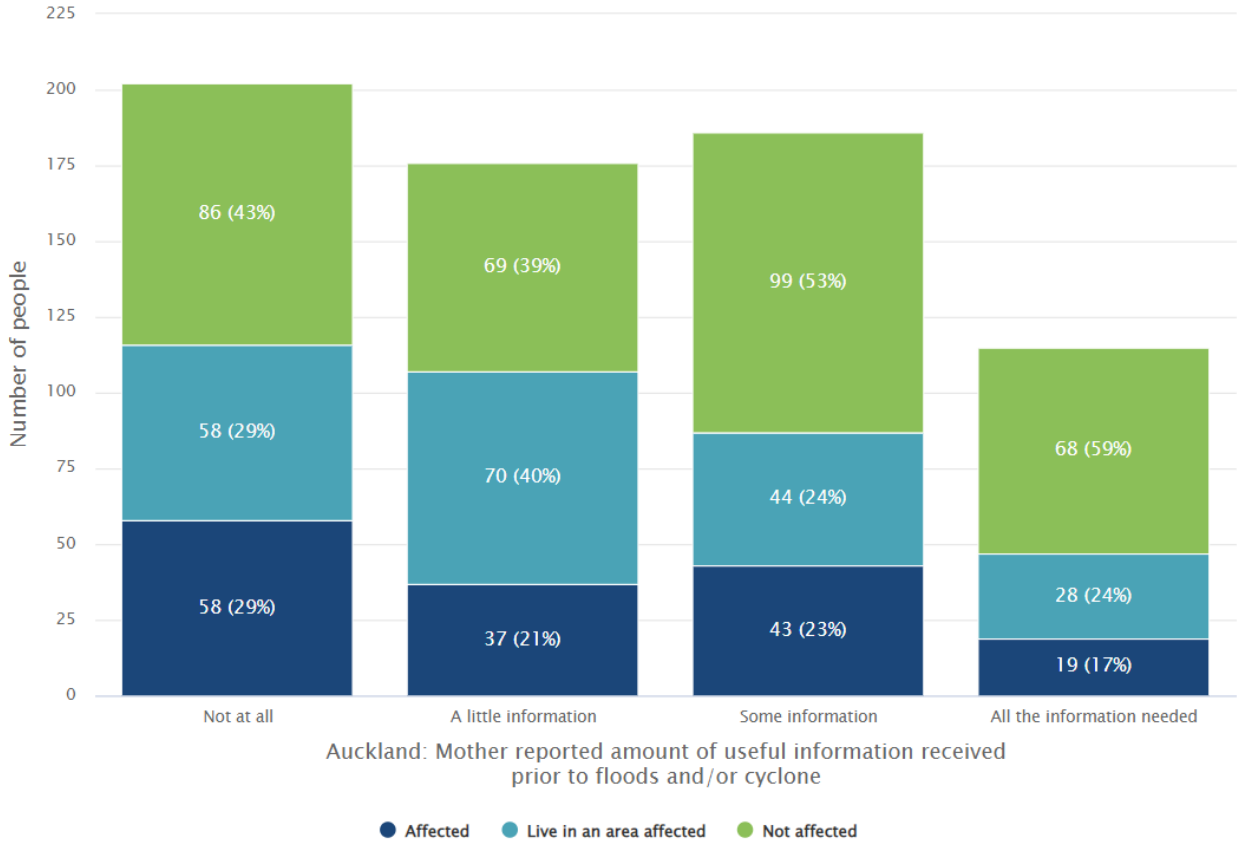


*Figure 2. Shows whether enough useful information was received by the mother/primary caregiver before the extreme weather events.*

## Information needed

The mothers/primary caregivers who reported that they received no, a little, or some information in the previous question (*n* = 564), were asked what they would have liked more information about before the floods and/or cyclone. Figure 3 shows the number of mothers/primary caregivers who reported that they would have liked more information on storing or stocking up water (*n* = 186, 33.2%), storing or stocking up on food (*n* = 166, 29.6%), preparing a grab bag (*n* = 199, 35.5%), making a plan for evacuation (*n* = 332, 59.2%), clearing drains (*n* = 203, 36.2%), making sandbags (*n* = 167, 29.8%), charging electronics (*n* = 151, 26.9%), getting a solar or battery-powered radio (*n* = 135, 24.1%), purchasing other supplies (*n* = 173, 30.8%), or something else (*n* = 58, 10.34%). Each type of information (bar) is categorised by those who were affected (dark blue; *n* = 159, 23%), live in an area that was affected (light blue; *n* = 202, 29.2%), or were not affected (green; *n* = 330, 47.8%) by the extreme weather events.

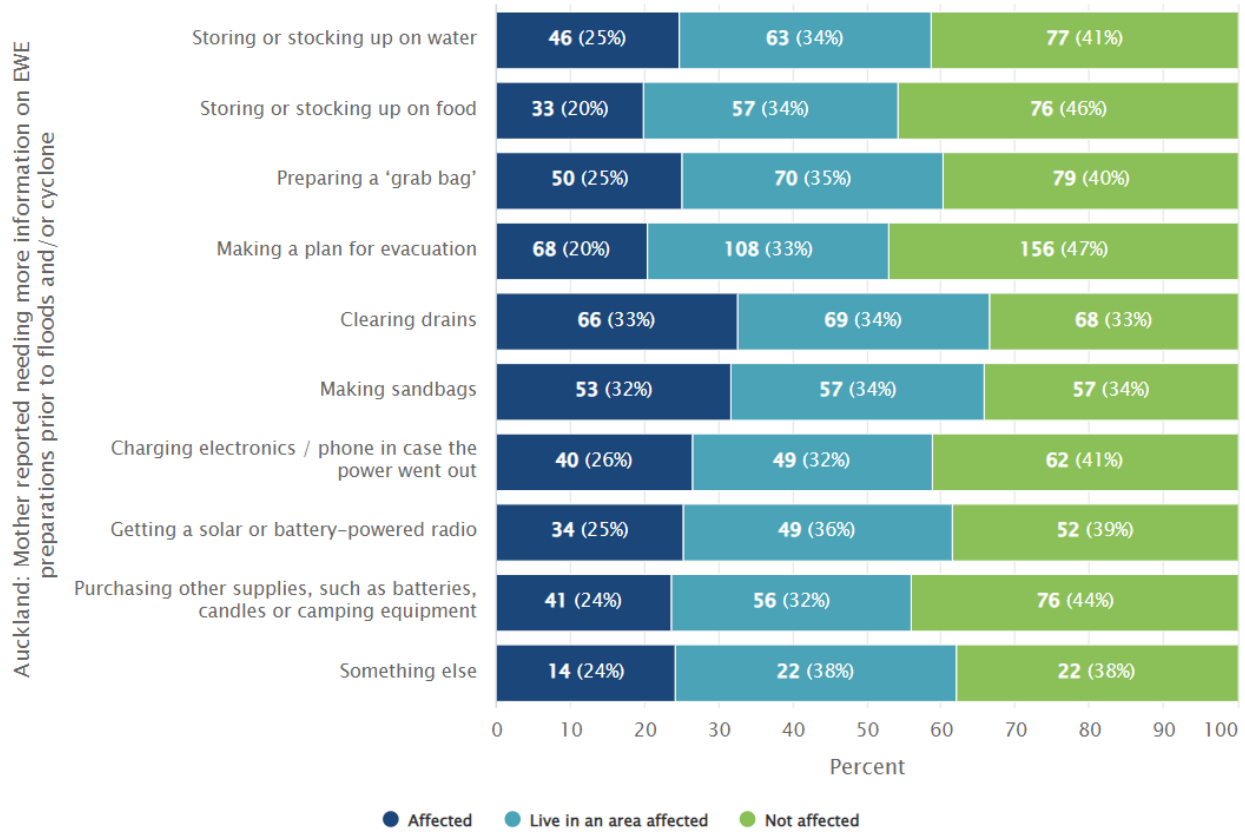


*Figure 3. Shows the types of preparations that mothers/primary caregivers reported they would have liked more information about before the extreme weather events.*

## Preparations before extreme weather events

We asked the mothers/primary caregivers which preparations their household completed before the floods or cyclone. Figure 4 and Table 1 show the number of mothers/primary caregivers who reported 'yes' they prepared or 'no' they did not prepare for each different type of preparation (store or stock up on water, store or stock up on food, prepare a grab bag, make a plan for evacuation, clear drains, make sandbags, charge electronics, get a radio, purchase other supplies, or something else).

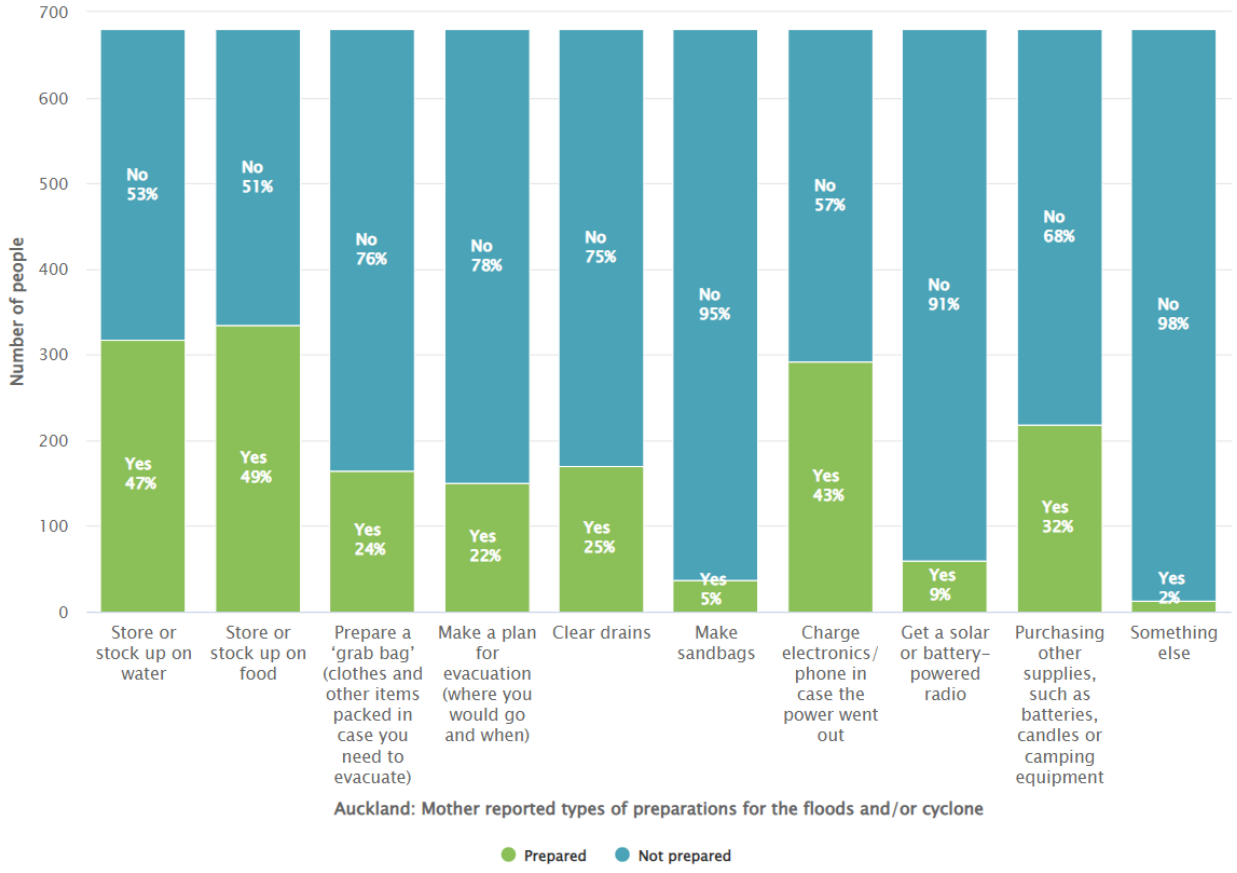


*Figure 4. Shows the types of preparations completed before the extreme weather events as reported by the mother/primary caregiver.*

*Table 1. Proportion of mothers/primary caregivers who reported they did prepare or did not prepare before the floods and/or cyclone.*

| Types of preparations | Number of people prepared (%) | Number of people not prepared (%) | Total |
|---|---|---|---|
| Store or stock up on water | 318 (46.8%) | 362 (53.2%) | 680 |
| Store or stock up on food | 335 (49.3%) | 345 (50.7%) | 680 |
| Prepare a 'grab bag' (clothes and other items packed in case you need to evacuate) | 165 (24.3%) | 515 (75.7%) | 680 |
| Make a plan for evacuation (where you would go and when) | 150 (22.1%) | 530 (77.9%) | 680 |
| Clear drains | 170 (25%) | 510 (75%) | 680 |
| Make sandbags | 37 (5.4%) | 643 (94.6%) | 680 |
| Charge electronics/ phone in case the power went out | 292 (42.9%) | 388 (57.1%) | 680 |
| Get a solar or battery-powered radio | 59 (8.7%) | 621 (91.3%) | 680 |
| Purchasing other supplies, such as batteries, candles or camping equipment | 218 (32.1%) | 462 (67.9%) | 680 |
| Something else | 13 (1.9%) | 667 (98.1%) | 680 |

## Preparedness

The mothers/primary caregivers were asked how prepared they thought their household was for the floods and/or cyclone (not at all, a little, somewhat, or very). Figure 5 shows the number of mothers/primary caregivers who were not at all prepared (*n* = 161, 24.7%), a little prepared (*n* = 233, 34.3%), somewhat prepared (*n* = 221, 32.5%), and very prepared (*n* = 64, 9.4%) for the extreme weather events. Each level of preparedness (bar) is categorised by those who were affected (dark blue; *n* = 159, 23.0%), live in an area that was affected (light blue; *n* = 202, 29.2%), or were not affected (green; *n* = 330, 47.8%) by the extreme weather events.

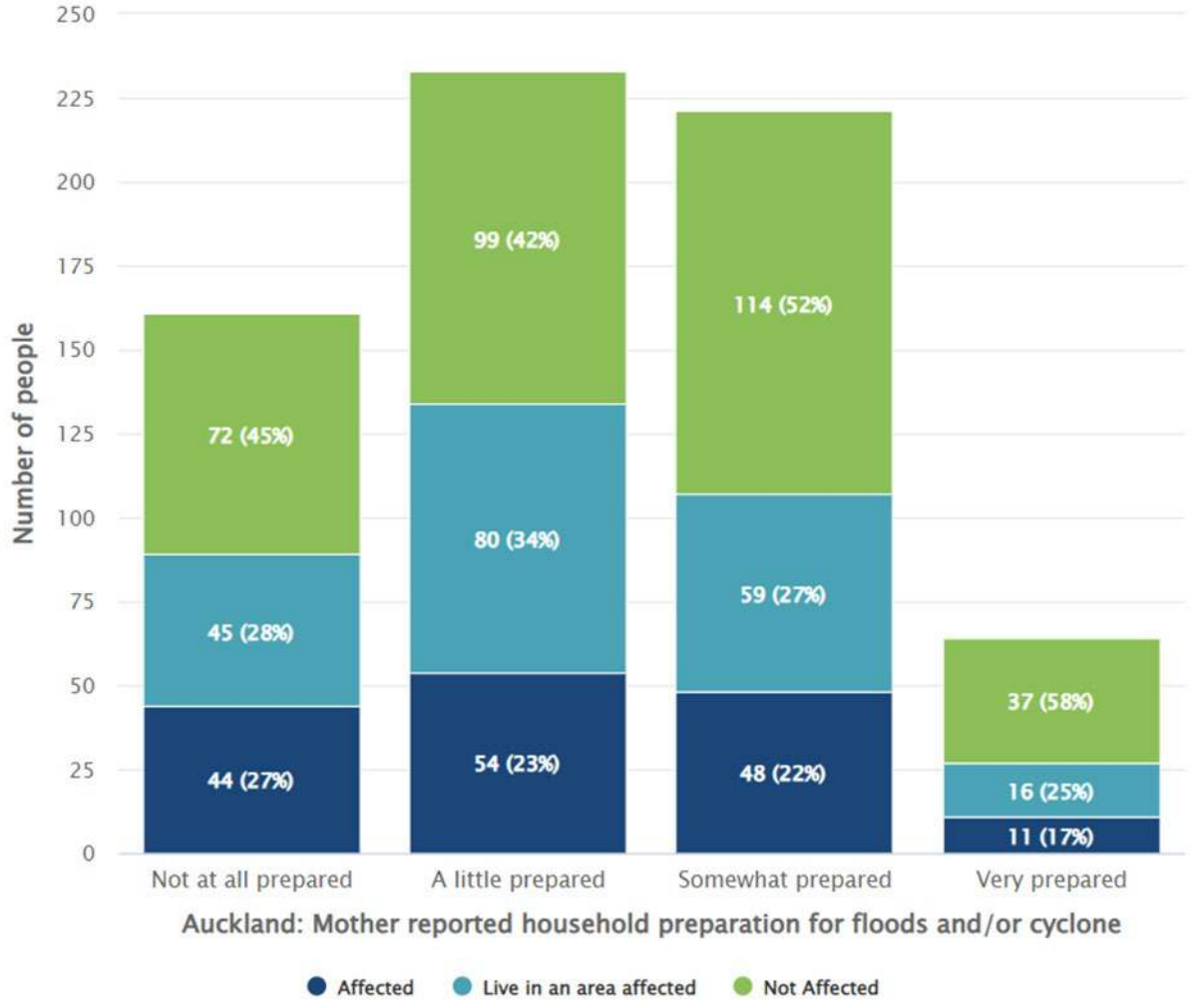


*Figure 5. Shows how prepared the mothers/primary caregivers felt before the extreme weather events.*

## Housing: Evacuation, condition, and damage

In the aftermath of the extreme weather events, many people were forced to evacuate their homes (temporarily or permanently) and/or to repair damage that was caused by the severe weather [8].

The Auckland Anniversary Weekend flooding caused damage to thousands of houses due to flooding and landslides [5, 8]. As of June 1st 2023, 167 red placards (can no longer enter property), 1560 yellow placards (limited entry) and 3014 white placards (minor damage, safe to enter) had been issued by Auckland Council because of the flooding [8]. Furthermore, there was extensive damage to

housing across the North Island following Cyclone Gabrielle. As of June 1st 2023, 326 red placards, 1,780 yellow placards, and 1817 white placards had been issued because of the cyclone [8]. Over 100,000 insurance claims have been made because of the two extreme weather events combined, with insurance companies having paid out $2.053 billion of an estimated $3.5 billion in claims [35].

*Growing Up in New Zealand* asked young people and their primary caregivers about housing evacuation, relocation, condition, and damage.

### Housing evacuation and relocation

We asked the mothers/primary caregivers whether they had to evacuate their homes because of the floods and/or cyclone. Most mothers/primary caregivers (96.4%, *n* = 666) did not have to evacuate, while 3.5% (*n* = 24) had to leave their homes with <10 missing. For those 24 mothers/primary caregivers who had to relocate 45.8% (*n* = 11) were unable to live in their homes for up to one week, while 50% (*n* = 12) were unable to live in their homes for more than 1 week. For those who had to leave their homes (*n* = 24), 58.3% (*n* = 14) stayed in their local community, while 37.5% (*n* =<10) had to move away.

### Housing condition

We asked the mothers/primary caregivers to describe the condition of their house immediately after and six months after the floods and/or cyclone. Figure 6 shows the number of mothers/primary caregivers who reported that immediately after the weather events, their house needed no immediate repair (*n* = 453, 65.6%), minor maintenance (*n* = 110, 15.9%), some repair (*n* = 85, 12.3%), or was stickered (*n* = 20, 2.9%). Only 19 (2.7%) mothers/primary caregivers answered 'don't know' or 'prefer not to say', with around 1% (<10%) missing.

Figure 6 also shows the number of mothers/primary caregivers who reported that six months after the weather events, their house needed no immediate repair (*n* = 507, 73.4%), minor maintenance (*n* = 77, 11.1%), some repair (*n* = 61, 8.8%), or was stickered (*n* = 18, 2.6%). Only 13 (1.9%) mothers/primary caregivers answered 'don't know' or 'prefer not to say', with around 1% (<10%) missing. Each house condition (bar) is categorised by those who were affected (dark blue; *n* = 159, 23%), live in an area that was affected (light blue; *n* = 202, 29.2%), or were not affected (green; *n* = 326, 47.8%) by the extreme weather events.

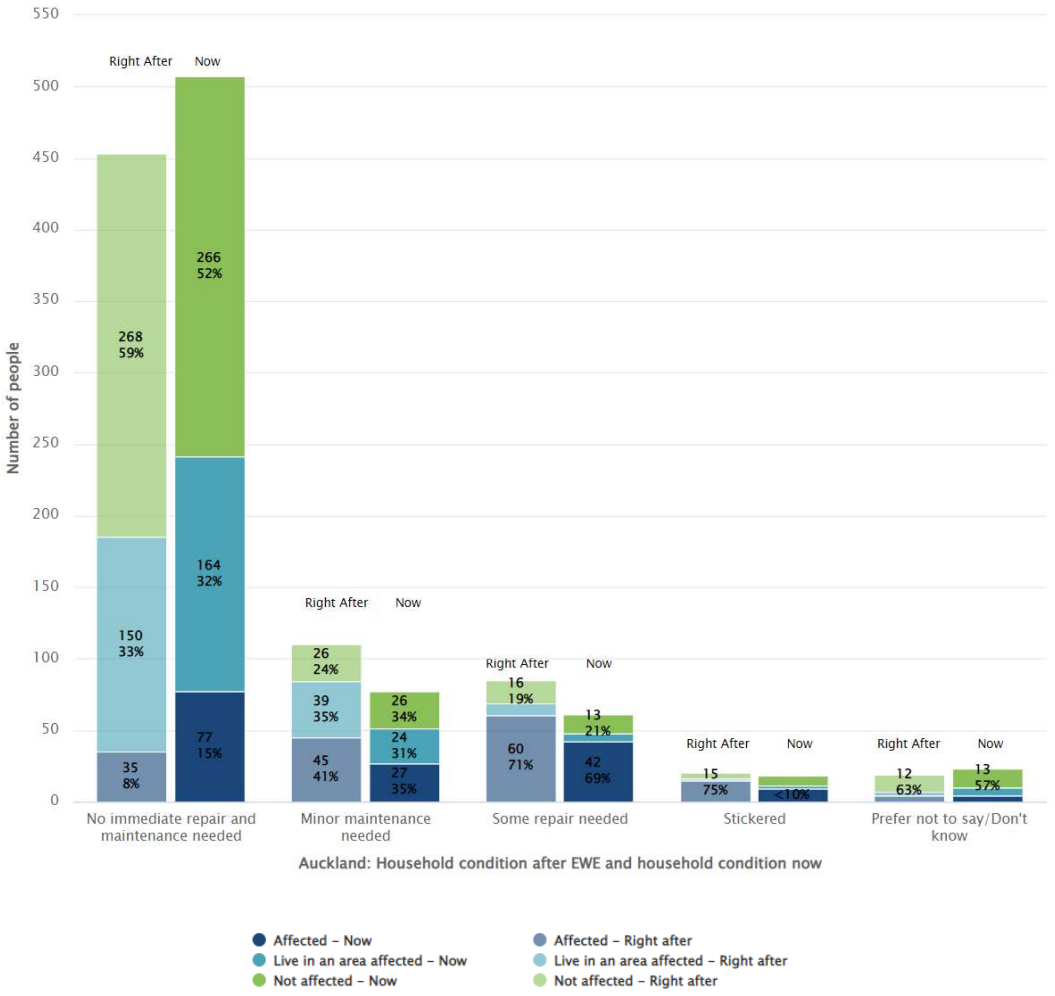


*Figure 6. Shows the house condition right after and six months after the extreme weather events as reported by the mother/primary caregiver.*

## Housing costs

We asked the mothers/primary caregivers whether their usual housing costs changed because of the floods and/or cyclone (increased, decreased, no, or don't know). Over half (68.9%, *n* = 476) of mothers/primary caregivers reported that their housing costs did not change, almost one quarter (21.7%, *n* = 150) said that their housing costs have increased, and 8.4% (*n* = 58) said that their housing costs decreased or that they didn't know, there were <10 missing.

## House damage

Young people were asked whether their house was damaged or flooded during the extreme weather events (not at all, a little, or a lot). Figure 7 shows the number of young people (*n* = 561) who reported that their house was not at all damaged (*n* = 394, 70.2%), a little damaged (*n* = 133, 23.7%), or a lot damaged (*n* = 23, 4.1%). Only 11 (2%) young people answered 'don't know' with 1 missing. Each level of house damage (bar) is categorised by those who were affected (dark blue; *n* = 112, 20%), knew someone else affected (light blue; *n* = 159, 28.3%), or were not affected (green; *n* = 290, 51.7%) by the extreme weather events.

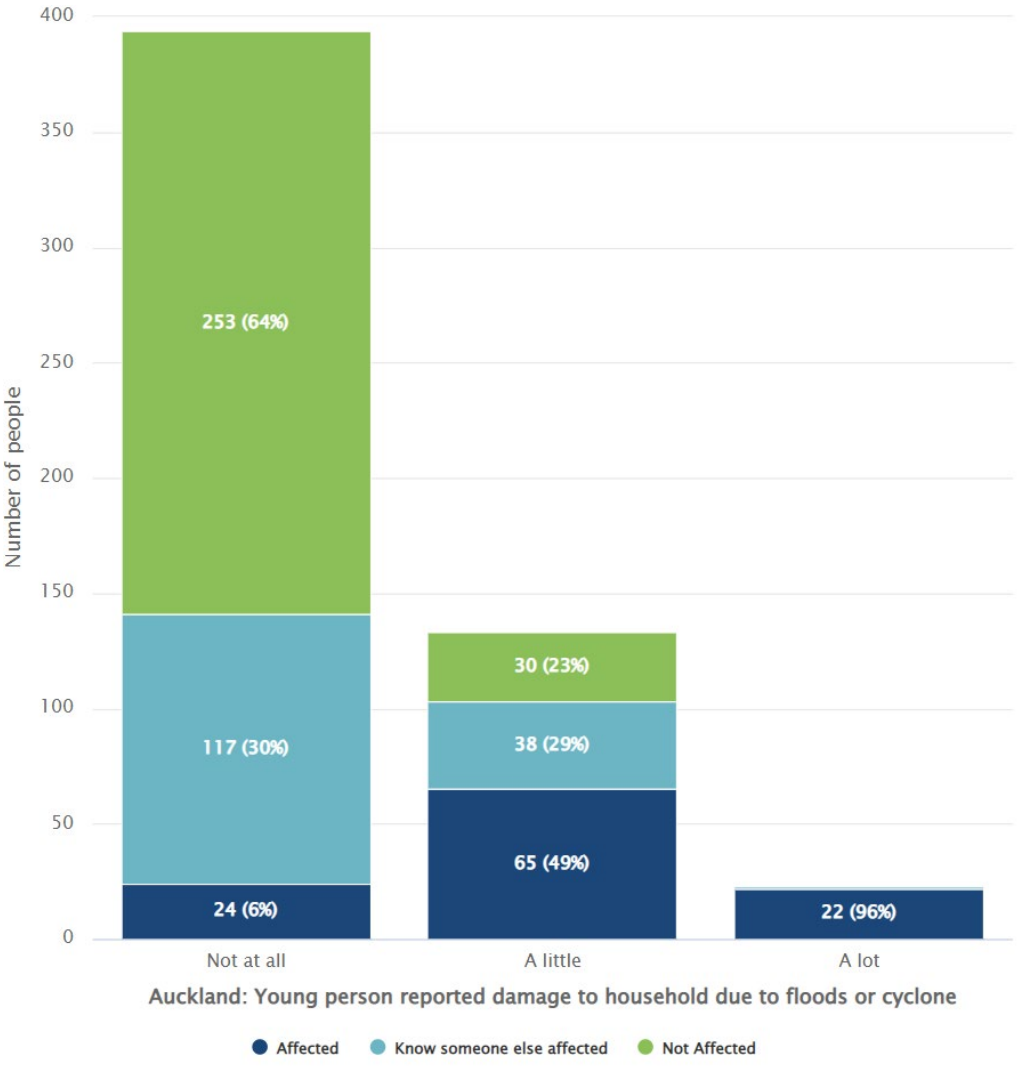


*Figure 7. Shows young person reported damage to household due to the extreme weather events.*

### Damage to belongings

Young people were asked whether their clothes or belongings were damaged or flooded during the extreme weather events (not at all, a little, or a lot). Figure 8 shows the number of young people who reported that their belongings were not at all damaged (*n* = 488, 87%), a little damaged (*n* = 55, 9.8%) or a lot damaged (*n* = 15, 2.7%). Less than 10 young people answered 'don't know'. Each level of house damage (bar) is categorised by those who were affected (dark blue; *n* = 112, 20%), knew someone else affected (light blue; *n* = 159, 28.3%), or were not affected (green; *n* = 290, 51.7%) by the extreme weather events.

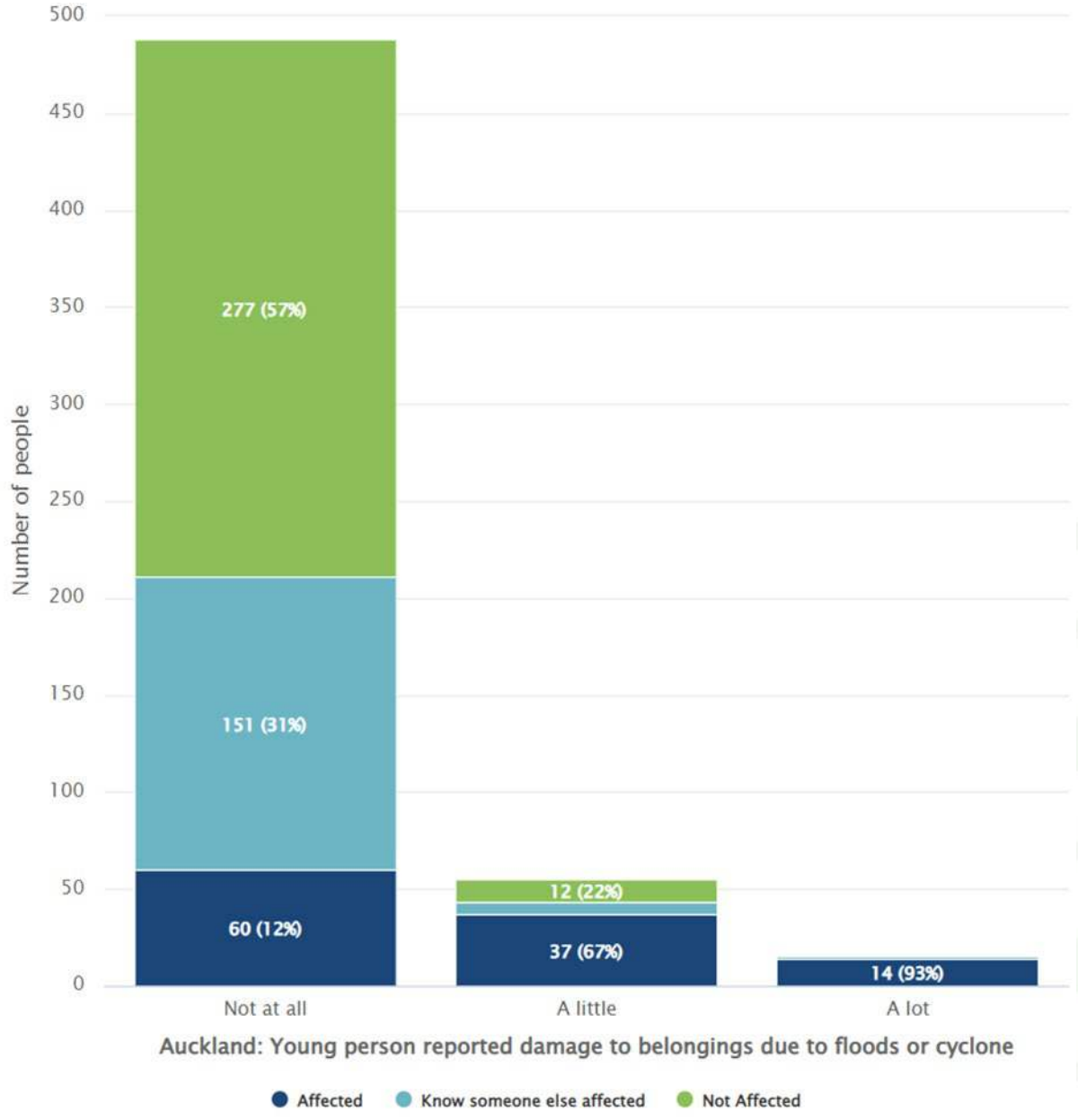


*Figure 8. Shows young person reported damage to belongings due to the extreme weather events.*

## Neighbourhood damage

Young people were asked whether their neighbourhood was damaged or flooded during the extreme weather events (not at all, a little, or a lot). Figure 9 shows the number of young people who reported that their neighbourhood was not at all damaged (*n* = 270, 48.1%), a little damaged (*n* = 172, 30.7%), and a lot damaged (*n* = 72, 12.9%). Overall, 47 (8.4%) young people answered 'don't know'. Each level of house damage (bar) is categorised by those who were affected (dark blue; *n* = 112, 20%), knew someone else affected (light blue; *n* = 159, 28.3%), or were not affected (green; *n* = 290, 51.7%) by the extreme weather events.

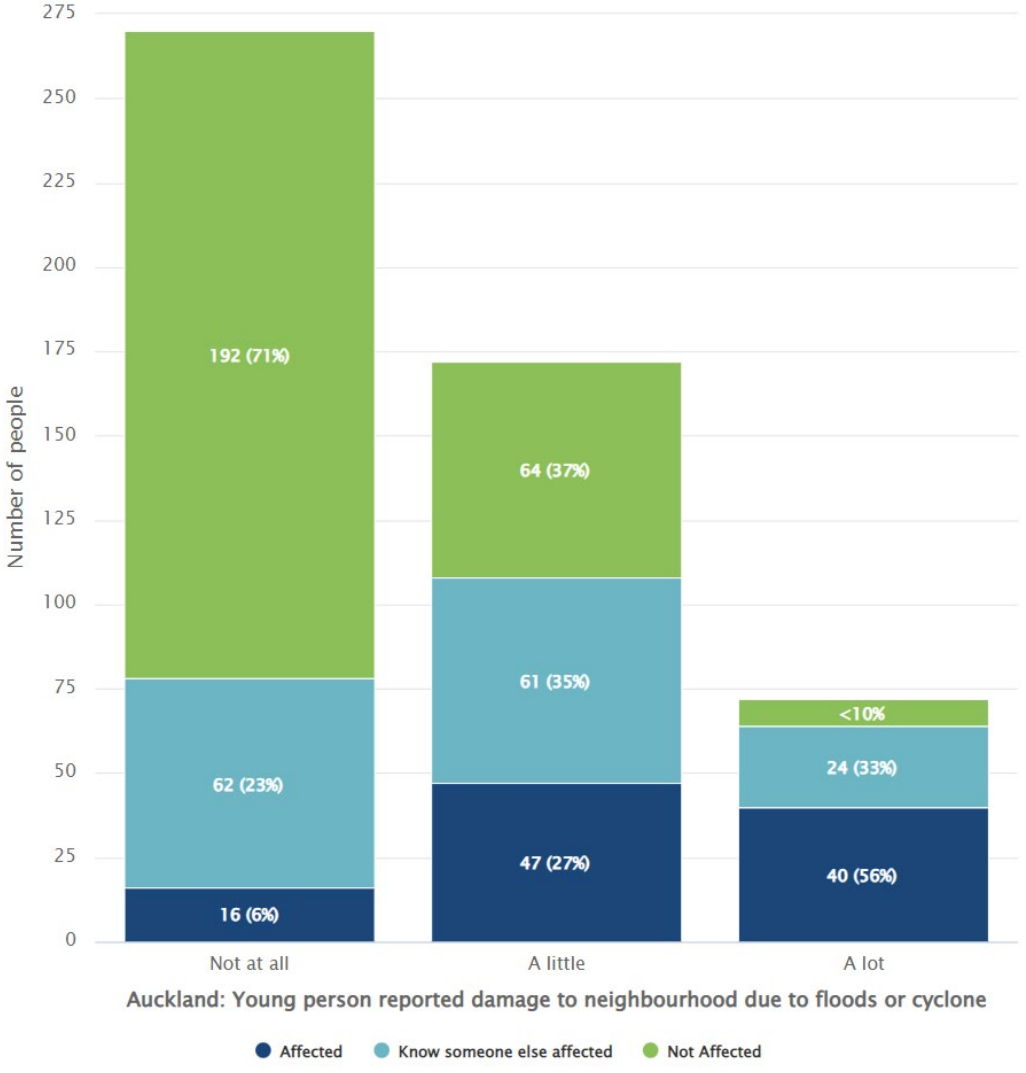


*Figure 9. Young person reported damage to neighbourhood due to the extreme weather events.*

## Access to services

Extreme weather events can destroy infrastructure needed for services such as power, water, and telecommunications. Across the North Island, Cyclone Gabrielle caused widespread damage to power line networks, with 332,000 households cut off during the cyclone [8]. This extensive loss of power also meant that cell phone connectivity was down, with 660 mobile towers disconnected [8]. Water and wastewater infrastructure was also damaged, notably in Gisborne, where repairs to the water supply pipe into the city lasted for 45 days [36].

Furthermore, because of damage from Cyclone Gabrielle, roads, motorways, and bridges were closed across the North Island [10, 37]. Busses, trains, and ferries were delayed, detoured, or cancelled (including school bus services) [10, 37]. Hawke's Bay and Gisborne experienced significant damage to infrastructure, causing communities to be cut off [10]. Restoration and repairs are long-term and still ongoing [11, 38].

*Growing Up in New Zealand* asked about access to services (gas, internet, phone coverage, power, water, and public transport) for the young person and their primary caregiver.

### Disruption to services

We asked the mothers/primary caregivers if they experienced disruption to any services (gas, internet, landline phone, mobile phone coverage, power, water, or none of the above) during or after the floods. Figure 10 and Table 2 show the number of mothers/primary caregivers who reported 'yes' the service was disrupted (full coloured (right) bars) or 'no' the service was not disrupted (opaque coloured (left) bars). Each bar is categorised by those who were affected (dark blue; $n$ = 216, 26.7%), live in an area affected (light blue; $n$ = 239, 29.6%), or were not affected (green; $n$ = 353, 43.7%) by the extreme weather events.

*Table 2. Number and Proportion of mothers/primary caregivers who reported disruption to services, reported for the total sample and for those affected, live in an area affected, and not affected.*

| | Affected | | Live in an area affected | | No affected | | Total |
|---|---|---|---|---|---|---|---|
| Service | Service disrupted | Service not disrupted | Service disrupted | Service not disrupted | Service disrupted | Service not disrupted | |
| Gas supply | <10 | 155 (22.7%) | <10 | 196 (28.7%) | <10 | 323 (47.4%) | 682 |
| Internet | 30 (4.4%) | 128 (18.8%) | 38 (5.6%) | 163 (23.9%) | 27 (4%) | 296 (43.4%) | 682 |
| Landline phone | 12 (1.8%) | 146 (21.4%) | <10 | 193 (28.3%) | <10 | 316 (46.3%) | 682 |
| Mobile phone coverage | 12 (1.8%) | 146 (21.4%) | 25 (3.7%) | 176 (25.8%) | 11 (1.6%) | 312 (45.7%) | 682 |
| Power | 42 (6.2%) | 116 (17%) | 39 (5.7%) | 162 (23.8%) | 29 (4.3%) | 294 (43.1%) | 682 |
| Tap/drinking water (not including bottled water) | 29 (4.3%) | 129 (18.9%) | 18 (2.6%) | 183 (26.8%) | 13 (1.9%) | 310 (45.5%) | 682 |
| None of the above | 103 (15.1%) | 55 (8.1%) | 135 (19.8%) | 66 (9.7%) | 269 (39%) | 54 (7.6%) | 682 |

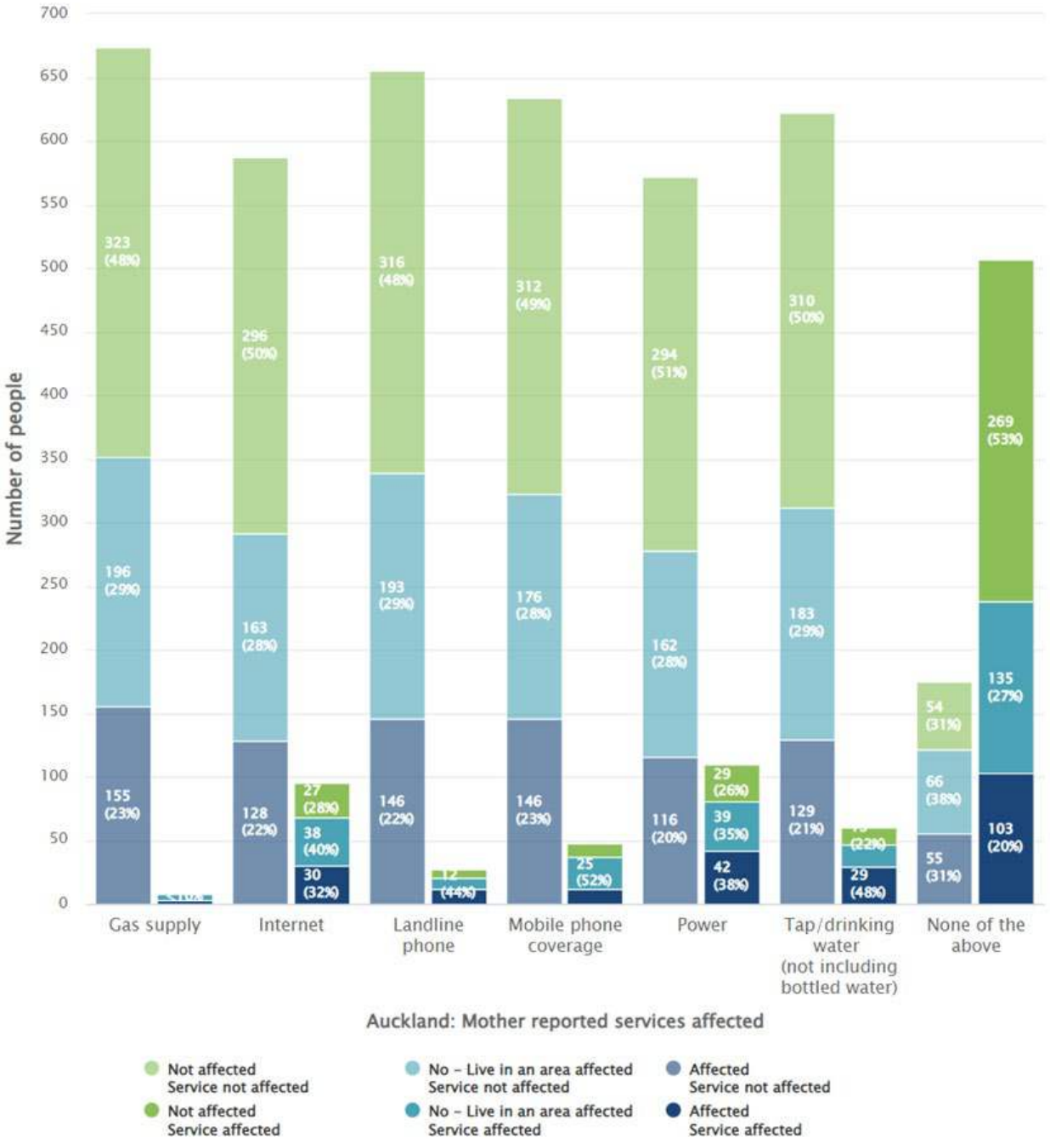


*Figure 10. Shows mother/primary caregiver reported disruption to services due to the extreme weather events.*

### Duration of service disruption

We asked those mothers/primary caregivers who reported disruption to services (gas supply: *n* = <10, internet: *n* = 95, landline phone: *n* = 27, mobile phone coverage: *n* = 48, power: *n* = 110, water: *n* = 60) how long the service was disrupted for. Figure 11 shows the different type of service (gas supply, internet, landline phone, mobile phone coverage, power, and water) and the number of participants who reported disruption for less than 2 days, 3 or more days, still disrupted, or not applicable.

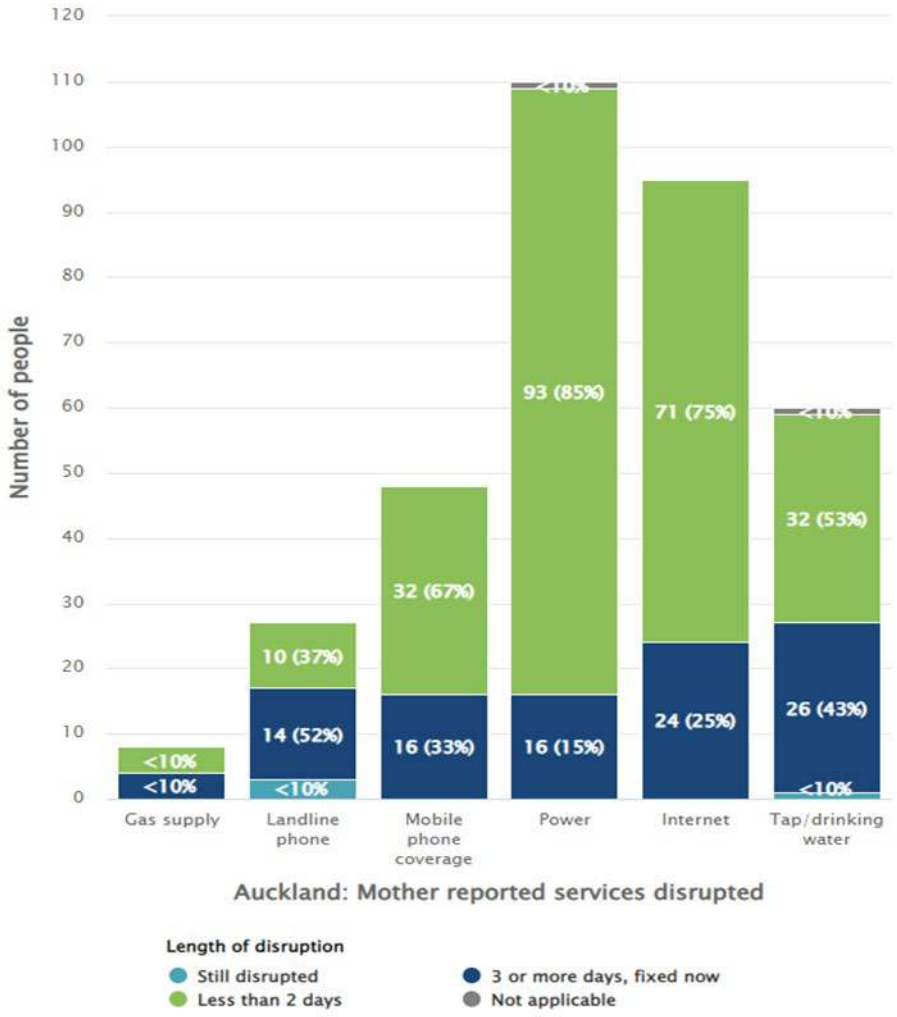


*Figure 11. Shows how long the services were disrupted for as reported by the mother/primary caregiver.*

### Services needed and received

Mothers/caregivers were asked if they needed (and may or may not have received) support for a range of things associated with the floods and/or cyclone, such as accommodation support, supplies (food, water, clothes), education (school supplies and other education needs), medical or mental health care, financial assistance, physical support (property, transport, belongings) and advice/support (with landlord, to manage insurance claims, to manage government options). Of the 691 mothers/caregivers, 208 answered these questions.

Figure 12 shows the number of mothers/primary caregivers who needed accommodation support (emergency housing or temporary accommodation, medium/long term accommodation) and did ($n$ < 10) or did not ($n$ = 17, 8.17%) receive it, and those who didn't need accommodation support and did ($n$ < 10) or did not ($n$ = 183, 88%) receive it.

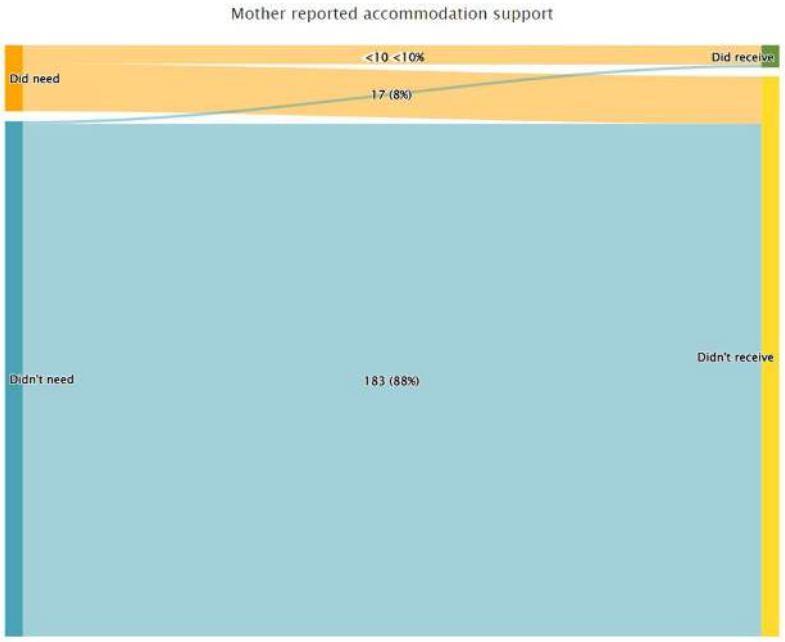


*Figure 12. Shows mother/primary caregiver reported accommodation support needed and received.*

Figure 13 shows the number of mothers/primary caregivers who needed supplies (food, water, clothes) and did ($n$ = 60, 28.9%) or did not ($n$ = 42, 20.2%) receive it, and those who didn't need supplies and did ($n$ < 10) or did not ($n$ = 97, 46.6%) receive it.

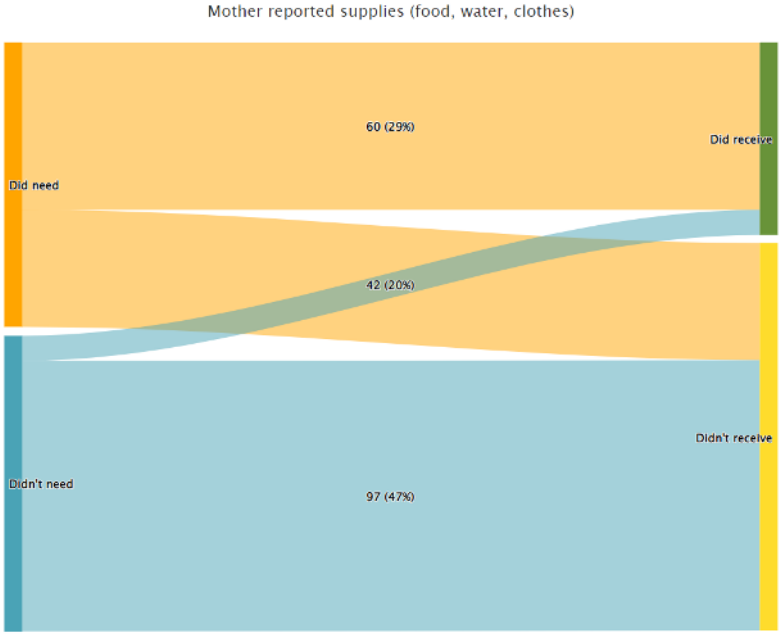


*Figure 13. Shows mother/primary caregiver reported supplies (food, water, clothes) needed and received.*

Figure 14 shows the number of mothers/primary caregivers who needed education support (school supplies and other education needs) and did (*n* = <10) or did not (*n* = 29,13.9%) receive it, and those who didn't need education support and did (*n* < 10) or did not (*n* = 166, 79.8 %) receive it.

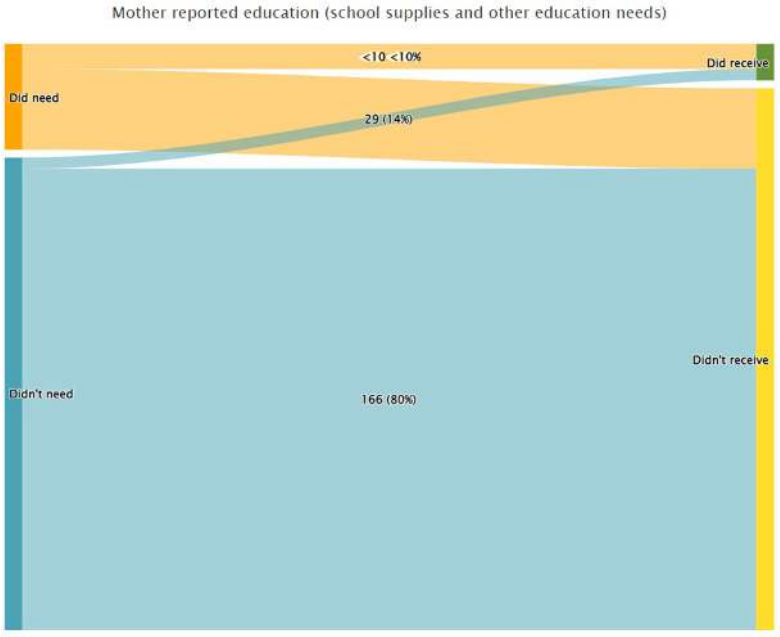


*Figure 14. Shows mother/primary caregiver reported education (school supplies and other education needs) needed and received.*

Figure 15 shows the number of mothers/primary caregivers who needed medical or mental health care and did (*n* = 14, 6.7%) or did not (*n* = 32, 15.4%) receive it, and those who didn't need medical or mental health care and did (*n* < 10) or did not (*n* = 159, 76.4%) receive it.

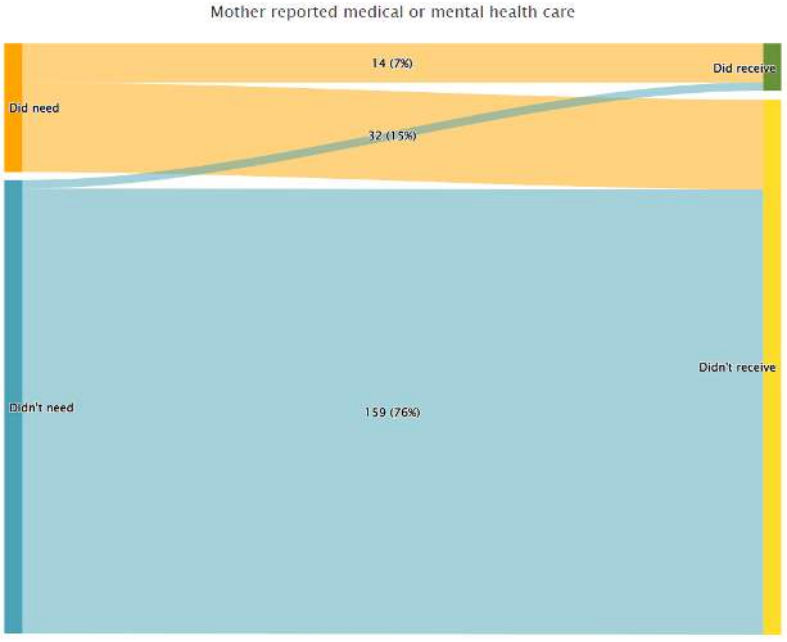


*Figure 15. Shows mother/primary caregiver reported medical or mental health care needed and received*

Figure 16 shows the number of mothers/primary caregivers who needed financial assistance and did

(*n* = 16, 7.7%) or did not (*n* = 48, 23.1%) receive it, and those who didn't need financial assistance and did (*n* = 6, 2.9%) or did not (*n* = 138, 66.3%) receive it.

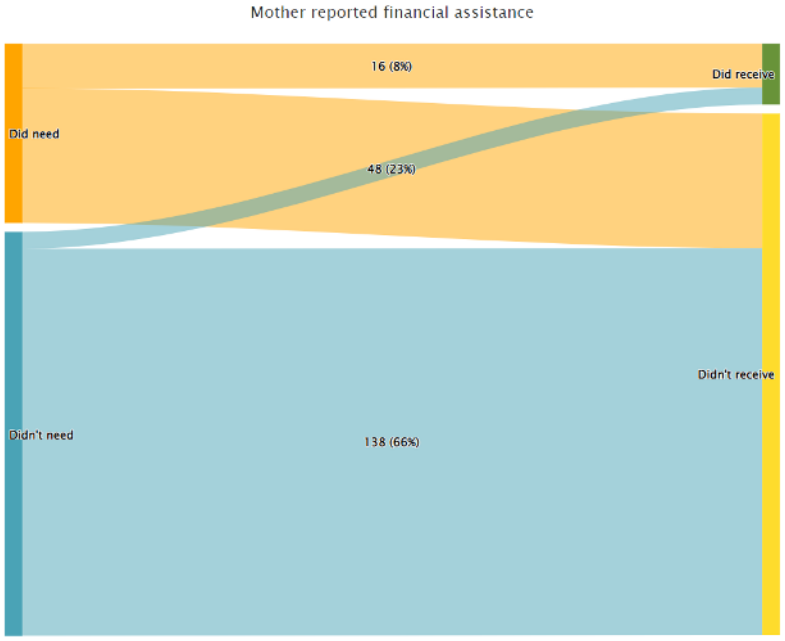


*Figure 16. Shows mother/primary caregiver reported financial assistance needed and received.*

Figure 17 shows the number of mothers/primary caregivers who needed physical support (property, transport, belongings) and did (*n* = 31, 14.9%) or did not (*n* = 70, 33.7%) receive it, and those who didn't need physical support (property, transport, belongings) and did (*n* = 3, 1.4%) or did not (*n* = 104, 50%) receive it.

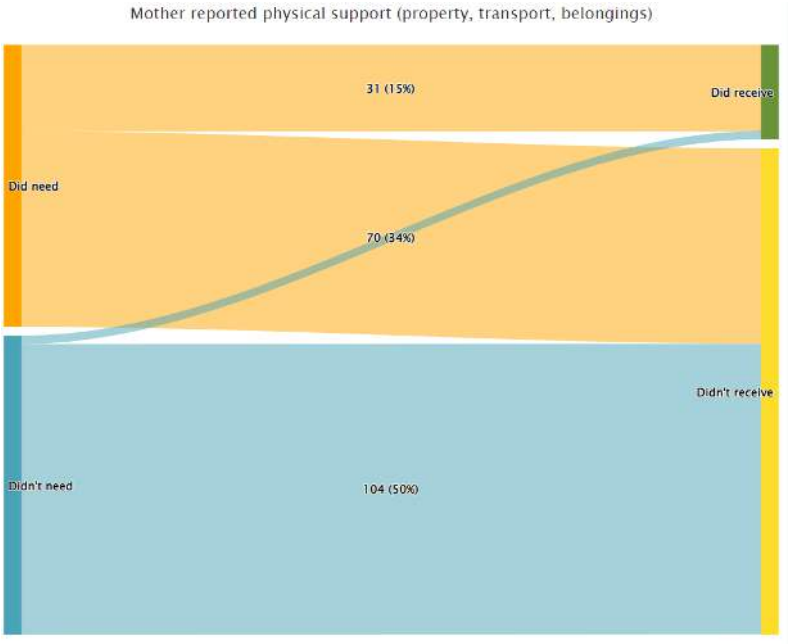


*Figure 17. Shows mother/primary caregiver reported physical support (property, transport, belongings) needed and received.*

Figure 18 shows the number of mothers/primary caregivers who needed advice assistance and did (*n* = 16, 7.7%) or did not (*n* = 29, 13.9%) receive it, and those who didn't need advice assistance and did (*n* = 6, 2.9%) or did not (*n* = 157,75.5%) receive it.

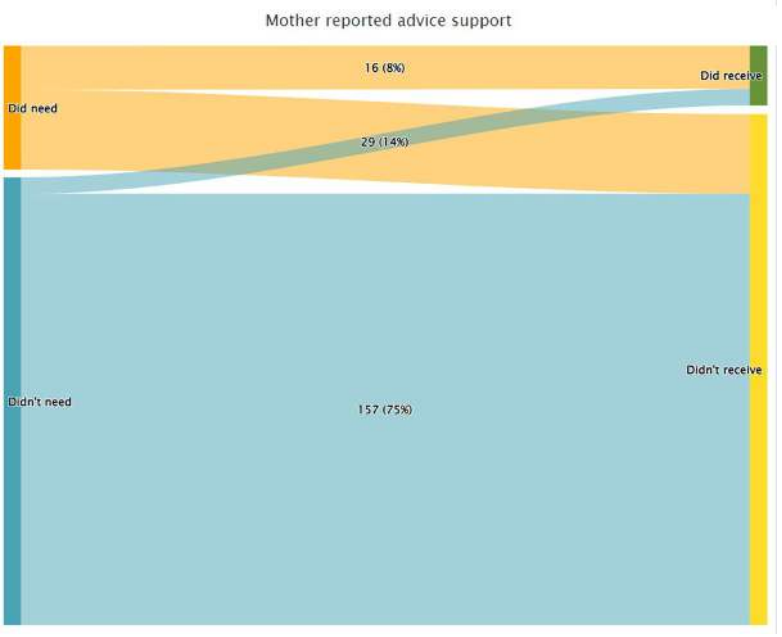


*Figure 18. Shows mother/primary caregiver reported advice/support needed and received.*

## Schooling

The two extreme weather events that occurred in January and February 2023 coincided with the start of the school year for young people in Aotearoa New Zealand. Many of the *Growing Up in New Zealand* cohort would have been transitioning to Year 9 (first year of secondary school). Following the Auckland Anniversary Weekend flooding, all schools in the Auckland region were closed on Monday 30th and Tuesday 31st January [27, 28]. During Cyclone Gabrielle, over the week of February 13-17th, school attendance rates dropped to a low of 52.1% because of school closures [29, 30]. The combination of these two extreme weather events resulted in property and infrastructure damage to over 500 North Island schools [31, 32].

The timing of these extreme weather events may have interfered with young people's educational experience at the start of 2023. *Growing Up in New Zealand* asked young people about the impact of the extreme weather events on school and everyday activities.

From the young people who participated in the Extreme Weather Survey in Auckland, more than half (62.8%, *n* = 352) were starting a new school at the beginning of 2023. Due to the floods and/or cyclone, over two-thirds (69.9%, *n* = 392) of young people were delayed from starting school. Most young people did not have to change schools or move school buildings (95.9%, *n* = 537).

The majority of young people (82%, *n* = 459) had time off school because of the extreme weather. Of those 459 young people who had time off school, 4.6% (*n* = 21) had less than 1 day off, 44.7% (*n* = 205) had 1-3 days off, 28.1% (*n* = 129) had 4-5 days off, 15.7% (*n* = 72) had more than a week off school, and around 7% (*n* = 32) said that they didn't know.

## Everyday life

Young people were asked how much their everyday activities were interrupted or stopped because of the floods and/or cyclone (not at all, a little, a lot, or not applicable). The everyday activities we asked about were homework, school activities (e.g. arts, music, Kapa Haka), social activities (e.g. sports, going to the mall, marae, church), online games or communication, and seeing friends or family. Figure 19 shows the number of young people who reported that their everyday activities were interrupted or stopped. Each bar represents the activity (school, social, online, friends, family) and shows what percentage of young people answered not at all, a little, a lot, or not applicable.

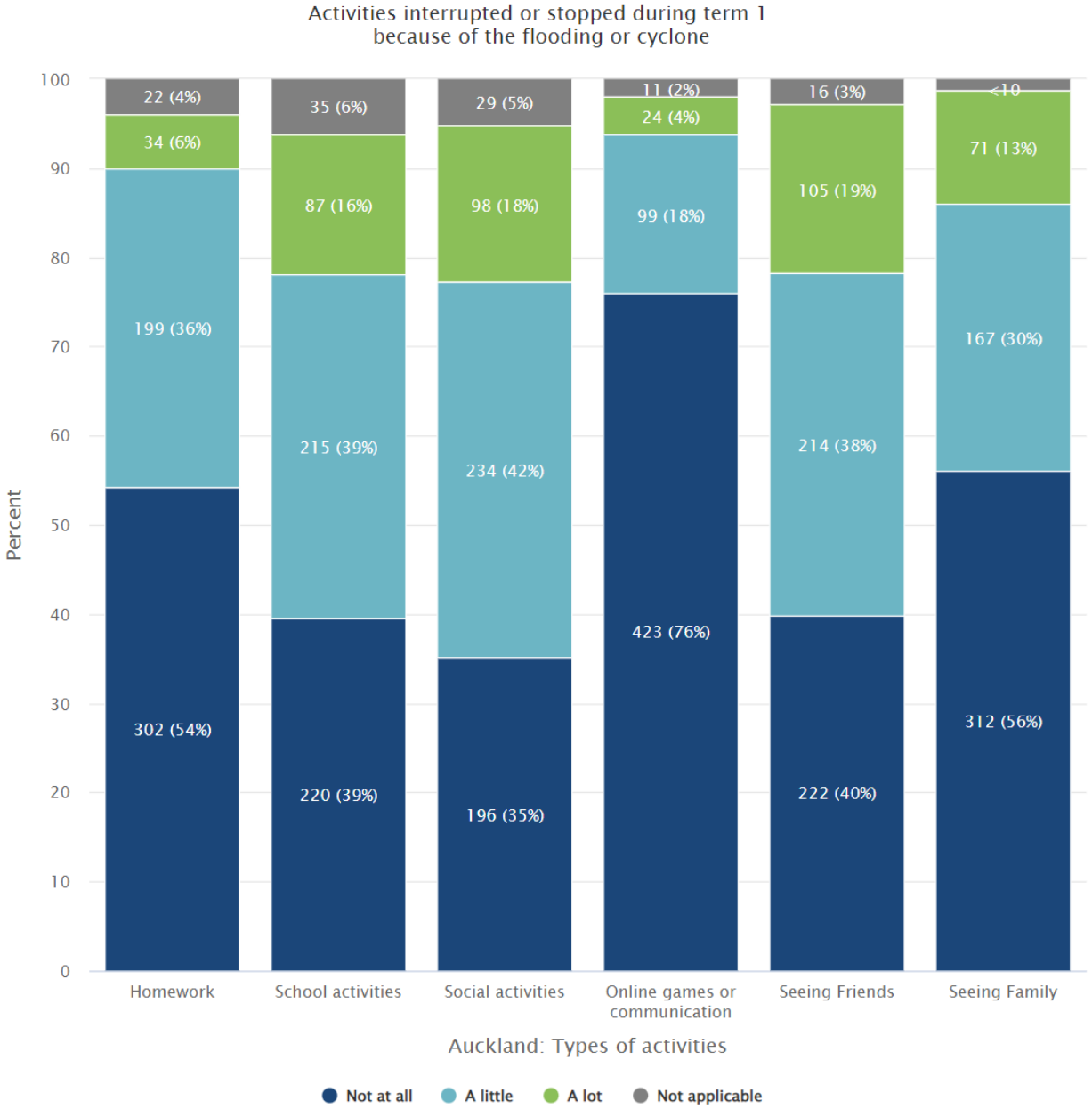


*Figure 19. Young people's activities missed due to floods and or cyclone.*

# Further *Growing Up in New Zealand* resources and reports

A range of existing resources based on our research findings can be found on our website, including:

- Additional reports are available on a dedicated Extreme Weather section of the Growing Up website growingup.co.nz/extreme-weather-survey-2/extreme-weather-survey-overview-list
- Full *Growing Up in New Zealand* Extreme Weather report [1]: https://doi.org/10.17608/k6.auckland.25762731.v1
- Te Matau-a-Māui/Hawke's Bay and Te Tai Rāwhiti/Gisborne Extreme Weather regional report [2]: DOI: 10.17608/k6.auckland.25833685.
- Tāmaki Makaurau/Auckland Extreme Weather regional report [3]: DOI: 10.17608/k6.auckland.25833676.
- Policy briefs: smaller publications on a specific topic of interest to policymakers and government. growingup.co.nz/growing-policy-briefs
- Reports: comprehensive reports based on data collected at key milestones: growingup.co.nz/growing-reports
- Published articles: *Growing Up in New Zealand* researchers use the study data to investigate a wide range of topics around child and youth development. growingup.co.nz/published-articles

For more information, please email researchgrowingup@auckland.ac.nz or visit our website at www.growingup.co.nz



[1] Gawn, J., Fletcher, B.D., Neumann, D., Pillai, A., Miller, S., Park, A., Napier, C., Paine, S.J. (2024). The impact of extreme weather events on young people and their families: Evidence from Growing Up in New Zealand. Auckland: Growing Up in New Zealand. DOI: 10.17608/k6.auckland.25762731.

[2] Gawn, J., Fletcher, B.D., Neumann, D., Pillai, A., Miller, S., Park, A., Napier, C., Paine, S.J. (2024). Te Matau-a-Māui/Hawke's Bay and Te Tai Rāwhiti/Gisborne regional report of the impact of extreme weather events on young people and their families: Evidence from Growing Up in New Zealand. Auckland: Growing Up in New Zealand. DOI: 10.17608/k6.auckland.25833685

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# Resources

## Extreme weather events

- 'Uncivil Defence' - a guide provided by *Growing Up in New Zealand* to help young people to cope with their emotions and to be ready for extreme weather events. Free download available at: growingup.co.nz/extreme-weather-survey-3
- Civil Defence National Emergency Management Agency website (civildefence.govt.nz/find-your-civil-defence-group) for more information on extreme weather events, and information on preparing for an emergency.
- Regional civil defence groups for local information: civildefence.govt.nz/find-your-civil-defence-group
- Ministry for the Environment website for information on recovering from recent severe weather events: https://environment.govt.nz/what-government-is-doing/areas-of-work/recovering-from-recent-severe-weather-events/
- Fire and Emergency website for safety tips and support for extreme weather events: https://www.fireandemergency.nz/incidents-and-news/extreme-weather-events/
- Whaikaha Ministry of Disabled People website for information on where to go for help for extreme weather: https://www.whaikaha.govt.nz/news-and-events/news/extreme-weather-where-to-go-for-help/

## Mental and physical health

See the Ministry of Health website (health.govt.nz/your-health/services-and-support) for a list of resources or click below for information or support:

- Need to talk? Free text or call 1737 any time for support from a trained counsellor, or see 1737.org.nz
- For wellbeing support near you including for Youth, Kaupapa Māori, Pacific-led see wellbeingsupport.health.nz
- Support for rangatahi to find support for hauora, identity, culture, and mental health,see thelowdown.co.nz
- Healthcare providers near you, see healthpoint.co.nz/mental-health-addictions/?programmeArea=im%3A42a1e54a-a52d-4c63-b91a-18714aef1c38
- Youthline – Free, confidential and non-judgemental, phone 0800 376 633, free text 234, email talk@youthline.co.nz or use the online chat: youthline.co.nz/web-chat-counselling.html
- You can find Māori Health Providers in your area here health.govt.nz/your-health/services-and-support/health-care-services/maori-health-provider-directory
- Find a local rongoā provider here teakawhaiora.nz/nga-rauemi-resources/find-a-rongoa-provider/
- Vaka Tautua 0800 652 535 (0800 OLA LELEI) - free national Pacific helpline, email enquiries@vakatautua.co.nz . The team speaks Samoan, Tongan, Cook Islands Māori and English
- Asian Family Services 0800 862 342, email or help@asianfamilyservices.nz - provides professional, confidential support in multiple languages
- Rainbow mental health organisation OutLine provides free support: free phone 0800 688 5463 or free online chat via outline.org.nz/

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