

# Arts, Culture and Recreation Participation in the *Growing Up* *in New Zealand* Cohort at 12- Years



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## Table of Contents

List of Figures & Tables .....	4
Executive Summary .....	5
1. Introduction.. .....	7
2. Methodology. ....	9
2.1. The <i>Growing Up in New Zealand</i> study.....	9
2.2. Measures.....	9
2.3. Data Analysis .....	12
2.4. Sample characteristics .....	12
3. Results.....	14
3.1. Overview of young people’s participation in free-time ACR activities.....	14
3.2. Overview of young people’s participation in extracurricular ACR activities .....	15
3.3. Individual extracurricular activities.....	16
3.4. Ngā toi Māori activities .....	17
3.5. Group participation.....	18
3.6. Number of activities and number of activity categories.....	18
3.7. Enablers of and barriers to participation .....	19
3.7.1. Summary of enablers and barriers.....	25
3.8. Missed activities .....	26
4. Discussion ....	29
4.1. Overall participation .....	29
4.2. Barriers and enablers of participation .....	31
4.3. Limitations and Future Research .....	34
4.4. Implications for Policy and Practice .....	36
4.5. Conclusions .....	38
5. Acknowledgements.....	39
6. References ...	40

Appendix A. Variables Used in Analysis .....44

Appendix B. Detailed Results .....48



## List of Figures & Tables

Figure 1. Young people’s participation in free-time ACR activities. Overall percentages (left) represent ‘some participation’ (once a week or more)( <i>n</i> =4,452). .....	14
Figure 2. Overall participation in extracurricular ACR activities according to group (Total <i>n</i> =4,449). .....	15
Figure 3. Total number of extracurricular activities participated in at age 12-years (Total <i>n</i> =4,449). .....	18
Figure 4. Number of extracurricular groups participated in at 12-years ( <i>n</i> =4,449). .....	19
Figure 5. Distribution of four creative free-time activities by gender (percentage of ‘some’ participation). ...	21
Figure 6. Dance and drama participation by four demographic variables – ethnicity, gender, household structure and rurality. ....	23
Figure 7. Categories of extracurricular activity that 12-year olds reported missing out on ( <i>n</i> =1,324). ....	27
Figure 8. The top 10 missed individual extracurricular activities reported by 12-year-olds. ....	27
Figure 9. Reasons for missed extracurricular activities ( <i>n</i> =1,323). ....	28
Table 1. Individual activity options and group category headings for extracurricular ACR participation.....	10
Table 2. Summary of cohort numbers for each of our demographic characteristics. ....	13
Table 3. Crosstab of kapa haka participation in both music and dance & drama extracurricular categories. .	17
Table 4. Kapa haka participation by ethnic grouping. ....	25
Table 5. Participation measures examined in research questions 1 & 2.....	44
Table 6. Participant child, household and neighbourhood characteristics examined in research question 2 (barriers and enablers of participation).....	46
Table 7. Free-time ACR activity participation (frequency and participation). ....	48
Table 8. Individual extracurricular participation (frequency and participation). ....	49
Table 9. ‘Missed’ activities as reported by our cohort 12-year-olds. ....	51
Table 10. Child, household and neighbourhood characteristics by creative free-time ACR activity participation. ....	52
Table 11. Child, household and neighbourhood characteristics by “Other” free-time ACR activities.....	54
Table 12. Child, household and neighbourhood characteristics by extracurricular ACR activities. ....	56

## Executive Summary

Many children and young people participate in arts, culture and recreation (ACR) activities, yet there is very little research reporting on this in Aotearoa New Zealand. Research is particularly lacking for young people's ACR participation under 15 years of age. The current research project utilised data from 4,500 12-year-olds, captured through *Growing Up in New Zealand* (GUINZ)'s 12-year data collection wave (DCW); the aim of the analysis was to gain insight into young people's participation in a variety of extracurricular and free-time arts, cultural, sporting and recreation activities, in order to inform policy and service delivery.

Specifically, the project asked how 12-year-olds are participating in ACR activities, and what are the enablers and barriers to participation in ACR activities.

Overall, the results showed that young people were highly engaged in ACR activities outside of school; however, not all young people had the same opportunities or interest in participation.

More specifically, the results showed that:

- Over 90% of young people reported listening to music, active play, household chores, and spending time outdoors at least once a week.
- Listening to music was the free-time activity young people most frequently engaged in; over half (52%) of all participants listened to music daily or more.
- Approximately 3 out of 4 young people read books at least once a week.
- 97% of 12-year-olds reported participating in some kind of extracurricular activity.
- Overall, sports was the extracurricular activity category with the highest level of participation, with 88% of 12-year-olds reporting having regularly participated in extracurricular sports activities.
- When examining individual extracurricular activities, the highest reported individual extracurricular activity was 'painting or drawing' (39%).
- On average, young people reported 6.2 extracurricular activities, and 83% reported these from 2 or more categories (e.g. sports and music).
- 15% of young people participated in kapa haka as an extracurricular activity, yet other individual ngā toi Māori activities had lower extracurricular participation.

Both free-time and extracurricular ACR activities were then examined in relation to various child, household and neighbourhood demographic characteristics to explore both barriers to and enablers of ACR participation. Young people also reported on activities that they missed out on, and reasons for missing out on these activities.

These results showed that:

- Cisgender girls and transgender and non-binary young people reported higher participation in creative free-time activities than cisgender boys.
- People living with extended family reported higher creative free-time activity participation than those living in other family contexts. Some differences were also seen by ethnicity, with Asian, Pacific, and MELAA young people reporting higher creative free-time activity participation for some activities, compared to sole European.

- Functional disability, material hardship, and area-level deprivation were associated with lower participation in some free-time activities; however, the pattern of results was more complex.
- For extracurricular activities, participation varied by ethnicity, gender, disability, material hardship, household structure, and rurality.
- Sports participation was higher for cisgender boys, those with little material hardship, and those living with extended family. Participation was lower for those with a functional disability.
- Living with extended family was associated with higher participation across a large range of extracurricular activities, compared to other household structures.
- Almost a third of 12-year-olds said there was an extracurricular activity they wanted to do but missed out on, the top two individual missed activities being ‘running/cross-country’ and ‘Asian dance styles’.
- The most common reason young people cited for missing out on an activity was not having enough time (37%).

Overall, this research demonstrates that 12-year-olds are highly engaged in arts, culture and recreation activities, reflecting an importance of providing access to these activities across New Zealand. Listening to music, sports, drawing and painting, and community groups or clubs were all very popular activities with New Zealand youth. Other activities indicate new and emerging avenues for ACR participation, such as gaming and digital art. Yet some activities have lower participation overall, including those categorised as ngā toi Māori (with the exception of kapa haka participation). Understanding participation rates with specific cultural activities that are associated with our unique kiwi identity, is important for mitigating barriers to ensure the preservation and promotion of matāuranga Māori.

The research also shows that not everyone has equal access or interest in participation; it is important to examine those who have lower or higher participation, such as those living with extended family members, differences between gender groups, and disability. In turn, understanding the reasons why 12-year-olds cannot engage in specific activities, either due to lack of time, access, or challenges due to hardship or individual and cultural beliefs, can help develop strategic support to encourage young peoples’ ACR participation.

The findings have policy and practice implications; although they do not indicate the impacts of specific initiatives, they contribute to an overall evidence base for how youth participate. They show that 12-year-olds are highly engaged in arts, culture and recreation activities, reflecting an importance of providing access to these activities across New Zealand. Understanding the unique issues and contribution of youth will foster participation, equity, and support the long-term goals of resilience and sustainability within the cultural system.

## 1. Introduction

Many children and young people participate in arts, culture and recreation (ACR) activities, yet there is very little research reporting on this in Aotearoa New Zealand. Research is particularly lacking for young people's ACR participation under 15 years of age. In 2020, the *Growing Up in New Zealand* (GUINZ) longitudinal study reported that one in two 8-year-olds took part in “art, music or dance lessons”, and two thirds of children participated in an organised team sport at least once a week (Morton et al., 2020). Further analysis of the GUINZ cohort can provide contemporary, timely data about ACR participation in a largely representative sample of New Zealand youth, at a time when participation in ACR activities is commonplace and important to them.



Young people are involved in a variety of ACR activities; some of these activities have been popular and well-established for a number of years (e.g. cricket and musical instrument lessons) while others reflect technological and societal changes (e.g. cosplay and gaming clubs). The types of activities, variety, and total number of activities together contribute to an understanding of how youth engage with ACR, and areas of opportunities for participation that require additional support. There are several known mechanisms by which participation in ACR activities can lead to improved youth outcomes, including increased community engagement, cultural identity development, educational outcomes, positive peer relationships, and emotional and cognitive competencies across the lifespan. The Covid-19 pandemic has shown us how arts and cultural activities positively contribute to wellbeing and social inclusion, and the detrimental effects when access to these activities is limited (Gattenhoff et al., 2022).

Manatū Taonga Ministry for Culture and Heritage acts as a central government steward for New Zealand's cultural system. As part of this leadership role, the Ministry is seeking to enhance the quality and quantity of cultural participation data for New Zealanders. Youth are a significant population of interest for Manatū Taonga in the Ministry's 2022 Long-Term Insights Briefing. Currently Manatū Taonga has few insights around youth cultural participation across New Zealand; therefore the key objective of this project is to fill gaps in the Ministry's cultural participation data, including levels of cultural participation for diverse New Zealand youth, as well as initial indicators of enablers and barriers to participation. Filling these gaps will enable evidence-informed policy development and stronger understanding about cultural participation, which are critical to progress towards the long-term outcomes outlined in Te Rautaki o Manatū Taonga (i.e., higher cultural participation rates in targeted communities, an inclusive and reflective cultural system, and a cultural system that is sustainable and resilient).

Additionally, a continued focus area for arts and heritage policy is the preservation and revitalisation of ngā toi and mātauranga Māori. Therefore, as part of access and participation to ACR activities there is a need to provide evidence around participation Māori cultural activities, including kapa haka, raranga and other traditional activities.

Finally, the Child and Youth Wellbeing Strategy states that children and young people have a right to “participate freely in cultural life and the arts” (DPMC, 2019). Giving children the spaces and opportunities to play and express themselves creatively through participation in ACR activities fosters children who are active, healthy and creative.

The key research questions to be explored in this report are:

1. How are 12-year-olds participating in ACR activities?
  - a. How are young people participating in free-time activities (e.g. reading books, listening to music)?
  - b. How are young people participating in extracurricular activities (e.g. community group, sports group)?
2. What are the enablers of and barriers to access and participation in ACR activities?
  - a. Are there any groups of young people who reported higher or lower participation?
  - b. What are the activities that young people reported missing out on?
  - c. What are the reasons for missing out on certain activities as reported by young people?





## 2. Methodology

### 2.1. The *Growing Up in New Zealand* study

This report uses data from *Growing Up in New Zealand* (GUiNZ), New Zealand’s largest contemporary longitudinal birth cohort study that tracks over 6,000 children and their family and whānau since pregnancy. GUiNZ was designed to collect contemporary, population-relevant information to understand the development and wellbeing of children growing up in New Zealand in the 21st century. The study began by recruiting pregnant mothers in 2009 and 2010 who were residing in the District Health Board regions (DHBs) of Auckland, Counties Manukau and Waikato. The cohort of 6,853 children recruited at baseline was diverse, broadly generalisable to the New Zealand birth population at the time, and sized to provide adequate statistical power for complex analyses of subgroups. Six main data collection waves (DCWs) have been completed to date: at the antenatal period, when the children were 9 months of age, 24 months, 54 months, 8 years, and 12 years. There has been good retention of the cohort over time (85% at 8 years of age, and 72% at 12 years of age). More information about the study, including recruitment processes and the cohort profile, can be found in Morton and colleagues, 2013 and 2015.

The current report utilises survey data from the 12-year DCW — a time when extensive information was collected about the cohort’s participation in both extracurricular and free-time activities. The 12-year DCW occurred between September 2021 and July 2022, during which the cohort (mean age = 12.30 years, standard deviation = 0.27 years) completed their own questionnaires via online electronic surveys. Additional information about this DCW can be found in *Now We Are 12: Introduction to the Growing Up in New Zealand 12-Year Data Collection Wave* (Napier et al., 2023).



### 2.2. Measures

The GUiNZ study adopts a life course approach to child development, recognising the dynamic interactions between children and their environments, both their immediate family environments and the wider society in which they live. The 12-year DCW included questionnaire items across six key interconnected domains: family and whānau, societal context, education, health and wellbeing, psychological and cognitive development, and culture and identity.

Five items in the 12-year child questionnaire can be used to explore young people’s involvement in arts, cultural and recreation activities:

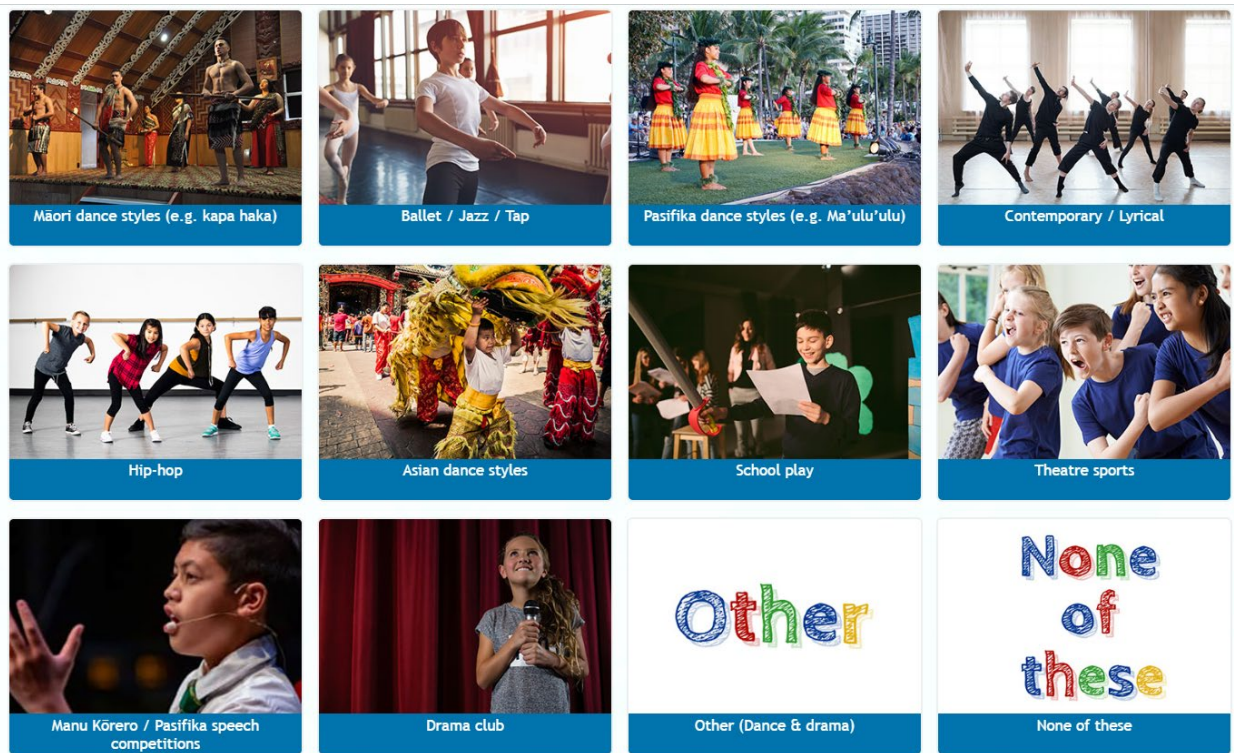
- (1) Free-time activities: “How often do you: read books; listen to music; sing or play an instrument; do some art/craft or quiet activity (e.g. Lego, board games, drawing); active play (e.g. running around playing games, bike riding), spend time outdoors; do household chores; do homework?”. Response options were: Never/ almost never; Once a week; Several times a week; Once a day; Several times a day.
- (2) Extracurricular activities: “Thinking about the past year, which of the following activities do you do or have you done regularly (about once a week)?” Young people selected as many as needed from a list of activities, umbrellaed under each of 5 categories: 1. Community group or club, 2. Dance and drama, 3. Sports, 4. Music, and 5. Arts, crafts and technology (see full list of activities options in Table 1).

Table 1. Individual activity options and group category headings for extracurricular ACR participation.

Community group or club	Dance and drama	Sports	Arts, craft and technology	Music
Student council	Māori dance styles (e.g. kapa haka)	Cricket	Weaving, Raranga	Waiata or choir
Environmental group	Ballet, jazz, tap	Waka ama, rowing, mau rākau	Robotics, AI, Coding club	Orchestra
Academic group (e.g. Mathletics, Spelling, Chess)	Pasifika dance styles (e.g. Ma'ulu'ulu)	Netball, basketball, volleyball	Gaming club	Kapa Haka
Radio, Blog, Social Media	Contemporary, Lyrical	Rugby or touch rugby	Sculpture, carving	Jazz/Blues band
Second Language	Hip-hop	Hockey, floorball	Knitting, craft	Traditional group
Religious group	Asian dance styles	Running, cross-country	Painting, Drawing	Brass/concert band
Scouts or guides	School play	Swimming	Digital arts	Guitar or ukulele group
Other	Theatre sports	Football, soccer or futsal	Other	Instrument lessons
None of these	Manu Kōrero, Pasifika speech competitions	Athletics	None of these	Rock band/ other band
	Drama club	Tennis, racket sports		Other
	Other	Cycling		None of these
	None of these	Tramping, bush walks		
		Other		
		None of these		

- (3) Group participation of extracurricular activities: “Which of these activities do you do in a group?”
- (4) Missed extracurricular activities: “Is there any activity that you WANT to do but you don’t or can’t?”
- (5) Reasons for missed extracurricular activities: “Thinking about this activity, why don’t you do it?” Response options: 1. I don’t have enough time; 2. It costs too much; 3. Problems getting there and back home; 4. It’s not available in my neighbourhood; 5. My family doesn’t want me to do it; 6. Health problems (mental or physical health); 7. People would make fun of me; 8. I’m afraid I won’t be good at it; Other.

Note that for both free-time and extracurricular ACR activities, only young people’s participation outside of school hours was captured. In each set of questions, participants were prompted by asking them to report on activities ‘before or after school, or at lunchtime, or in the weekend’ (See Table 5, Appendix A). With extracurricular activities, 12-year-olds were asked to reflect on ‘regular’ activities participated in over ‘the past year’ (to capture all activities across seasons). See below for an example of the survey questionnaire on the ‘dance and drama’ page.



Extract from the 12-year survey child questionnaire – extracurricular activities section – Dance and drama options.

The sociodemographic characteristics examined in the second key research question (enablers and barriers to participation) include:

- Child characteristics (i.e., ethnicity (total response)<sup>1</sup>, gender<sup>1</sup>, and disability<sup>2</sup>);
- Household characteristics (i.e., material hardship<sup>3</sup>, household composition<sup>4</sup>);
- Neighbourhood characteristics (i.e., area-level socioeconomic deprivation<sup>5</sup>, DHB/region, and urban/rural geography<sup>6</sup>)

Tables 5 and 6 in Appendix A contain more information on the variables examined. This includes the data source (e.g., child or mother questionnaire), question wording, original response options, and the scales or categories used in the analyses.

<sup>1</sup> Ethnicity is represented in this report using total response ethnicity – in which young people provided self-identified ethnic identification information via an ethnicity question taken from the Statistics New Zealand Census of Population and Dwellings. This question allowed participants to identify with multiple ethnic groups and describe multiple “other” ethnic groups. Their information was then classified by retaining multi-ethnic identification, in a way that best represents the multi-ethnic diversity of our cohort. For a full description of the questions used and our derivations of both ethnicity and gender at 12-years, please see Neumann et al. (2023).

<sup>2</sup> To measure disability, we used child-reported Washington Group Short Set on Functioning (WG-SS; Washington Group on Disability Statistics, 2022). For a full description of the questions used and our derivations of disability at 12-years, please see Marks et al. (2023).

<sup>3</sup> Material hardship was classified using the Dep-17 Index (Statistics New Zealand, 2019). For a full description of the questions used and our derivations of material hardship at 12-years, please see Grant et al., 2023.

<sup>4</sup> For a full description of the questions used and our derivations of household composition at 12-years, please see Evans et al. (2023a).

<sup>5</sup> Area-level socio-economic deprivation was measured using the New Zealand Deprivation Index 2018 (NZDep18; Atkinson et al., 2019), based on the participant’s home address. Five groups (quintiles) were derived based on NZDep18 scores, ranging from NZDep 1-2 (least deprived 20% of neighbourhoods) to NZDep 9-10 (most deprived 20% of neighbourhoods).

<sup>6</sup> Urban/rural classification (Statistics New Zealand, 2017) based on home address.

### 2.3. Data Analysis

To answer the question *how are 12-year-olds participating in ACR activities?*, we present descriptive statistics (i.e., frequencies and percentages) for free-time activity (e.g. reading books, listening to music) and extracurricular activity participation (e.g. dance and drama group – kapa haka).

To answer the question *what are the enablers of and barriers to access and participation in ACR activities*, we explore the child, household and neighbourhood characteristics associated with participation in ACR activities (both free-time and extracurricular). To do this, we present cross tabulations and Chi squared tests of independence exploring participation vs non-participation in free-time activities and grouped extracurricular activities (sports, music etc.), by participant, household and neighbourhood characteristics. Note that for comparisons between ethnic groupings, we have compared each grouping (e.g., Māori, Pacific) with Sole European (only those participants who identified uniquely as NZ European), in alignment with *Growing Up in New Zealand's* approach<sup>1</sup>.

To create binary derived variables for each of the free-time activities, we selected all those who reported *Once a week, Several times a week, Once a day, or Several times a day*, and defined this as 'some participation'; all those who selected *Never/Almost never*, were categorised as 'no participation'. Extracurricular activity participation was already in a binary (Yes/No) format, as participants had selected only those activities in which they had participated regularly (once a week or more, over the past year).

We also present descriptive statistics (i.e., frequencies and percentages) of how young people report on experiences of 'missed' extracurricular activities, as well as reasons given for missing out on particular activities. Bivariate analyses were used to compare differences in participation across groups, and results with a  $p$ -value below 0.05 ( $p < .05$ ) were considered statistically significant. All analyses were conducted using R version 4.2.1 (R Core Team, 2022).

### 2.4. Sample characteristics

Due to the policy focus of this report, only those living in New Zealand during the 12-year DCW were included in the analytic sample ( $N=4,500$ ). See Table 2 below for a summary of the demographic characteristics of our cohort.

Of these participants, 4,449 completed at least one of the extracurricular activities questions (51 missing), and 4,452 completed at least one of the free-time activities questions (48 missing). Therefore, all subsequent analyses use these numbers of participants ( $n=4,449$  extracurricular and  $n=4,452$  free-time) when calculating percentages.

Overall, the majority of the cohort reported participating in both free-time and extracurricular activities (90.3%,  $n=4,019$ ) and less than one percent ( $n < 10$ ) said they did not participate in either. Those who participated in free-time but not extracurricular activities represented 2.9% ( $n=130$ ) of the cohort, and those who participated in extracurricular but not free-time activities represented 6.7% ( $n=298$ ) of the cohort.

Table 2. Summary of cohort numbers for each of our demographic characteristics.

<b>Demographic characteristic</b>	<b>Grouping</b>	<b><i>n</i></b>	<b>% (Total NZ cohort, N=4,500)</b>
Ethnicity	Māori	979	21.8%
	Pacific	491	10.9%
	Asian	542	12.0%
	MELAA	55	1.2%
	Other	36	0.8%
	Sole European	2,268	50.4%
Gender	Boy/mostly boy	2,055	45.7%
	Girl/mostly girl	1,683	37.4%
	Transgender/Non-binary/Unsure	725	16.1%
Disability	No disability	4,010	89.1%
	Some disability	437	9.7%
Material hardship	No/little material hardship	3,520	78.2%
	Material hardship	185	4.1%
	Severe material hardship	127	2.8%
Household composition	Sole parent	567	12.6%
	Two or more parents	3,299	73.3%
	Living with extended family	499	11.1%
	Living with non-kin	83	1.8%
Area level deprivation	NZDep 1-2 (lowest deprivation)	1,067	23.7%
	NZDep 3-4	990	22.0%
	NZDep 5-6	858	19.1%
	NZDep 7-8	723	16.1%
	NZDep 9-10 (highest deprivation)	778	17.3%
DHBS/ Regions	Auckland	1,032	22.9%
	Bay of Plenty	138	3.1%
	Canterbury	70	1.6%
	Capital and Coast	38	0.8%
	Counties Manukau	1,235	27.4%
	Hawke's Bay	43	1.0%
	Hutt Valley	13	0.3%
	Lakes	59	1.3%
	Mid Central	32	0.7%
	Nelson Marlborough	29	0.6%
	Northland	90	2.0%
	South Canterbury	<10	-
	Southern	43	1.0%
	Tairāwhiti	<10	-
	Taranaki	31	0.7%
	Waikato	1,228	27.3%
	Wairarapa	<10	-
	Waitemata	292	6.5%
West Coast	<10	-	
Whanganui	15	0.3%	
Urban/rural	Urban	3,620	80.6%
	Rural	788	17.5%

### 3. Results

#### 3.1. Overview of young people’s participation in free-time ACR activities

At 12 years of age, the *Growing Up in New Zealand* cohort were asked to indicate how often they participated in several free-time activities, including reading books, listening to music and spending time outdoors. Frequency counts (along with percentages) can be found in Table 7 in Appendix B. As shown in Figure 1, of the sample ( $n=4,452$ ):

- The top four reported free time activities were listening to music, active play, spending time outdoors and household chores (92%, 92%, 91% and 90% reporting participation once a week or more, respectively).
- The free-time activity with the highest reported engagement was listening to music: over half of all participants (52%) reported listening to music at least once a day.
- The second most reported free time activity was active play (50% of participants reported active play once a day or several times a day).
- Approximately three quarters (76%) of participants reported reading books at least once a week.
- The activity with the highest reported non-engagement was for making music: for 44% of participants, ‘singing or playing an instrument’ was reported never or almost never.
- 89% of participants reported doing household chores once a week or more, and 72% reported doing homework once a week or more.

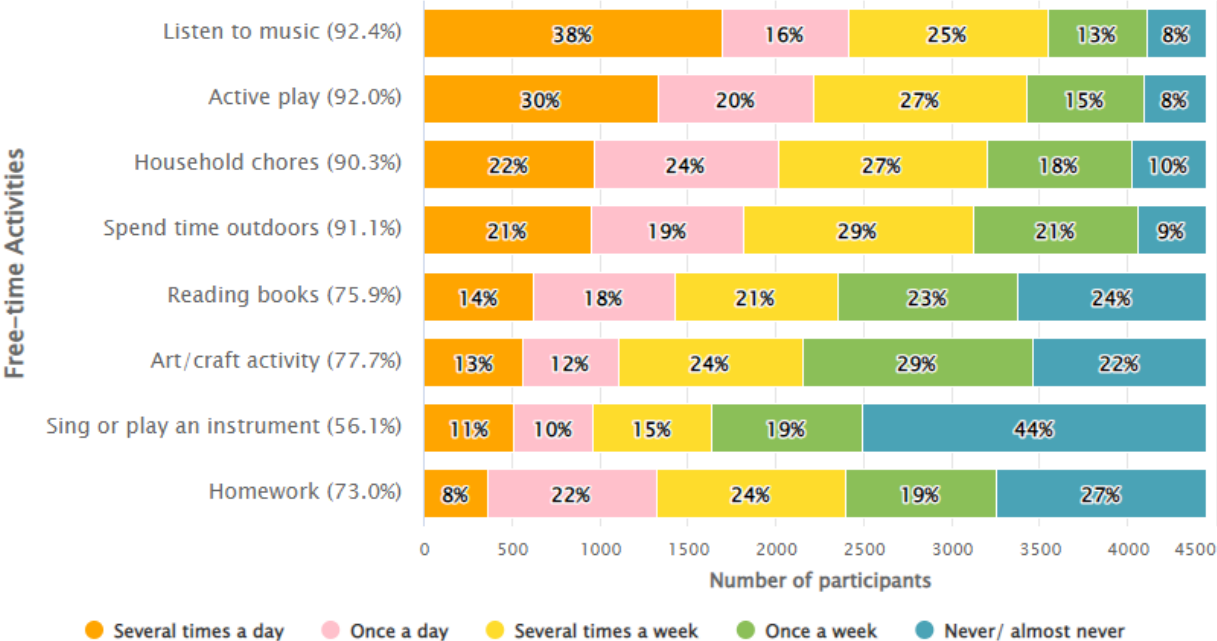


Figure 1. Young people’s participation in free-time ACR activities. Overall percentages (left) represent ‘some participation’ (once a week or more)( $n=4,452$ ).

### 3.2. Overview of young people’s participation in extracurricular ACR activities

At 12 years of age, the *Growing Up in New Zealand* cohort were asked to indicate which ACR activities they had participated in frequently (at least once a week) over the past year, and were provided with several options, including “other” and “none”, within each of 5 categories of activity. Overall, 97% ( $n=4,317$ ) of all 12-year-olds reported participating in some kind of extracurricular sport, arts, dance, music, or community group activity, and 3% ( $n=132$ ) reported not participating in any of the listed extracurricular activities.

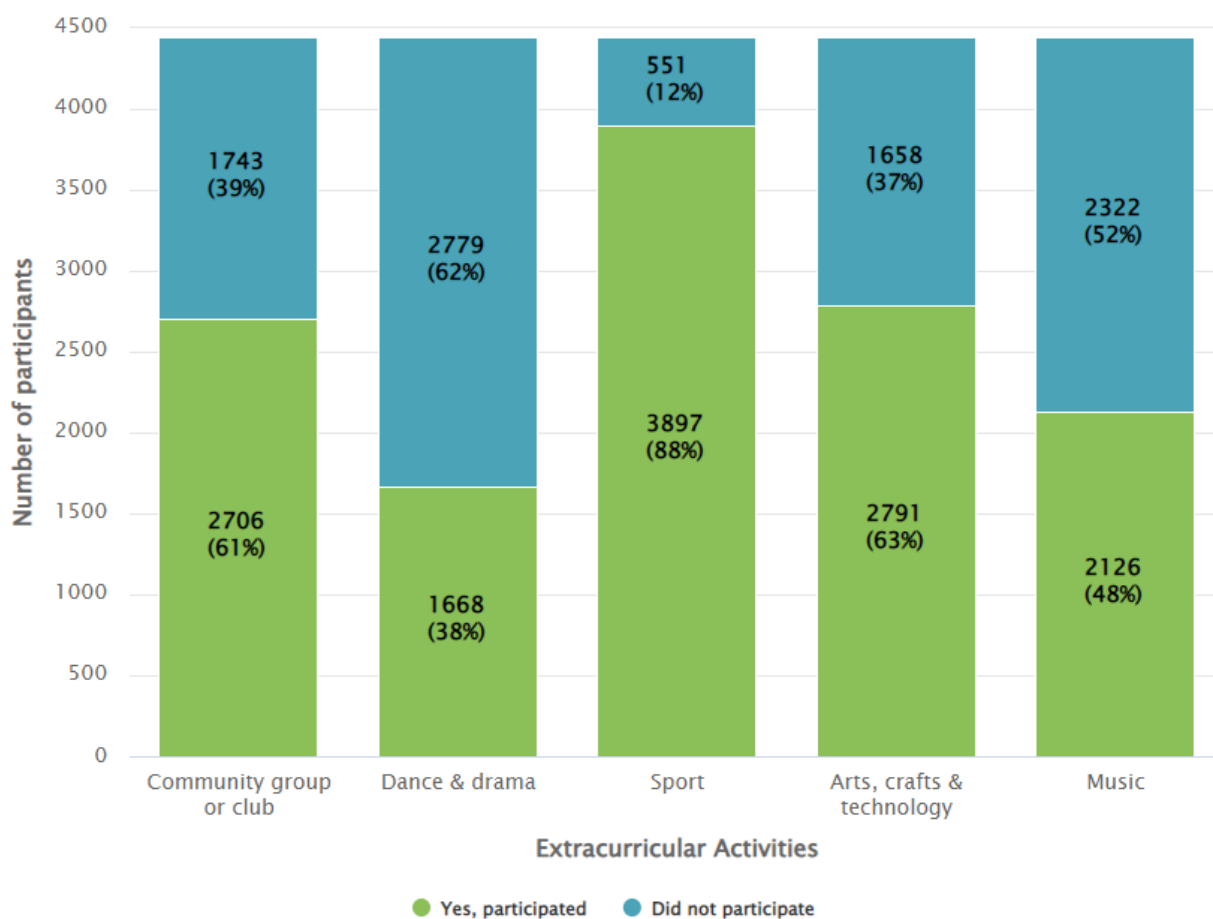


Figure 2. Overall participation in extracurricular ACR activities according to category (Total  $n=4,449$ ).

When examining participation across categories:

- Sport had the highest overall levels of extracurricular participation (88%,  $n=3,897$ ).
- The next highest participation categories were arts, craft, and technology (63%,  $n=2,791$ ) and community group or club (61%,  $n=2,706$ ).
- Almost half of 12-year-olds reported participating in extracurricular music activities (48%,  $n=2,126$ ).
- Dance and drama was the category with the lowest participation: approximately 2 out of 5 young people had participated in a dance or drama group (38%,  $n=1,668$ ).

### 3.3. Individual extracurricular activities

To see the full list of reported participation in individual extracurricular activities, please refer to Table 8 in Appendix B.

**Sport:** Sports activities were reported by a significant number of young people. The top three most popular sports activities were team ball sports (netball, basketball, volleyball; 36%,  $n=1,612$ ), followed by swimming (33%,  $n=1,480$ ), then cycling (29%,  $n=1,290$ ).

**Arts, Crafts and Technology:** The highest activity reported in this category (and across all extracurricular activities) was painting or drawing: 39% ( $n=1714$ ) of young people reported painting or drawing regularly (about once a week or more) over the past year. The second most reported activity in this category was a gaming club (19%,  $n=875$ ). The third most reported activity was digital arts, reported by 15% of our cohort ( $n=673$ ).

**Community Group or Club activities:** Overall, 61% of 12-year-olds ( $n=2,706$ ) reported participating in some kind of community group or club. Amongst these, 37% ( $n=1,639$ ) of our cohort reported participating in or belonging to some “other” kind of community group or club. This indicates that our list of individual activities in this category did not adequately capture young people’s current types of involvement in this area. The second highest individual activity in this category was radio, blog, and social media, reported by 12% of participants ( $n=546$ ), followed by 12% of participants reporting participating in a second language group ( $n=525$ ). Of note, 8% of participants ( $n=371$ ) reported belonging to a religious group, and 5% ( $n=223$ ) reported taking part in an environmental group.

**Music:** Almost half of 12-year-olds reported participating in some kind of music activity. Amongst these, the top three most popular music activities were instrument lessons (18%,  $n=800$ ), followed by “other” music activities (13%,  $n=571$ ), then kapa haka, reported by 13% of participants ( $n=566$ ).

**Dance and Drama:** Overall, dance and drama was the category with the lowest reported participation. The type of activity selected varied within the dance and drama category, however, 10% reported Māori dance styles (e.g. kapa haka) ( $n=462$ ), with additional performing arts activities selected by between 1-9% of participants.





### 3.4. Ngā toi Māori activities

Five activities may be considered as ngā toi Māori activities in our measures: kapa haka, manu kōrero, waka ama, rowing or mau rākau, weaving or raranga, and sculpture or carving.

Kapa haka: The combined total of ‘some kapa haka’ participation was 15% of participants ( $n=675$ ). 13% ( $n=565$  participants) reported participating in kapa haka under the heading of music activities – the second highest type of musical activity reported, after musical instrument lessons (18%,  $n=800$ ). Under the category of dance and drama, 10% ( $n=462$ ) of young people reported participating in kapa haka, relatively high compared to Pasifika dance styles (4%,  $n=156$ ) and Asian dance styles (1%,  $n=28$ ). Note, however, that kapa haka was provided twice – as both an option within music and an option within dance and drama, as this can be considered an art form that spans both categories equally and we did not want to miss any participation. See Table 3 below for a crosstabulation of those who answered kapa haka in each of the categories.

Table 3. Crosstab of kapa haka participation in both music and dance & drama extracurricular categories.

	<b>Music Kapa haka - Yes</b>	<b>Music Kapa haka - No</b>
<b>Dance &amp; drama Kapa haka - Yes</b>	352 (7.9%)	110 (2.5%)
<b>Dance &amp; drama Kapa haka - No</b>	213 (4.8%)	3,771 (85.0%)

Manu kōrero: 61 participants (1%) reported having participated in either manu kōrero or Pasifika speech competitions. This was the second lowest reported activity within dance and drama – other activities (for comparison) were reported by between 1% (Asian dance styles,  $n=28$ ) and 10% (Māori dance styles/kapa haka,  $n=462$ ) of participants.

Waka ama, rowing or mau rākau: Two percent ( $n=101$ ) of participants reported participating in these types of activities. This was the lowest of all sporting activities reported. Other sporting activities (for comparison) were reported by between 11% (hockey, floorball,  $n=500$ ) and 36% (netball, basketball or volleyball,  $n=1,612$ ) of participants.

Weaving or raranga: Three percent ( $n=142$ ) of young people reported participating in weaving or raranga activities.

Sculpture or carving: Six percent ( $n=275$ ) of young people reported participating in Sculpture or carving activities. Together, weaving or raranga and sculpture or carving were the lowest reported arts, craft and technology activities, as other activities in this category were reported (for comparison) by between 10% (robotics, AI, coding club,  $n=443$ ) and 39% (painting, drawing,  $n=1,714$ ) of participants.



### 3.5. Group participation

Following these questions on extracurricular activity participation, young people were presented with a list of the individual activities they had selected (e.g. netball, instrument lessons, kapa haka), and were asked “Which of these activities do you do in a group?”.

Group counts and percentages (out of the individual activity) can be found in Table 8 in Appendix B. Across all extracurricular activities, there was a wide spread of group-based vs. individual participation (mean=58.8%). Individual participation was highest for “other” community group activities (with 24% participating in a group) and group participation was highest for ballet, jazz or tap groups (with 89% participating as a group). On average, 58.7% of community group or club activities were group-based activities, 69.5% of dance and drama activities, 64.4% of sports activities, 39.4% of arts, craft and technology activities, and 62.1% of music activities.

### 3.6. Number of activities and number of activity categories

In exploring participation, we also examined the overall distribution of the total number of extracurricular activities and activity categories. This was to examine variability in participation, to see whether young people who participate in high numbers of activities do so within or between extracurricular activity types. For example, young people may participate in many different activities, all from one activity category (sports); or from a range of activity categories (music, sports, community groups etc).

The distribution of the total number of extracurricular activities young people participated in can be seen in Figure 3 below. The average number of activities was 6.2 (SD=4.48). Just 3% of young people did not participate in any activity, 6% reported one activity, and most young people (89.9%) reported participating in 2 or more activities.

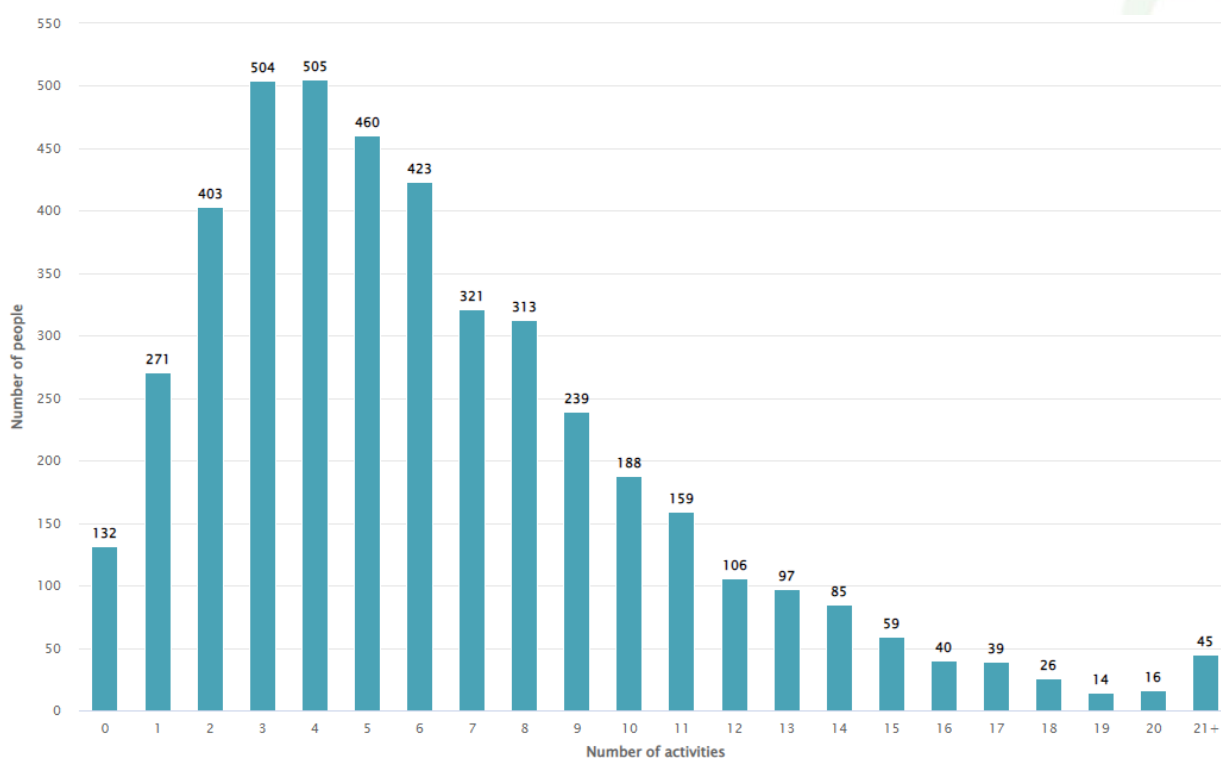


Figure 3. Total number of extracurricular activities participated in at age 12-years (Total  $n=4,449$ ).

The distribution of *number of activity categories* can be seen in Figure 4, where the mean number of categories was 2.9 (SD=1.38). Of those who participated, 83.3% of young people participated in more than 1 category of extracurricular activity, and 12.6% participated in just one category of activity.

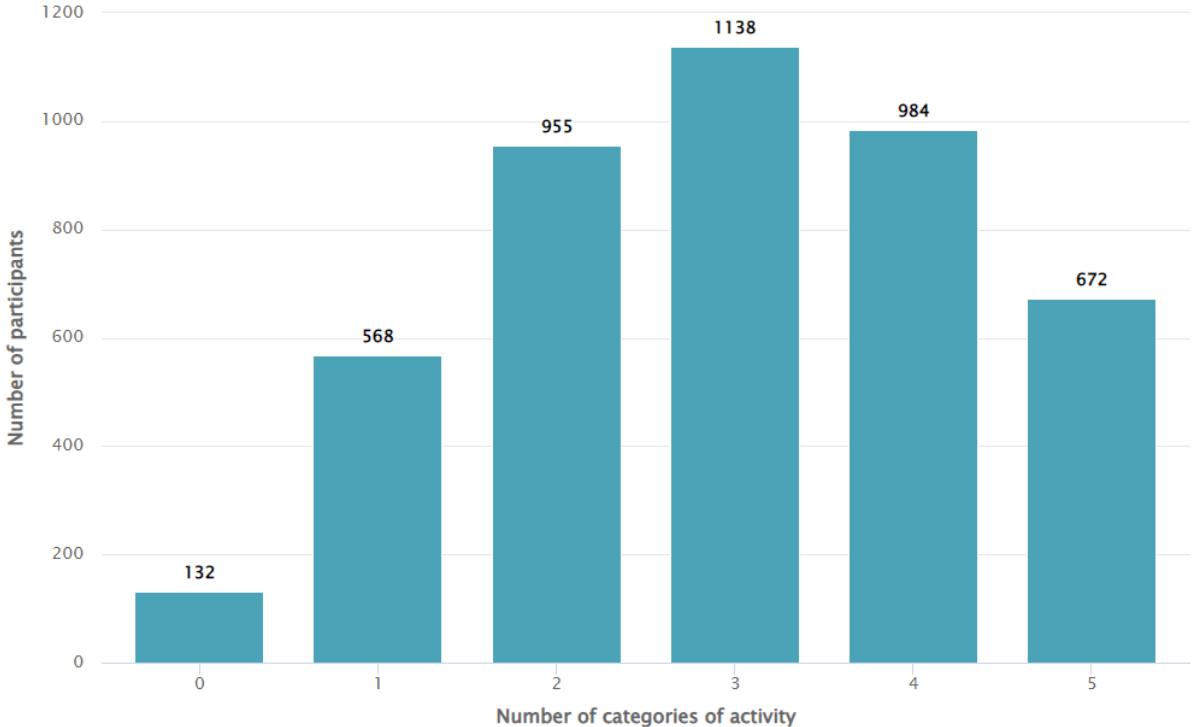


Figure 4. Number of extracurricular categories participated in at 12-years ( $n=4,449$ ).

### 3.7. Enablers of and barriers to participation

#### Free-time activity participation

To explore the enablers of and barriers to access and participation in free-time activities, we describe how young people’s free-time activity was associated with their child, household and neighbourhood characteristics. To examine this relationship, binary variables were created for each type of free-time activity (see methods section) and bivariate analyses were conducted (chi-square tests for categorical characteristics). The main results are described below. We also present four graphs showing creative participation by gender (due to space, we are unable to display a graph for all the characteristics examined) (Figure 5). Full results are available in Tables 10 and 11 in Appendix B, including whether differences between participation categories were statistically significant ( $p < .05$ ). In these analyses, those who did not respond to the question (between 51 and 53 participants, approx. 1.1%) were omitted from the analytic sample<sup>7</sup>. Note that differences between ethnic groupings are calculated comparing each grouping to sole European.

<sup>7</sup> For the questions listen to music; read books; art, craft and quiet activities; sing or play an instrument; active play and household chores;  $n=4,452$ ; for the questions spend time outdoors and homework;  $n=4,451$ ).

There were no differences in young people's reports of listening to music between any demographic grouping, except for gender: cisgender girls (94.4%) and transgender and non-binary young people (94.0%) reported listening to music more frequently than cisgender boys (90.1%;  $p < .01$ ). Apart from this difference, young people reported listening to music in similar ways across child, household and neighbourhood demographic contexts.



Young people's experiences of reading books varied by some demographic characteristics. Asian young people (83.4%) reported reading books more often than sole European young people ( $p < .01$ ). Cisgender girls (78.7%) and transgender and non-binary young people (77.3%) reported reading books more frequently than cisgender boys (73.2%;  $p < .01$ ). Young people with a disability (62.7%) reported reading books less than those without a disability (77.3%;  $p < .01$ ). There appears to be a linear relationship between experiences of material hardship and book reading, with those experiencing greater material hardship being less likely to read books ( $p < .01$ ). Similarly, there was a linear trend in area-level deprivation: young people living in areas of greater

deprivation read books less often than those living in areas of low deprivation ( $p < .01$ ). Young people living in households with extended family reported book reading more than other household structures (79%,  $p < .01$ ). There was no difference between young people from rural vs urban areas in terms of book reading.

In terms of art, craft and quiet activity participation, Asian young people (84.3%) and MELAA young people (87.0%) reported higher participation than sole European young people ( $p < .01$ ). In addition, cisgender girls (84.5%) and transgender and non-binary young people (83.4%) reported doing arts, craft and quiet activities more than cisgender boys (70.3%,  $p < .01$ ). Young people living in single parent families reported lower arts, craft and quiet activity (71.7%,  $p < .01$ ) than other household structures. Young people living in areas of highest deprivation (NZDep 9-10) reported the lowest arts, craft and quiet activity participation (75.7%,  $p = .02$ ).

In terms of making music (reported singing and/or playing an instrument), the highest rates were for Asian young people (65.3%) and Pacific young people (64.4%; compared to sole European,  $p < .01$ ). Additionally, cisgender girls (61.7%) and transgender and non-binary young people (62.3%) reported higher rates of making music ( $p < .01$ ). Young people living in households with extended family also reported singing or playing with instruments more than other household structures ( $p < .01$ ). Finally, there were higher rates of music-making for young people from urban environments (57.1%) compared to those from rural environments (50.6%;  $p < .01$ ).

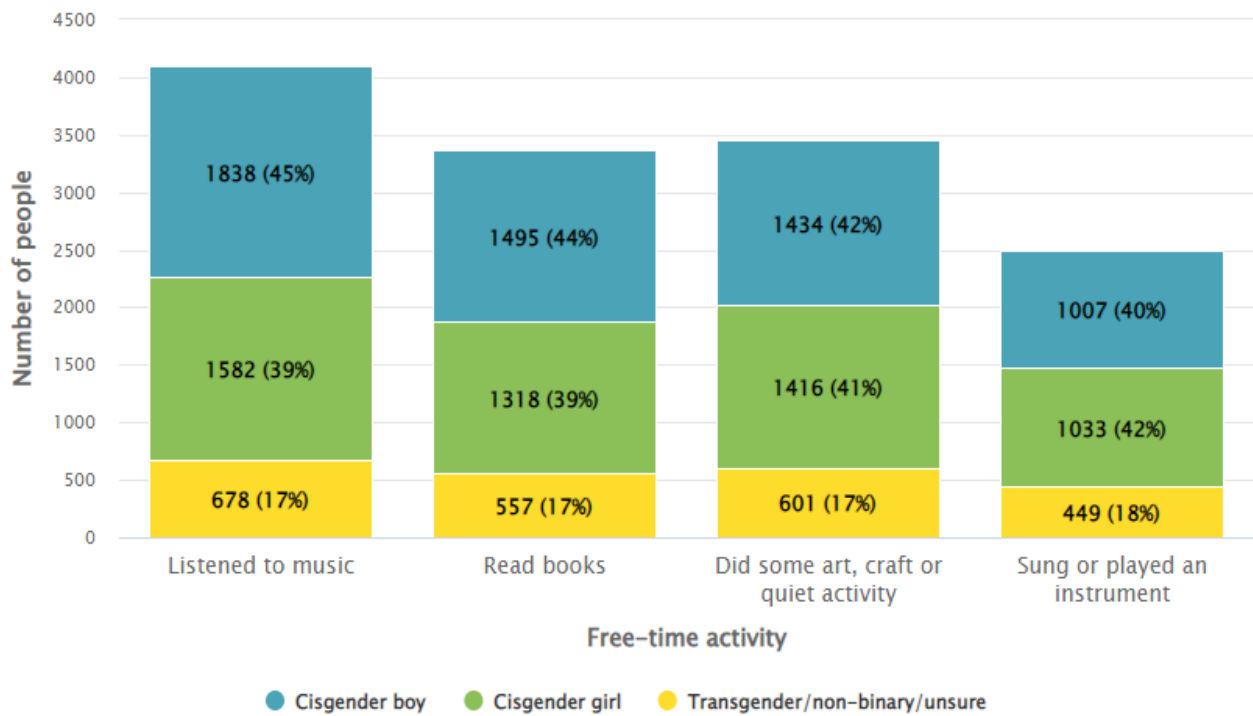


Figure 5. Distribution of four creative free-time activities by gender (percentage of ‘some’ participation).

In terms of other non-creative free-time activity participation, notable demographic differences were identified including the following:

There were significant differences between young people’s reports of active play according to ethnic grouping ( $p=.02$ ), gender ( $p<.01$ ), disability status ( $p<.01$ ), experiences of material hardship ( $p<.01$ ), household structure ( $p<.01$ ), and area-level deprivation ( $p<.01$ ). Notably, cisgender boys (93.4%) reported increased active play than other gender groupings, and those experiencing a disability reported less active play (87.2%) compared to those without a disability (92.5%). There were also higher rates of active play for young people from rural environments (94.4%) compared to those from Urban environments (91.5%;  $p<.01$ ).

For young people’s reports of spending time outdoors, there were also significant differences between their experiences in terms of ethnic grouping ( $p<.01$ ), gender ( $p<.01$ ), disability status ( $p<.01$ ), experiences of material hardship ( $p<.01$ ), and household structure ( $p<.01$ ). Notable examples of differences include spending less time outdoors for transgender and non-binary young people (88.8%) and spending less time outdoors for those experiencing a disability (87.0%) compared to those without a disability (91.6%). There were also higher rates of spending time outdoors for young people from rural environments (95.1%) compared to those from urban environments (90.4%;  $p<.01$ ). Please refer to Table 11 for results of young people’s reports of both household chores and homework participation.

**Extracurricular activity participation**

To explore the enablers of and barriers to access and participation in extracurricular activities, we describe associations between young people’s extracurricular activity participation and child, household and neighbourhood characteristics, using chi-square tests to check differences in categorical characteristics. The main results are described below. We also present four graphs to display dance and drama participation by select significant demographics (due to space, we are unable to display a graph for all the characteristics examined) (Figure 6). Full results are available in Table 12 in Appendix B, including whether differences between participation categories were statistically significant ( $p < .05$ ). In these analyses, those who did not respond to the question ( $n=51$ , 1.1%) were omitted from the analytic sample ( $n=4,449$ ). Note again that differences between ethnic groupings are calculated comparing each grouping to sole European.

A significant difference was seen between community group or club participation for different ethnic groupings ( $p < .01$ ), where Asian young people reported the highest participation (71.5%); and for different gender groups ( $p < .01$ ), where cisgender girls reported the highest participation (65%). There was a significant difference between community group or club participation by region ( $p = .01$ ), with Auckland showing the highest community group or club participation (65.5%); however, caution should be used when interpreting differences as some regions have very low numbers. There was also a significant difference between participation across area-level deprivation regions ( $p < .01$ ), for which the highest participation was for deprivation levels 5-6 (65.0%). There were no significant differences by rurality, household structure, material hardship or disability.



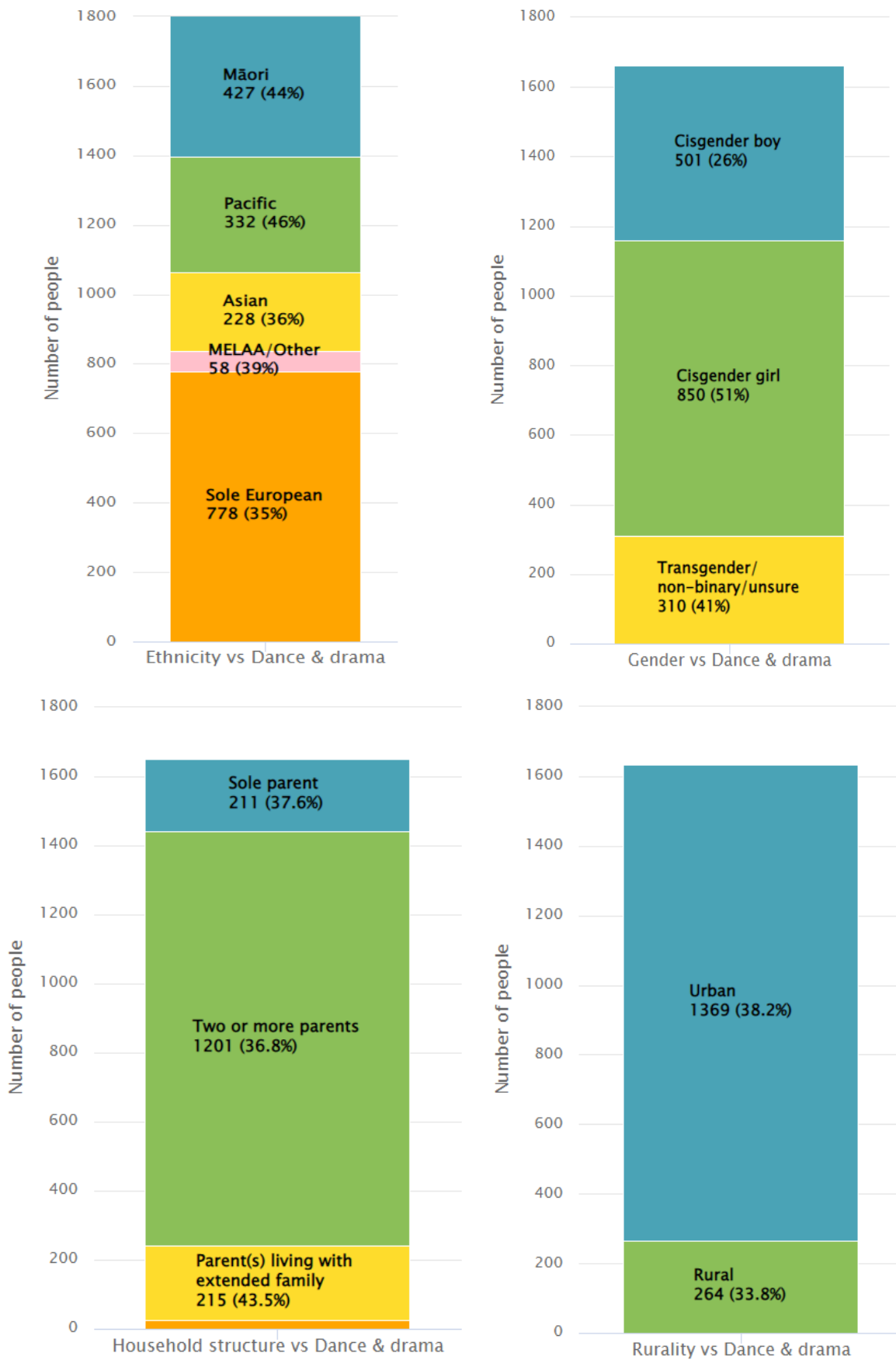


Figure 6. Dance and drama participation by four demographic variables – ethnicity, gender, household structure and rurality.

For dance and drama participation, there were significant differences in participation by ethnic grouping ( $p < .01$ ): rangatahi Māori (44.1%) and Pacific young people (44.3%) reported the highest participation. In terms of gender, cisgender girls were almost twice as likely than cisgender boys to report participation in dance and drama activities (50.5% vs 25.6%;  $p < .01$ ). Those living in households with extended family reported the highest participation in dance and drama activities (43.5%;  $p = .02$ ). In addition, rurality showed a significant difference ( $p < .05$ ), where urban young people reported higher participation (38.2%) and rural youth who reported lower participation (33.8%) in dance and drama activities. There were no significant differences by area-level deprivation, region, material hardship or disability. See Figure 6.



For sports participation, there were no significant differences in reported sports participation by ethnicity. However, cisgender boys were most likely (90.4%) and transgender and non-binary young people were least likely (78.7%), to participate regularly in sports ( $p < .01$ ). Those who experience a disability reported lower participation (82.2%) in sports than those without a disability (88.2%;  $p < .01$ ). In addition, there appeared to be a downward trend in sports participation from households with little or no material hardship (88.4%) to those with severe material hardship (81.3%;  $p = .02$ ). Finally, there was higher sports participation in rural (91.2%) compared to urban areas (86.9%;  $p < .01$ ).

For music participation, Asian young people in our cohort reported the highest participation (57.1%;  $p < .01$ ). There were significant differences in music participation by gender: transgender and non-binary young people reported the highest participation in music activities (52.9%), followed by cisgender girls (51.7%), and the lowest participation was for cisgender boys (43.8%;  $p < .01$ ). There were also significant differences between reports of music participation by household structure ( $p < .01$ ), with the highest participation for young people living with extended family (57.0%,  $n = 282$ ); and differences in terms of rurality ( $p = .05$ ), with young people living in urban areas reporting higher music participation (48.4%,  $n = 1,734$ ). There was no difference in music participation between young people with and without a disability ( $p = .70$ ). There was also no difference in music participation by material hardship ( $p = .47$ ).

For arts, craft and technology participation, there were differences by several demographic groupings, including ethnicity ( $p < .01$ ), gender ( $p < .01$ ), disability ( $p < .01$ ), household structure ( $p < .01$ ) and area-level deprivation ( $p < .01$ ). Notably, transgender and non-binary young people reported the highest participation in arts, craft and technology (77.4%) compared to other genders, and those living with extended family reported the highest participation (72.3%) compared to other household structures. In addition, those experiencing a disability reported higher participation (70.9%) than those without (61.8%).

### Kapa haka participation

Within the individual extracurricular activities we wished to explore those we could classify as ngā toi Māori, however, only kapa haka had an appropriately large enough sample size (due to participation frequency) to examine participation across demographic groups.

When comparing participation in kapa haka across different ethnic groupings, we found a significant effect



for some comparisons. Rangatahi Māori reported significantly higher participation (36.4%,  $n=356$ ) than sole European (8.4%,  $n=191$ ) in kapa haka ( $p<0.01$ ). In addition, Pacific young people (23.8%,  $n=173$ ,  $p<0.01$ ) and our “other” ethnic grouping of young people (16.7%,  $n=13$ ,  $p=0.01$ ) reported significantly higher participation in kapa haka than sole European young people (see Table 4 below).

Table 4. Kapa haka participation by ethnic grouping.

	n	% (of ethnic grouping)	$\chi^2$ (df)	p-value
Māori	356	36.4	381.1 (1)	<.01
Pacific	173	23.8	121.5 (1)	<.01
Asian	60	9.3	0.5 (1)	0.49
MELAA	<10	-	0.6 (1)	0.44
Other	13	16.7	6.5 (1)	0.01
Sole European*	191	8.4	REF*	REF*

\*Note that Sole European was our reference group.

### 3.7.1. Summary of enablers and barriers

Across the sociodemographic characteristics examined in the current research, patterns of participation in various free-time and extracurricular ACR activities emerged, summarised below. For a full list of demographics that were associated with ACR participation, see Tables 10-12 in Appendix B.

#### Free-time ACR activities

- There were some differences in creative free-time activity participation by ethnicity: Asian young people and in some cases Pacific and MELAA young people reported participating significantly more often in creative activities than other ethnic groupings.
- Across all four creative activities, both cisgender girls and transgender and non-binary young people reported significantly higher participation than cisgender boys.
- Young people’s functional disability did not appear to be a significant barrier to free-time activity participation, except for spending time outdoors, active play, and reading books, for which participation was significantly lower.
- In some creative free-time activities (book reading and music-making), living with extended family was a potential enabler of participation.
- The picture of creative free-time ACR participation and measures of material hardship and area-level deprivation was complex. However, young people living in areas of highest deprivation reported both the lowest arts, craft and quiet activity participation, and the lowest rates of book-reading.

#### Extracurricular ACR activities

- There were some differences in extracurricular ACR activity by ethnicity: in some cases Asian young people (for community groups, music, and arts, craft and technology) and in some cases rangatahi Māori and Pacific young people (for dance and drama) reported significantly higher participation than other ethnic groupings.

- Cisgender girls reported the highest participation in both community groups or clubs and dance and drama, while transgender and non-binary young people in our cohort reported the highest participation in both music and arts, craft and technology. Cisgender boys reported the highest participation in sports.
- Having a disability was a barrier to participation in extracurricular sports, with significantly lower participation than those without a disability, however, those with a disability reported significantly higher participation rates in arts, craft and technology activities. There were no differences in dance, drama, music and community group or club participation.
- Material hardship was only a factor in young people's reports of sports participation; those experiencing little or no material hardship reported significantly higher participation in sports.
- Living with extended family appears to be an enabler of extracurricular participation in this age group. For all activity groups, participation was either highest (dance and drama, music, arts, craft and technology) or second highest (community group or club, sports) compared to other household types.
- Area-level deprivation was a factor for some activities (community group or club, sports and arts, craft and technology activities), but trends in participation were not always in the same direction. For example, those living in areas of lowest deprivation reported the highest participation in sports, however, those living in the highest areas of deprivation reported the highest participation in arts, craft and technology. Although the participation trend for community groups or clubs was not linear across area-level deprivation groups, higher deprivation groups (i.e., NZDep 7 and above) were less likely to report participation in community group or clubs. For other activities (dance and drama and music), area-level deprivation was not a factor.
- Rurality, however, appears to somewhat hinder creative extracurricular participation, as dance and drama, music, and arts, craft and technology participation amongst 12-year-olds was significantly lower than for those living in urban homes.

Across all ACR activities, caution should be used when interpreting differences in region as some regions have very low numbers (<10 participants), however, participation frequency and percentages can be found in Table 12, Appendix B.

### 3.8. Missed activities

Within the extracurricular activity question, 12-year-olds were also asked if there were any activities that they wished to do but missed out on. Overall, 29.4% ( $n=1,324$ ) of participants reported that there was an activity they missed out on. The pattern of results for missed activities echoes the pattern seen for participation in extracurricular activities (see Figure 7); 33.8% of 12-year-olds said they missed out on sports (predominantly running and other not specified sports), and 16.0% on community groups (including academic groups such as Mathletics and chess, and radio, blog, and social media groups). Breaking from this pattern was dance and drama: while participation in dance and drama activities was lowest compared to other activity categories, 28.5% reported that they missed out on extracurricular dance activities (including Asian dance styles, Pasifika dance styles, drama club, and hip-hop dance). Arts, craft and technology and music were the least likely activity categories to be reported as missed activities (11.6% and 9.1% respectively).

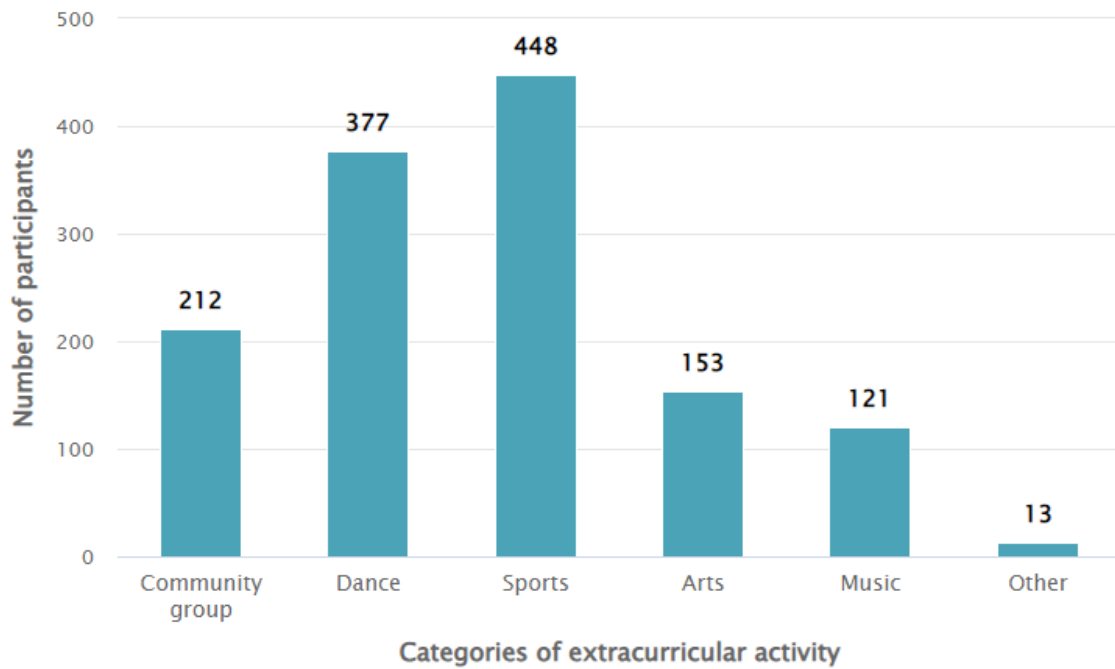


Figure 7. Categories of extracurricular activity that 12-year-olds reported missing out on ( $n=1,324$ ).

The top two activities that young people would like to do but didn't, were running/cross-country (9.6%) and Asian dance styles (6.9%). Together, 8.2% of young people reported missing out on some kind of ngā toi Māori activity (including kapa haka, manu kōrero, Pasifika speech competitions, waka ama, rowing, mau rākau, weaving and raranga ( $n=109$ )). See Figure 8 for the top 10 most commonly reported activities that young people missed out on. See also Table 9 in Appendix B for a complete list of missed activities.

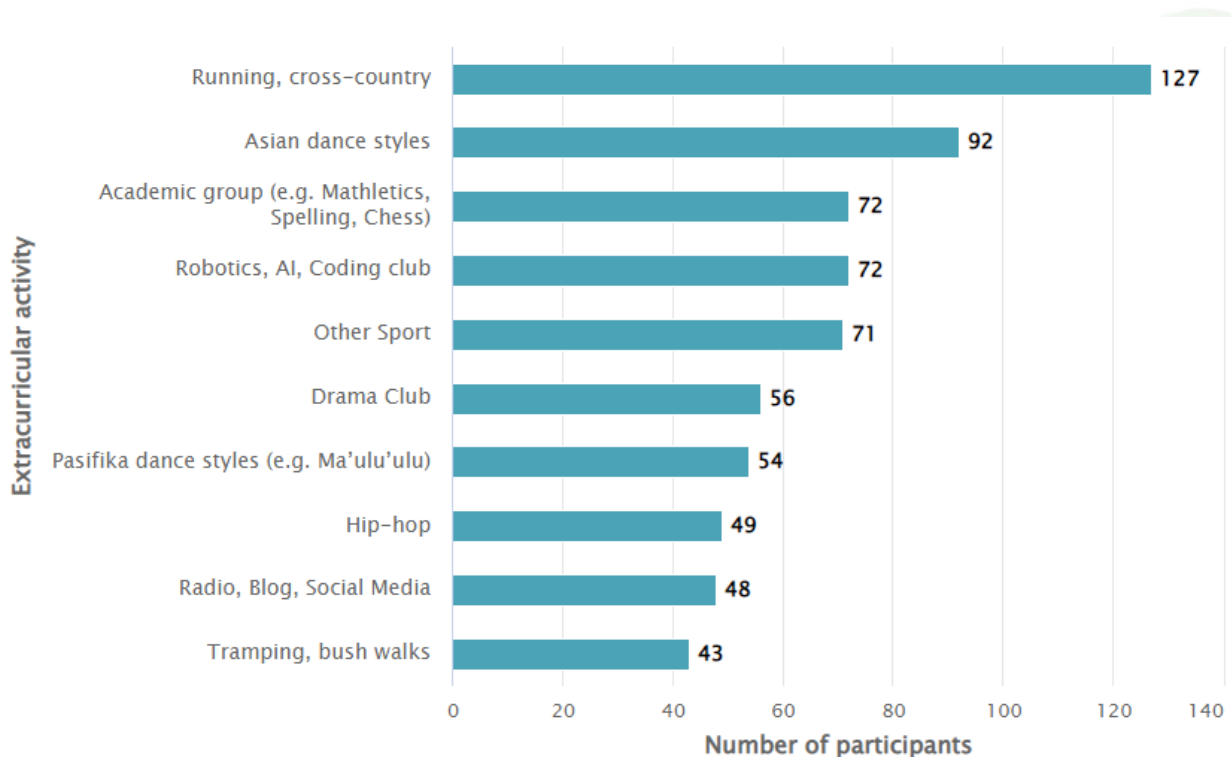


Figure 8. The top 10 missed individual extracurricular activities reported by 12-year-olds.

## Reasons for missing out on some activities

For missed activities, in the 12-year DCW young people were asked “Thinking about this activity, why don’t you do it?”. Participants were able to select multiple response options, including “I don’t have enough time”, “It costs too much”, and “Problems getting there and back home”, “I don’t know”, and “other – please tell us”. When examining these “other” options, we categorised their responses into a further 12 categories, including “Haven’t asked my parents”; “Recently discovered activity/Haven’t made up my mind yet”; and “Didn’t get selected/Didn’t get in”. Uncategorised responses ( $n=55$ ) stayed in the “other” category. For a full description of this question, see Table 5 in Appendix A.

Out of the 1,324 participants who said they had a missed activity, 1,323 participants had a reason why they couldn’t do their activity (1 missing). There were various reasons young people cited for missing out on these activities; these reasons were grouped into 22 categories. See Figure 9 for a graph showing the distribution of all of the reasons cited.

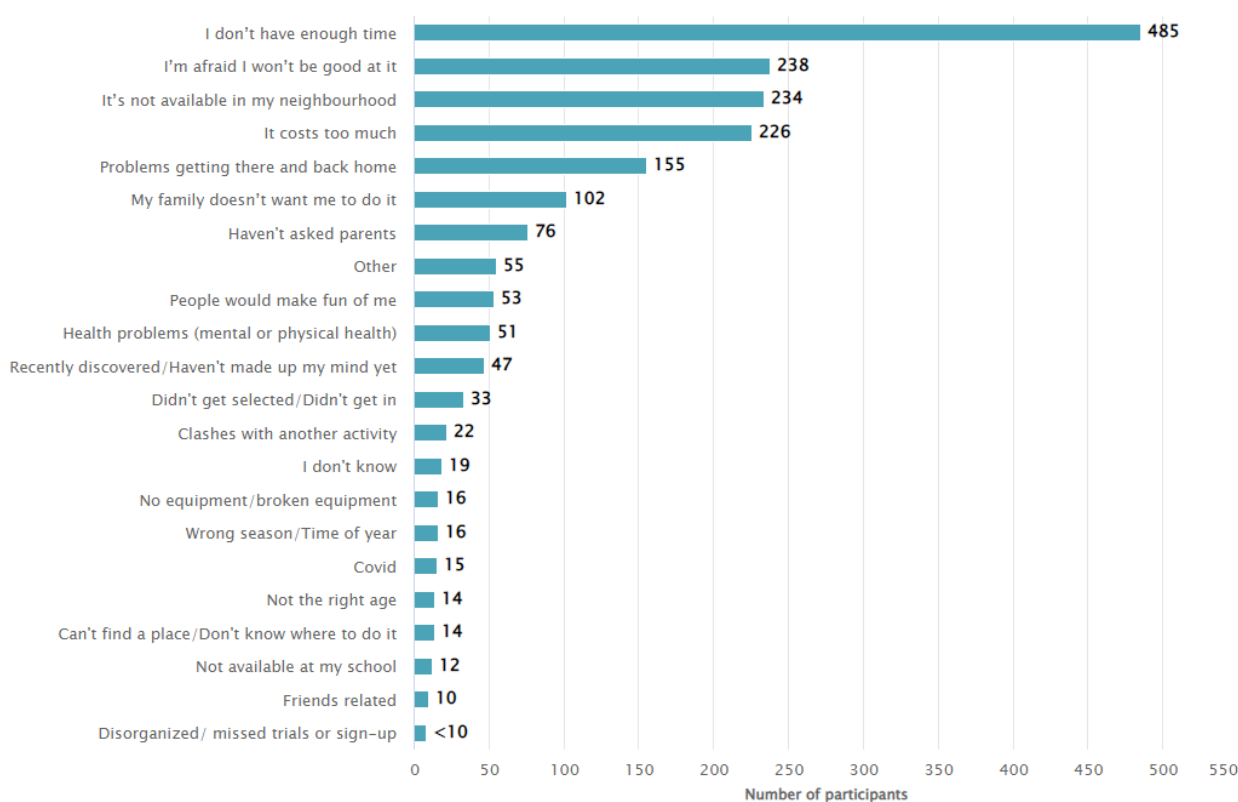


Figure 9. Reasons for missed extracurricular activities ( $n=1,323$ ).

The most common reason young people cited was not having enough time ( $n=485$  participants or 36.7% of those who had a reason). Several main reasons refer directly to problems of accessibility, including citing an activity not being available in their neighbourhood ( $n=234$ , 17.7%), the cost of the activity ( $n=226$ , 17.1%) and transportation problems ( $n=155$ , 11.7%). Other reasons cited refer to individual- or family-level reasoning including feeling “I’m afraid I won’t be good at it” ( $n=238$ , 18.0%), “my family doesn’t want me to do it” ( $n=102$ , 7.7%), and believing that “people would make fun of me” ( $n=53$ , 4.0%).

## 4. Discussion

### 4.1. Overall participation

With limited research about youth cultural participation in New Zealand, the first research question to answer was *how are 12-year-olds engaging in activities related to arts, culture, and recreation?* This was investigated through the number of 12-year-olds who reported frequent participation in extracurricular, and free-time ACR activities.

Regarding free-time activities, almost all the cohort reported listening to music, active play, spending time outdoors, and household chores at least once a week. Approximately three quarters of participants reported reading books at least once a week. The least likely free time activity to be reported was singing or playing a musical instrument, however, half of the participants still reported doing this at least once a week.

For extracurricular activities, 97% of 12-year-olds reported participating in some kind of extracurricular sport, arts, craft, technology, dance, drama, music, or community group activity. Participation was highest overall for sports activities, followed by arts, craft, and technology, then community group or club activities. Dance and drama was the lowest reported extracurricular activity category. As with free-time activities, approximately half of young people reported participating in music as an extracurricular activity.

Not only was there high engagement in a number of ACR activities, there was also a wide spread of group-based versus individual participation in extracurricular activities. In addition, on average, young people reported having participated frequently in around 6 activities over the past year, and many young people (83.3%) participated in more than 1 category of extracurricular activity, indicating high engagement both across and within activity types.

#### Popular activities and groups

The findings around popular extracurricular activities unveil insights into young people's preferences and engagement in our cohort. The top five selected extracurricular activities were painting or drawing, "other" community groups or clubs, team ball sports (netball, basketball, volleyball), swimming, and cycling.

Notably, the most prevalent extracurricular activity reported was painting or drawing, with 39% of respondents engaging regularly in this creative pursuit. This underscores a significant emphasis on artistic expression within our cohort of young people, reflecting a continuation of creative practices established earlier in childhood. The popularity of painting or drawing as an extracurricular activity may be attributed to its relatively accessible nature, allowing participation both individually and in groups. The New Zealanders and the Arts Youth survey by Creative New Zealand (2020) also found that painting and drawing was a popular activity for 10- to 12-year-olds, however, that participation in this activity was lower for older age groups (13 to 14 years). It remains to be seen if this is due to a reduction in interest, opportunity, access, or whether it is replaced by alternative ACR activities in older age groups.

The second most popular extracurricular activity reported falls under the broad category of "other" community groups or clubs. This finding highlights the diverse landscape of community involvement that 12-



year-olds engage in today, showcasing a wide tapestry of community connections (including marae, youth wellbeing groups, mentoring groups, community gardens, sustainability groups and many more).

Out of the popular activities, sports were also highly represented, as well as being the most highly reported 'missed' activity category. New Zealand is a sporting nation, and this trend in sports activities among young people reflects the cultural and social significance of sports in the country. Data from Sport New Zealand's Active NZ youth survey (Sport New Zealand, 2020) shows that 94% of youth aged 5- to 17-years had participated in sports and recreation in the past 7 days, and that a high proportion of young people also wish to engage in more physical activities.

### Ngā toi Māori

In this report, the participation of young people in kapa haka is documented in both music participation (13%) and dance and drama participation (10%). Overall, 15% of young people reported participating in kapa haka activities, and this appears to be driven mainly by participation from rangatahi Māori and Pacific young people in the cohort. Kapa haka serves as a unique expression of Māori connection to, engagement with, and expression of Māori cultural values, philosophy, and principles, placing value on Māori language and culture while affirming the Māori system of knowledge (Smith, 1997). For young people in New Zealand, engaging in kapa haka holds a crucial role in nurturing the essential concept of whanaungatanga, emphasising the importance of communal participation and interconnectedness. Recognised not only as an activity but as a vehicle for cultivating a more enriched and cohesive society in New Zealand, kapa haka makes an important contribution to the construction and fortification of individual, communal and national identity (Pihama et al., 2014).



However, while there were lower participation rates among other ngā toi Māori activities, kapa haka had relatively high engagement. Activities such as manu kōrero, waka ama, rowing, mau rākau, raranga and sculpture or carving exhibited significantly lower participation rates, ranking either as the lowest or second lowest reported activity in each of their categories. Together, 8.2% of young people reported missing out on some kind of ngā toi Māori activity, indicating that there are existing barriers to participation in these activities.

### Gaming, technology, and new forms of participation

This report finds that approximately 1 in 5 young people reported participating in a gaming club, reflecting the popularity of gaming amongst young people. Gaming is recognised as a multifaceted type of engagement, sometimes categorised as e-sports, other times as creative and educational activity, other times as virtual community of engagement (including platforms like Minecraft). Notably, in this report, the context of gaming club is not specified, therefore some respondents might be selecting this option while participating in traditional board games, role-playing games or card games. Clarifying these definitions in future research could help to gain a better understanding of the type of gaming activities young people in New Zealand are involved in and the motivation behind their choices.

Importantly, many activities undertaken by young people today possess a pronounced technology component and serve as channels for both creative expression and social interactions. Through gaming practices for example, young people develop social capital, both by interacting with peers, and via cultural capital which enables them to have conversations with peers about the media they are consuming (Fenaughty, 2010). Another example is the increasing trend of young people posting artificial intelligence-generated images in online social environments. This evolution prompts an opportunity to reframe the understanding of digital activities in shaping the social and creative endeavours of young people.

### 4.2. Barriers and enablers of participation

The second research question in this report examined the enablers of and barriers to participation; particularly, which child, household, or neighbourhood demographic characteristics were associated with higher or lower participation in ACR activities. When examining participation further, not all 12-year-olds were participating across activities to the same degree.

When interpreting these findings, it is important to consider the context and interplay between personal preferences, family and whānau, cultural beliefs, and systemic factors, all of which may influence participation level. For example, lower participation in some groups might reflect a cultural value or system that has not yet been explored, rather than a systemic barrier. It is also possible that some activities (e.g. rowing, sculpture, carving) emerge at later stages of development (e.g. they require a level of strength) and therefore the lower participation reflects developmentally appropriate engagement.

#### ACR participation and extended family

This report reveals that living with extended family was often associated with higher ACR participation. The presence of grandparents, aunts, uncles and other extended family and whānau may facilitate young people’s participation, by for example introducing them to and encouraging them to pursue an interest of theirs (the family member), by taking them to and from practices, or by spending time with them in their practice at home. Notably, it is also important to consider cultural contexts, as Māori, Pacific and Asian cultures are more often collectively oriented (Hofstede, 2001), and are more likely to live with extended family members.

Additionally, this report delves into reasons for missed activities, with notable reasons being “I don’t have enough time” and “it costs too much”. The presence of extended family members may emerge as a potential contributor to overcoming these barriers, providing young people with added time and financial resources to engage in ACR activities. This finding aligns with international studies that highlight associations between family structure and children’s participation in various activities (i.e., Howie et al., 2020).



## Gender

Gender was associated with variable participation across different ACR activities, including sport, creative free-time, and extracurricular activities such as music, arts, craft and technology, and community groups.

Cisgender boys were most likely to report being engaged in sports, followed by cisgender girls, and transgender and non-binary young people. Existing binary differences in sport participation are well documented, and present day, women and girls still experience barriers to access for some sports (Soares et al., 2013). In 2018, Sport NZ launched a strategy to address inequalities in women's and girls' experiences in sport and recreation (Sport New Zealand, 2018).

The lower proportion of transgender and non-binary young people who reported engaging in sport compared to the other gender groups is also reflected in the Youth 19 survey findings on transgender secondary school students. Barriers for transgender and non-binary young people engaging in sport in New Zealand include not feeling accepted in sports due to their gender, not feeling safe, not being able to access changing rooms or uniforms that affirm their gender, or not being able to participate in a sports team that matched their gender (Fenaughty et al., 2023).

Across all four creative free-time activities (listening to music, reading books, arts, craft and quiet activities, and singing/playing an instrument), both cisgender girls and transgender and non-binary young people reported higher participation than cisgender boys. In addition, transgender and non-binary young people in our cohort reported the highest participation in both the music and arts, craft and technology categories of extracurricular participation. These differences may reflect a number of reasons; these include seeking any extracurricular participation where possible (i.e., engaging in other activities if sport is not possible), intrinsic preferences for creative activities, or a more welcoming context in creative spaces for these young people. In



addition, it may also be the case that there are specific community groups or spaces designed for cisgender girls and transgender and non-binary young people that support their disproportionate engagement (e.g., Girl Guides, Gender and Sexuality Alliances, rainbow youth spaces etc.). The likelihood of more engagement in non-sporting groups, including drama groups, was also found in the Youth 19 analysis of transgender secondary school students (Fenaughty, et al., 2023). These groups and clubs are important opportunities for trans and non-binary youth to engage in social and community settings.

## Disability

Disability was associated with higher and lower participation in certain ACR activities. Disabled young people reported lower participation in book reading, compared to 12-year-olds who reported no disability. However, lower participation in book reading may be contributed to by impairment, and may not reflect engagement in reading in a broader sense (e.g. listening to audio books), which may reap similar benefits to overall wellbeing and language development. Having a disability was a barrier to participation to spending time outdoors, active play, and extracurricular sports, with significantly lower participation than those without a disability, however those with a disability reported higher participation rates in arts, craft and technology activities. There were no differences in dance, drama, music and community group or club participation.



In these analyses, as an indicator of childhood disability we have used the Washington Group Short Set on Functioning (WG-SS) – a self-reported measure designed to identify people with functional limitations (i.e., difficulty seeing or hearing). One limitation of these findings is that this measure has not been verified for use as self-report in this age group. Future research could include other measures of disability as they become available in our datasets, such as the mother-reported Child Functioning Module (CFM). This would help to validate the child self-report measures used in the current research, and also capture a broader definition of disability, including questions about learning, concentrating, controlled behaviour, friendships, anxiety and depression.

#### Missed activities and reasons for missing out

This report reveals that approximately 29% of young people expressed a desire to participate in an activity but reported missing out. While sports activities were the most mentioned category of missed activities (the top missed activity being running/cross-country), the dance and drama category also had a significant number of 12-year-olds expressing a desire to engage in these activities, including Asian dance styles – the second-most commonly reported ‘missed’ activity.

*Time.* The most frequently cited reason for missing out on an activity was ‘I don’t have enough time’. It is unclear whether this means those who *are* able to participate have more free time, are better at organising their time, or have fewer responsibilities, including caring for family members. Unravelling these complexities is noteworthy, in order to understand whether time constraints present genuine barriers to participation, reflect learned responses (akin to adults), or whether participants are already engaged in numerous activities. Additional factors influencing time availability, such as possible financial hardship, the area of residence (rural or urban), and cultural practices, warrant consideration to offer a more comprehensive understanding of the complexities surrounding time constraints.

*Access.* Several other reasons refer directly to problems of accessibility, including an activity not being available in their neighbourhood. This underscores the importance of local accessibility in shaping the ACR engagement of young people. There is an opportunity to understand the reasons for and impact of neighbourhood unavailability, especially considering the residential living area, whether urban or rural, where the lack of nearby activities can disproportionately affect young people’s participation. Moreover, it’s necessary to acknowledge the influence of cultural practices on activity availability in neighbourhoods. For instance, the availability of culturally relevant activities may differ between urban and rural areas, contributing to varied participation experiences based on different locations. The availability of programs and events that acknowledge and celebrate diverse cultural and identity backgrounds is instrumental in fostering inclusivity and ensuring that young individuals can actively participate in activities that resonate with their unique identities.

*Hardship.* Another common reason for ‘missed’ activities was ‘It costs too much’. Yet in our participation data, material hardship was only a factor in young people’s reports of sports participation, and the pattern of free-time activity participation and material hardship was not clear in any one direction. The potential impact of cost extends beyond a singular dimension and encompasses various aspects, including program fees, transportation expenses, and specialised gear or material requirements. This highlights the need for strategies that address the financial barriers to ensure that the cost of activities does not hinder the participation. Policies aimed at reducing costs, providing subsidies, or establishing scholarship programs can contribute to creating an inclusive environment, enriching participation opportunities available to young people.

*Beliefs.* This report also addresses an additional reason for ‘missed’ activity that is rooted in individual-or-family-level considerations, such as ‘my family doesn’t want me to do it’. This reasoning may encompass a range of considerations, including cultural values, parental priorities, or perceptions about the perceived benefits or drawbacks of specific activities. For instance, certain families might prioritise academic pursuits over extracurricular activities, while others may have cultural or societal beliefs that shape their attitudes towards certain forms of activities and community engagements.

Together, these reasons highlight that it is important to understand and further examine the nuances in what drives participation, and the outcomes associated with participating (or not participating). It is likely to be a complex picture, encompassing individual, community, and systemic factors.



### 4.3. Limitations and Future Research

Several limitations of the current research should be noted. These include those around capturing activity outside of school hours, cross-sectional design for the ACR participation measures, and attrition rate for the 12-year DCW.

In this report we are not specifically capturing young people’s participation during school hours. For some activities, such as ngā toi Māori participation for example, this presents a limitation as the results may under-represent many of these activities that often happen inside of school time (such as manu kōrero). However, for all extracurricular activities, participants were asked to reflect on activities over the past year. Because of this extended time-period, and the difficulty in recalling past activities, young people might not always have made the distinction between school-based activities and those outside of school with their reporting. There may also be some overlap because at this age, many activities are promoted through the school but then run by a club (either on school grounds or off). Further data collection waves could explore the distinction between school-based and other activities in more detail.

Second, although *Growing Up in New Zealand* is a longitudinal study, the results presented in this report are cross-sectional in nature (i.e., all measured at 12 years of age). This means causation cannot be inferred, and there may be other factors underlying both participation and the associated child, household and neighbourhood characteristics. For example, there may be behavioural, or mental health trajectories that are associated with participation for some groups. However, the benefit of using the longitudinal GUiNZ study is that future DCWs may test these assumptions and associations.

Thirdly, while the *Growing Up in New Zealand* cohort was broadly generalisable in terms of ethnicity and socioeconomic position at birth compared to New Zealand at the time (Morton et al., 2015), 29% of households recruited at baseline did not respond to the survey in the 12-year DCW (Napier et al., 2023). It is possible that young people who are not represented in the 12-year DCW are more or less likely to participate regularly in ACR activities, and may have a different pattern of results compared to those who responded to the survey (i.e., attrition bias).

Finally, our data was collected between September 2021 and July 2022, when New Zealand was still experiencing Covid-19, at a time when much of the extracurricular activity infrastructure was impacted, and people were still finding their way back to their own ‘normal’. Taking the Covid-19 context into consideration

may mean that we are seeing an overrepresentation of family- or household-based activities, and additionally, it may mean that young people started to do more activities using technology because of specific requirements for remote-learning at school.

There are several opportunities for future research outside of addressing the limitations mentioned above. One of the most important opportunities with GUINZ participation data will be to explore any outcomes or benefits of participation in both free-time and extracurricular ACR activities for young people, including social, emotional, familial, physical and mental wellbeing. Other opportunities for research include (but are not limited to):

- Examining cultural or religious contexts for what is considered cultural participation. In this research, activities were positioned as extracurricular or free-time activities (out of school), however, for many communities within New Zealand, some of these activities are deeply ingrained in other practices and observances, such as church services. Exploring participation within cultural heritage and tradition is essential for a holistic understanding of cultural activities for young people in New Zealand, and will also aid the development of inclusive strategies that consider systemic factors and cultural diversity for ACR participation.
- Delving more comprehensively into the relationship between disability and participation. This research could involve exploring how different forms of disability, including sensory impairment, physical disability, neurodiversity or difficulties with mental health, may impact participation in various activities. For instance, investigating the connection between neurodivergent young people and participation in ACRs presents an important avenue for exploration, as certain activities may serve as pathways for young people to actively participate in the community (where they may have not previously had opportunity) and support their wellbeing.
- Additionally, exploring other measures of physical activity available in the 12-year datasets. This expanded investigation would offer a broader understanding of the factors influencing young people's engagement in physical activities, encompassing various types of disabilities. To illustrate, having a disability can present diverse challenges such as difficulties associated with sensory impairment, sensitivities, physical barriers or social skills. While there are some adapted sports that cater specifically to individuals with disabilities, there may also be space and opportunity to create more inclusive environments that cater to the diverse make up of New Zealand's young people.
- Exploring specific barriers for transgender young people's sporting engagement in New Zealand, as well as investigating why arts and music groups are more favourable or accessible.
- Examining in greater detail the reasons for participating or not participating across activity categories, by linking missed activities with specific reasons. For example, exploring the most cited reasons for those who wanted to do sports but didn't.
- Investigating changes in participation over time, not only to examine when young people might change their participation frequency or levels (such as lower participation for older children/young adults as suggested by Active NZ (2020) and New Zealanders and the Arts Young Persons Survey (2020)), but also to allow insight into trajectories of participation including trends and ACR career pathways.

- Expanding definitions of activities in future data collection waves to capture nuance within certain activities (i.e., gaming club). It would also be useful to explore emerging activities, particularly those associated with new technologies, and capture a wider dimension of digital activities including reasons for engagement.

#### 4.4. Implications for Policy and Practice

Despite the limitations noted, the current results have important implications for policy and practice. While the results of this research cannot indicate the impacts of specific policy initiatives, they can contribute to an overall evidence base for how youth participate, that can help inform policy initiatives in the future as well as progress towards long term goals for the Ministry and the cultural sector.

##### High overall participation across groups

The importance of ACR activity to young people's wellbeing is underscored by the high engagement found in this study. Additionally, the fact that so many young people participated in ACR activities, despite disruptions caused by Covid-19, highlights the value of these activities and groups to many young people and their whānau. This finding emphasises the importance of continued investment in arts, culture, and recreation initiatives. Rather than interpreting high participation as a sign of saturation, it could be seen as an indicator of the intrinsic value these activities hold for the youth and their families. If so, investing in these activities and reducing barriers to participation, will be important to maximise access to ACR activities for all young people in New Zealand.

This recognition creates opportunities to leverage the data effectively for broader initiatives. One such application is using this participation data to demonstrate the impact of specific initiatives, like the Creatives in Schools programme<sup>8</sup>. While the data might not provide a direct link to the impacts of individual policy initiatives, it contributes significantly to the overall evidence base; this can then be leveraged to identify patterns and trends of youth participation, to inform and shape initiatives effectively. For example, when looking at school-based initiatives we might consider what activities are most valued, or have limited access outside of schools, to ensure opportunities for youth to access diverse cultural activities.

Second, not all groups within the GUiNZ cohort are participating to the same degree or frequency, which speaks to potential inequities of access. Gender, ethnicity, disability status, family composition, material wellbeing, area-level deprivation, and rurality, are all associated with different levels of participation across activities. While this research project is cross-sectional, and there can be many reasons for why youth choose to participate (or not participate) in different ACR activities, these results help point to opportunities to examine these gaps more closely and reinforce patterns seen in adults in the General Social Survey (Statistics NZ, 2021) and the Manatū Taonga New Zealanders' cultural participation research (Kantar Public, 2022).

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<sup>8</sup> <https://www.education.govt.nz/our-work/publications/budget-2019/creatives-in-schools/>



### Revitalising ngā toi Māori

The recognition of kapa haka as a prominent ACR activity further supports the evidence base on kapa haka which acknowledges its cultural significance for young people in New Zealand, both as a means to connect youth to cultural identity and foster a sense of belonging. Addressing lower participation rates in other ngā toi Māori activities, such as raranga and carving, may require developing targeted initiatives that support the preservation and revitalisation of other areas of mātauranga Māori in addition to kapa haka.

Integrating ngā toi Māori elements into educational curricula and community engagement programs is a recommended policy avenue to increase awareness and participation. Encouraging schools and communities to incorporate ngā toi Māori components may foster a broader understanding and appreciation of Māori arts and cultural practices, thereby enhancing participation in various ngā toi Māori activities. Policies could also focus on enhancing inclusivity and accessibility to ngā toi Māori activities, dismantling barriers such as skill gaps, resource availability, and access to cultural knowledge. This approach ensures that a diverse range of young people can engage in and benefit from ngā toi Māori traditions.

### Some people missing out

Our findings indicate that a percentage of young people do not regularly engage in reading books (24%), making arts/craft or doing quiet activities (22%), or listen to music (8%). The report highlights that a substantial percentage of young people (29%) expressed a desire to participate in various activities but reported missing out. The top three missed activities include running or cross-country, Asian dance styles and participating in academic groups (eg. Mathletics or spelling). The top three reasons behind missing out on activities are 'I don't have enough time', 'I'm afraid I won't be good at it' and 'it is not available in my neighbourhood'.

The observed reasons behind missing out on activities reveals some insights that could inform policy and practice interventions. The most frequently cited reason as time constraints warrants in-depth exploration into the factors influencing time availability. Further research could consider whether those who participate more have better time management skills or fewer family/household responsibilities. Additional potential factors influencing time availability, including material hardship, urban or rural residence, and cultural practices require consideration to offer a comprehensive understanding of time constraints. Implications for policy and practice could consider how school activities might fill this gap, an aspect not covered in this report. Policymakers could explore opportunities to integrate ACR activities, including those missed out on by young people, into the school environment. This could ensure inclusive participation for those young people who might have more family/household responsibilities or material hardships.



## ACR participation and extended family

The findings from this report underscore the influential role of extended family relationships in shaping the ACR participation of young people. Previous research has emphasised the significance of these relationships for young people (Evans et al., 2023b), and the current report adds a nuanced perspective to the connection between extended family presence and ACR engagement. The positive impact of extended family on young people's ACR participation could be acknowledged in policy considerations: this might be through developing policies to recognise and leverage the support provided by extended family members, or by

acknowledging the cultural context of living with extended family members.

Practically, community programmes and initiatives involving extended family members in supporting and encouraging young individuals' participation in ACR activities could be established. Policies could be tailored to align with cultural values, fostering inclusive ACR programs that reflect the collective orientation of extended family structures. In turn, collaboration with community leaders and cultural organisations would be essential to ensure that cultural diversity, and celebration of the role of extended families, is actively considered in the design and implementation of ACR initiatives. Finally, but more importantly, emphasising the importance of equitable access to ACR activities for all young people, and considering demographic characteristics associated with systemic inequities should be a core policy principle. This could be implemented through research and strategies addressing disparities in ACR participation related to demographic characteristics.

## 4.5. Conclusions

This report examined the lives and experiences of young people using 12-year data from the *Growing Up in New Zealand* study. Although there is anecdotal understanding about high engagement with arts, culture, and recreation for New Zealand youth, there is limited data to evidence this. This report provides crucial baseline information about ACR participation for 12-year-olds in New Zealand and begins to examine factors associated with higher or lower participation.

Examining both extracurricular and free-time activity participation, overall, there was a high level of engagement with arts, culture, and recreation activities, both across and within activity types. The fact that so many young people participated regularly in ACR activities, despite disruptions caused by Covid-19, highlights the intrinsic value of these activities to many young people and their whānau, and emphasises the importance of continued investment in arts, culture, and recreation initiatives. By recognising youth not only as beneficiaries but as contributors to the cultural system, policies can empower young individuals to actively participate, contributing to the resilience and sustainability of the cultural system.

However, not all groups within the GUINZ cohort were participating to the same degree or frequency, which speaks to potential inequities in access as well as potential enablers of engagement. Gender, ethnicity, disability status, family composition, material wellbeing, area-level deprivation, and rurality were all associated with different levels of participation across activities. For example, having a disability was a barrier to participation in spending time outdoors, active play, and extracurricular sports, however, those with a disability also reported higher participation in arts, craft and technology activities, and there were no

differences in dance, drama, music and community group or club participation. While these results help to set the scene describing the experiences of 12-year-olds, further research into ACR participation trends over time, as well as exploring potential benefits to ACR participation, will be crucial to examine in future studies.

The current results also have important implications for current policy and practice, including emphasising the role of extended family in facilitating ACR participation. While the results of this research cannot indicate the impacts of specific policy initiatives, they can contribute to an overall evidence base for how youth participate that can help inform policy initiatives in the future as well as progress towards long term goals for the Ministry and the cultural sector.



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## Appendix A. Variables Used in Analysis

Table 5. Participation measures examined in research questions 1 & 2

Section	Question(s) or Source	Response options	Derived variable for analysis
<b>Free-time activities- 12y Child questionnaire</b>			
Free time activities:  Preamble: What you do with your time outside of school and the kinds of activities you do.	In this section, you are going to tell us about what you do in your free time. This might be after school, or at lunchtime, or in the weekend. Overall, how often do you do these things? <ul style="list-style-type: none"> <li>• Read books</li> <li>• Listen to music</li> <li>• Do some art/craft or quiet activity (e.g. Lego, board games, drawing)</li> <li>• Active play (e.g. running around playing games, bike riding)</li> <li>• Spend time outdoors or with nature (e.g. play on the grass, go to the beach, gardening)</li> <li>• Homework</li> <li>• Household chores</li> </ul>	0. Never/almost never 1. Once a week 2. Several times a week 3. Once a day 4. Several times a day	0. No participation 1. Some participation
<b>Extracurricular activities – 12y Child questionnaire</b>			
Extracurricular activities	In this section, we would love for you to tell us about the activities that you do before or after school, or at lunchtime, or in the weekend. You might not do any organised activities, that's ok! Thinking about the past year, which of the following activities do you do or have you done regularly (about once a week)? <ul style="list-style-type: none"> <li>• Community group or club (7 options; other; none)</li> <li>• Dance &amp; drama (10 options; other; none)</li> <li>• Sport (12 options; other; none)</li> <li>• Arts, crafts &amp; technology (9 options; other; none)</li> <li>• Music (7 options; other; none)</li> </ul>	0. No 1. Yes  <i>Children click on each of 5 categories, represented with an image of the activity and its name, then select from the list of extracurricular activities. The circles are presented one after another. Multiple activities can be selected within each category and across categories.</i>	Number of activities 0-40 Number of categories 0-5
Grouped activities	Which of these activities did you do in a group?	0. No 1. Yes	N/A

Section	Question(s) or Source	Response options	Derived variable for analysis
Missed activities	Is there any activity that you WANT to do but you don't or can't?	0. No 1. Yes	N/A
Reasons for missed activities <sup>a</sup>	Thinking about this activity, why don't you do it? (Choose all that apply) <ul style="list-style-type: none"> <li>• I don't have enough time</li> <li>• It costs too much</li> <li>• Problems getting there and back home</li> <li>• It's not available in my neighbourhood</li> <li>• My family doesn't want me to do it</li> <li>• Health problems (mental or physical health)</li> <li>• People would make fun of me</li> <li>• I'm afraid I won't be good at it</li> <li>• Other</li> <li>• I don't know</li> </ul>	0. No 1. Yes	Upcoded reasons: <ul style="list-style-type: none"> <li>• Haven't asked parents</li> <li>• Recently discovered/Haven't made up my mind yet</li> <li>• Didn't get selected/Didn't get in</li> <li>• Clashes with another activity</li> <li>• No equipment/broken equipment</li> <li>• Wrong season/Time of year</li> <li>• Covid</li> <li>• Not the right age</li> <li>• Can't find a place/Don't know where to do it</li> <li>• Not available at my school</li> <li>• Friends related</li> <li>• Disorganised/missed trials or sign-up</li> </ul>

<sup>a</sup>Only asked to those who responded "yes" to "Is there any activity that you WANT to do but you don't or can't?".

Table 6. Participant child, household and neighbourhood characteristics examined in research question 2 (barriers and enablers of participation).

Variable	Question(s) or source	Response options	Derived variable(s) for analysis
<b>Child characteristics (from 12-year child dataset)</b>			
Ethnicity (total response) <sup>9</sup>	Which ethnic group or groups do you belong to? (Choose all that apply, there is no wrong answer, you can select as many as you need)	1. New Zealand European 2. Māori 3. Samoan 4. Cook Island Māori 5. Tongan 6. Niuean 7. Chinese 8. Indian 971. Other ethnicity 1 972. Other ethnicity 2 973. Other ethnicity 3 974. Other ethnicity 4	<ul style="list-style-type: none"> <li>• Total response Māori (yes/no)</li> <li>• Total response Pacific (yes/no)</li> <li>• Total response Asian (yes/no)</li> <li>• Total response MELAA (yes/no)</li> <li>• Total response Other (yes/no)</li> <li>• Sole European (yes/no)</li> </ul> <p><i>Note.</i> MELAA = Middle Eastern, Latin American, or African.</p>
Gender	Thinking about who you are, do you see yourself as a boy, a girl, or somewhere in between?	1. Boy 2. Mostly a boy 3. Somewhere in the middle 4. Mostly a girl 5. Girl 99. I don't know	1. Boy/mostly boy 2. Girl/mostly girl 3. Trans/Non-binary/Unsure
	Sex assigned at birth (from Antenatal Dataset)	1. Male 2. Female	
Disability	Washington Group Short Set on Functioning (WG-SS; Washington Group on Disability Statistics, 2022): 1. Do you have difficulty seeing, even if wearing glasses? 2. Do you have difficulty hearing, even if using a hearing aid? 3. Do you have difficulty walking or climbing steps? 4. Do you have difficulty remembering or concentrating? 5. Do you have difficulty (with self-care such as) washing all over or dressing? 6. Using your usual language, do you have difficulty communicating, for example understanding or being understood?	0. No – no difficulty 1. Yes – some difficulty 2. Yes – a lot of difficulty 3. Cannot do at all	0. No (did not answer “yes – a lot of difficulty” or “cannot do at all” to any question) 1. Yes (answered “yes – a lot of difficulty” or “cannot do at all” to at least one question)

<sup>9</sup> For a description of the methods used to describe ethnic identity in our cohort, see Neumann et al., 2023

Variable	Question(s) or source	Response options	Derived variable(s) for analysis
<b>Household characteristics (from 12-year mother dataset)</b>			
Material hardship	DEP-17 Index (Statistics New Zealand, 2019)	0. No 1. Yes	1. No/little material wellbeing (scores 0–5) 2. Material hardship (6+) 3. Severe material hardship (9+)
Household composition	Derived from household grid (the following are considered a parent: mother, mother's partner, father, step-mother, step-father)	See Twelve-year Mother Questionnaire available at Growingup.co.nz	1. Sole parent 2. Two or more parents 3. Living with extended family 4. Living with non-kin
<b>Neighbourhood characteristics (derived from 12-year mother-reported residential location)</b>			
Area deprivation	NZ Deprivation Index 2018 (NZDep18; Atkinson et al., 2019) based on home address	N/A	1. NZDep 1-2 (lowest deprivation) 2. NZDep 3-4 3. NZDep 5-6 4. NZDep 7-8 5. NZDep 9-10 (highest deprivation)
District Health Board regions (DHBs)	N/A	N/A	1. Auckland 2. Bay of Plenty 3. Canterbury 4. Capital and Coast 5. Counties Manukau 6. Hawke's Bay 7. Hutt Valley 8. Lakes 9. Mid Central 10. Nelson Marlborough 11. Northland 12. South Canterbury 13. Southern 14. Tairāwhiti 15. Taranaki 16. Waikato 17. Wairarapa 18. Waitemata 19. West Coast 20. Whanganui
Urban/rural	Urban rural classification (Statistics New Zealand, 2017) based on home address	N/A	1. Urban 2. Rural

## Appendix B. Detailed Results

Table 7. Free-time ACR activity participation (frequency and participation).

	0= Never/almost never	1= Once a week	2= Several times a week	3= Once a day	4= Several times a day	Missing/DK	Mean	'Some' participation <sup>10</sup>
Listening to music	340 (7.6%)	566 (12.6%)	1,135 (25.2%)	716 (15.9%)	1,695 (37.7%)	48 1.07%	2.64	4,112 (91.4%)
Read books	1,073 (23.8%)	1,028 (22.8%)	925 (20.6%)	803 (17.8%)	623 (13.8%)	48 1.07%	1.75	3,379 (75.1%)
Art/craft or quiet activity	992 (22.0%)	1,304 (29.0%)	1,047 (23.3%)	546 (12.1%)	563 (12.5%)	48 1.07%	1.64	3,460 (76.9%)
Sing or play an instrument	1,956 (43.5%)	858 (19.1%)	676 (15.0%)	455 (10.1%)	507 (11.3%)	48 1.07%	1.26	2,496 (55.5%)
Active play	357 (7.9%)	664 (14.8%)	1,213 (27.0%)	882 (19.6%)	1,336 (29.7%)	48 1.07%	2.49	4,095 (91.0%)
Spend time outdoors or with nature	396 (8.8%)	929 (20.6%)	1,310 (29.1%)	863 (19.2%)	953 (21.2%)	49 1.09%	2.24	4,055 (90.1%)
Household chores	432 (9.6%)	815 (18.1%)	1,192 (26.5%)	1,047 (23.3%)	966 (21.5%)	48 1.07%	2.29	4,020 (89.3%)
Homework	1,200 (26.7%)	858 (19.1%)	1,071 (23.8%)	960 (21.3%)	362 (8.0%)	49 1.09%	1.65	3,251 (72.2%)

Note. N=4,500.

<sup>10</sup> 'Some Participation' was determined using all those who selected 'Once a week' or more. See methods section for more detail on derivation.



Table 8. Individual extracurricular participation (frequency and participation).

	Individual activity	<i>n</i>	% of cohort	Group activity - Yes	% of activity in group		Individual activity	<i>n</i>	% of cohort	Group activity - Yes	% of activity in group
Community group or club	Environmental group	223	5%	145	65.0%	Dance and drama	Asian dance styles	28	1%	15	53.6%
	Scouts or guides	266	6%	217	81.6%		Manu Kōrero, Pasifika speech competitions	61	1%	23	37.7%
	Student council	320	7%	221	69.1%		Pasifika dance styles (e.g. Ma'ulu'ulu)	156	4%	102	65.4%
	Religious group	371	8%	290	78.2%		Theatre sports	164	4%	107	65.2%
	Academic group (e.g. Mathletics, Spelling, Chess)	485	11%	288	59.4%		Contemporary, Lyrical	179	4%	144	80.4%
	Second Language	525	12%	258	49.1%		Ballet, jazz, tap	255	6%	227	89.0%
	Radio, Blog, Social Media	546	12%	235	43.0%		Drama club	301	7%	236	78.4%
	Other community group or club	1,639	37%	392	23.9%		Hip-hop	339	8%	223	65.8%
	None of these	1,743	39%	-	-		School play	394	9%	285	72.3%
Sports	Waka ama, rowing, mau rākau	101	2%	67	66.3%	Music	Māori dance styles (e.g. kapa haka)	462	10%	296	64.1%
	Hockey, floorball	500	11%	424	84.8%		Other dance and drama	469	11%	173	36.9%
	Tennis, racket sports	546	12%	401	73.4%		None of these	2,779	62%	-	-
	Cricket	547	12%	426	77.9%		Jazz/Blues band	43	1%	22	51.2%
	None of these	551	12%	-			Traditional group	80	2%	50	62.5%
	Athletics	707	16%	409	57.9%		Orchestra	116	3%	92	79.3%
	Tramping, bush walks	889	20%	539	60.6%		Brass/concert band	128	3%	85	66.4%
	Running, cross-country	1,059	24%	560	52.9%		Rock band/other band	194	4%	138	71.1%
	Other sports	1,155	26%	722	62.5%		Guitar or ukulele group	412	9%	244	59.2%
	Football, soccer or futsal	1,145	26%	938	81.9%		Kapa Haka	566	13%	422	74.6%
Rugby or touch rugby	1,163	26%	981	84.4%	Other music	571	13%	225	39.40 %		

	Cycling	1,290	29%	641	49.70%		Instrument lessons	800	18%	375	46.9%
	Swimming	1,480	33%	1012	68.4%		Waiata/choir	389	9%	274	70.4%
	Netball, basketball, volleyball	1,612	36%	1333	82.7%		None of these	2,322	52%	-	-
<b>Arts, crafts and technology</b>	Weaving, Raranga	142	3%	51	35.9%						
	Sculpture, carving	275	6%	91	33.1%						
	Robotics, AI, Coding club	443	10%	232	52.4%						
	Knitting, craft	604	14%	193	32.0%						
	Digital arts	673	15%	218	32.4%						
	Other arts, crafts and technology	673	15%	221	32.8%						
	Gaming club	875	19%	509	58.8%						
	None of these	1,658	37%	-	-						
	Painting, Drawing	1,714	39%	644	37.6%						

Note n=4,449.

Table 9. 'Missed' activities as reported by our cohort 12-year-olds.

<b>'Missed' activity</b>	<b>Count</b>	<b>% of those who reported a missed activity</b>	<b>'Missed' activity</b>	<b>Count</b>	<b>% of those who reported a missed activity</b>
Running, cross-country	127	9.6%	Religious group	14	1.1%
Asian dance styles	92	6.9%	Painting, Drawing	13	1.0%
Academic group (e.g. Athletics, Spelling, Chess)	72	5.4%	Other	13	1.0%
Robotics, AI, Coding club	72	5.4%	Waka ama, rowing, mau rākau	12	0.9%
Other Sport	71	5.4%	Cycling	11	0.8%
Drama Club	56	4.2%	Gaming club	11	0.8%
Pasifika dance styles (e.g. Ma'ulu'ulu)	54	4.1%	Knitting, craft	10	0.8%
Hip-hop	49	3.7%	Archery	10	0.8%
Radio, Blog, Social Media	48	3.6%	Softball/Baseball	10	0.8%
Tramping, bush walks	43	3.2%	Waiata/choir	<10	-
Football, soccer or futsal	37	2.8%	Motorbiking/Motocross	<10	-
Manu Korero, Pasifika speech competitions	34	2.6%	Other Arts, crafts & technology	<10	-
Orchestra	34	2.6%	Contemporary, Lyrical	<10	-
Instrument lessons	30	2.3%	Environmental group	<10	-
Kapa Haka	29	2.2%	Swimming	<10	-
Netball, basketball, volleyball	28	2.1%	Sculpture, carving	<10	-
Student council	26	2.0%	Other Community group or club	<10	-
Scouts or guides	25	1.9%	Hockey, floorball	<10	-
Theatre sports	25	1.9%	Brass/concert band	<10	-
School play	23	1.7%	Rock band/ other band	<10	-
Martial Arts	22	1.7%	Other Dance & drama	<10	-
Horse Riding	20	1.5%	Athletics	<10	-
Maori dance styles (e.g. kapa haka)	18	1.4%	Traditional group	<10	-
Gymnastics/Acrobatics/Tumbling	17	1.3%	Guitar or ukulele group	<10	-
Weaving, Raranga	16	1.2%	Other Music	<10	-
Digital arts	16	1.2%	Cricket	<10	-
Second Language	15	1.1%	Jazz/Blues band	<10	-
Ballet, jazz, tap	15	1.1%	Rugby, touch rugby	<10	-
Tennis, racket sports	15	1.1%			

Table 10. Child, household and neighbourhood characteristics by creative free-time ACR activity participation.

Variable	Category	Listen to music	Statistical test			Read books	Statistical test			Art/craft/quiet activity	Statistical test			Sing/play instrument	Statistical test		
		<i>n</i> (%*)	$\chi^2$	<i>d</i> <i>f</i>	<i>p</i> -value	<i>n</i> (%*)	$\chi^2$	<i>d</i> <i>f</i>	<i>p</i> -value	<i>n</i> (%*)	$\chi^2$	<i>d</i> <i>f</i>	<i>p</i> -value	<i>n</i> (%*)	$\chi^2$	<i>d</i> <i>f</i>	<i>p</i> -value
Ethnicity	Māori <sup>a</sup>	901 (93.0%)	0.9	1	0.34	633 (65.3%)	75.7	1	<0.01	732 (75.5%)	1.6	1	0.20	553 (57.1%)	6.7	1	<0.01
	Pacific <sup>a</sup>	688 (95.6%)	10.3		<0.01	505(70.1%)	28.7		<0.01	538(74.7%)	2.5		0.11	458 (63.6%)	29.1		<0.01
	Asian <sup>a</sup>	592 (92.5%)	0.2		0.69	525(82.03%)	1.7		0.20	535 (83.6%)	10.8		<0.01	414 (64.7%)	31.8		<0.01
	MELAA <sup>a</sup>	68(94.4%)	0.6		0.45	57(79.2%)	0.0		0.90	61(84.7%)	2.1		0.15	39(54.2%)	0.1		0.73
	Other <sup>a</sup>	70 (89.7%)	0.5		0.47	64 (82.05%)	0.3		0.61	60 (76.92%)	0.0		0.89	47 (60.3%)	1.2		0.16
	Sole European	2,074 (92.0%)	REF		REF	1,797 (79.7%)	REF		REF	1,749 (77.6%)	REF		REF	1,175 (52.1%)	REF		REF
Gender	Boy/Mostly boy	1,838 (90.1%)	28.6	2	<0.01	1,495 (73.2%)	15.7	2	<0.01	1,434 (70.3%)	124.0	<0.01	1,007 (49.3%)	70.2	2	<0.01	
	Girl/Mostly girl	1,582 (94.4%)				1,318 (78.7%)				1,416 (84.5%)			1,033 (61.7%)				
	Trans/Non-binary/Unsure	678 (94.0%)				557 (77.3%)				601 (83.4%)			449 (62.3%)				
Disability	No	3,700 (92.3%)	0.4	1	0.52	3,100 (77.3%)	45.9	1	<0.01	3,129 (78.0%)	2.7	1	0.10	2,253 (56.2%)	0.4	1	0.55
	Yes	407 (93.1%)				274 (62.7%)				326 (74.6%)				239 (54.7%)			
Material hardship	No/little material hardship	3,231 (92.4%)	2.6	2	0.27	2,705 (77.4%)	45.7	2	<0.01	2,728 (78.1%)	6.6	2	0.04	1,966 (56.3%)	0.4	2	0.83
	Material hardship	166 (90.2%)				121 (65.8%)				129 (70.1%)				102 (55.4%)			
	Severe material hardship	110 (89.4%)				67 (54.5%)				93 (75.6%)				66 (53.7%)			
Household structure	Sole parent	526 (93.8%)	3.5	3	0.32	358 (63.8%)	58.0	3	<0.01	402 (71.7%)	14.4	3	<0.01	307 (54.7%)	19.7	3	<0.01
	Two or more parents	3,005 (91.9%)				2,544 (77.8%)				2,568 (78.5%)				1,805 (55.2%)			
	Living with extended family	460 (92.9%)				391 (79.0%)				392 (79.2%)				318 (64.2%)			
	Living with non-kin	76 (95.0%)				53 (66.3%)				65 (81.3%)				35 (43.8%)			
Area deprivation	NZDep 1-2 (lowest deprivation)	78 (92.1%)	1.43	5	0.92	863 (81.3%)	48.89	5	<0.01	831 (78.2%)	7.39	5	0.19	592 (55.7%)	3.09	5	0.69
	NZDep 3-4	978 (92.2%)				759 (77.6%)				775 (79.2%)				546 (55.8%)			

	NZDep 5-6	902 (92.5%)				655 (77.0%)				655 (77.0%)				485 (57.0%)			
	NZDep 7-8	787 (92.9%)				525 (73.4%)				564 (78.9%)				385 (53.8%)			
	NZDep 9-10 (highest deprivation)	664 (92.0%)				519 (67.9%)				578 (75.7%)				438 (57.3%)			
DHBs/ Region	Auckland	957 (93.5%)	21.4	1 9	0.37	840 (82.1%)	60.4	1 9	<0.01	821 (80.3%)	35.9	1 9	0.02	633 (61.9%)	39.2	1 9	<0.01
	Bay of Plenty	126 (92.6%)				102 (75.0%)				108 (79.4%)				77 (56.6%)			
	Canterbury	59 (85.5%)				56 (81.2%)				51 (73.9%)				36 (52.2%)			
	Capital and Coast	36 (94.7%)				35 (92.1%)				30 (78.9%)				22 (57.9%)			
	Counties Manukau	1,125 (92.2%)				892 (73.1%)				942 (77.2%)				653 (53.5%)			
	Hawke's Bay	39 (95.1%)				29 (70.7%)				30 (73.2%)				24 (58.5%)			
	Hutt Valley	11 (84.6%)				12 (92.3%)				10 (76.9%)				<10			
	Lakes	57 (96.6%)				41 (69.5%)				48 (81.4%)				30 (50.8%)			
	MidCentral	29 (90.6%)				26 (81.3%)				24 (75.0%)				13 (40.6%)			
	Nelson Marlborough	25 (86.2%)				22 (75.9%)				20 (69.0%)				16 (55.2%)			
	Northland	76 (85.4%)				67 (75.3%)				73 (82.0%)				45 (50.6%)			
	South Canterbury	<10				<10				<10				<10			
	Southern	40 (93.0%)				32 (74.4%)				29 (67.4%)				23 (53.5%)			
	Tairāwhiti	<10				<10				<10				<10			
	Taranaki	28 (90.3%)				20 (64.5%)				24 (77.4%)				14 (45.2%)			
	Waikato	1,118 (91.9%)				889 (73.0%)				936 (76.9%)				661 (54.3%)			
	Wairarapa	<10				<10				<10				<10			
Waitemata	270 (93.1%)	233 (80.3%)	235 (81.0%)	169 (58.3%)													
West Coast	<10	<10	<10	<10													
Whanganui	14 (93.3%)	<10	10 (66.7%)	10 (66.7%)													
Urban/rural	Urban	3,317 (92.6%)	1.4	1	0.23	2,715 (75.8%)	0.6	1	0.43	2,798 (78.1%)	0.3	1	0.60	2,047 (57.1%)	11.1	1	<0.01
	Rural	713 (91.3%)				602 (77.1%)				603 (77.2%)				395 (50.6%)			

<sup>a</sup>Compared to Sole European. *Note.* MELAA = Middle Eastern, Latin American, or African.

Table 11. Child, household and neighbourhood characteristics by other non-creative free-time ACR activities.

Variable	Category	Active play	Statistical test			Spend time outdoors	Statistical test			Household chores	Statistical test			Homework	Statistical test		
		<i>n</i> (%)	$\chi^2$	<i>df</i>	<i>p</i> -value	<i>n</i> (%)	$\chi^2$	<i>df</i>	<i>p</i> -value	<i>n</i> (%)	$\chi^2$	<i>df</i>	<i>p</i> -value	<i>n</i> (%)	$\chi^2$	<i>df</i>	<i>p</i> -value
Ethnicity	Māori <sup>b</sup>	879 (90.7%)	8.2	1	<0.01	886 (91.4%)	1.2	1	0.28	880 (90.8%)	0.2	1	0.64	595 (61.4%)	42.1	1	<0.01
	Pacific <sup>b</sup>	660 (91.7%)	3.1	1	0.08	651(90.4%)	3.4	1	0.07	677 (94.03%)	9.5	1	<0.01	536 (74.4%)	0.7	1	0.41
	Asian <sup>b</sup>	575 (89.84%)	10.3	1	<0.01	561(87.7%)	15.2	1	<0.01	558 (87.2%)	5.1	1	0.02	558(87.2%)	56.0	1	<0.01
	MELAA <sup>b</sup>	68 (94.4%)	0.1	1	0.76	70(97.2%)	2.3	1	0.13	70 (97.2%)	3.9	1	0.05	57 (79.2%)	1.4	1	0.24
	Other <sup>b</sup>	73 (93.6%)	<0.01	1	0.99	73 (93.6%)	0.1	1	0.73	68 (87.2%)	0.8	1	0.37	62 (79.5%)	1.7	1	0.20
	Sole European	2,109 (93.6%)	REF	-	REF	2,085 (92.5%)	REF	-	REF	2,035 (90.3%)	REF	-	REF	1,642 (72.9%)	REF	-	REF
Gender	Boy/Mostly boy	1,906 (93.4%)	23.8	2	<0.01	1,852 (90.8%)	9.4	2	<0.01	1,817 (89.0%)	17.7	2	<0.01	1,465 (71.8%)	3.3	2	0.20
	Girl/Mostly girl	1,543 (92.1%)				1,550 (92.5%)				1,553 (92.7%)				1,245 (74.3%)			
	Trans/Non-binary/Unsure	632 (87.7%)				640 (88.8%)				638 (88.5%)				533 (73.9%)			
Disability	No	3,709 (92.5%)	15.0	1	<0.01	3,672 (91.6%)	10.4	1	<0.01	3,642 (90.8%)	13.4	1	<0.01	2,941 (73.3%)	1.9	1	0.17
	Yes	381 (87.2%)				380 (87.0%)				373 (85.4%)				307 (70.3%)			
Material hardship	No/little material hardship	3,255 (93.1%)	15.5	2	<0.01	3,208 (91.8%)	11.2	2	<0.01	3,158 (90.4%)	2.3	2	0.32	2,566 (73.4%)	12.0	2	<0.01
	Material hardship	158 (85.9%)				156 (84.8%)				160 (87.0%)				127 (69.0%)			
	Severe material hardship	110 (89.4%)				111 (90.2%)				111 (90.2%)				74 (60.2%)			
Household structure	Sole parent	497 (88.6%)	28.4	3	<0.01	502 (89.5%)	24.3	3	<0.01	485 (86.5%)	12.6	3	<0.01	374 (66.7%)	15.6	3	<0.01
	Two or more parents	3,051 (93.3%)				3,018 (92.3%)				2,980 (91.1%)				2,415 (73.9%)			
	Living with extended family	435 (87.9%)				430 (86.9%)				443 (89.5%)				377 (76.2%)			
	Living with non-kin	72 (90.0%)				67 (83.8%)				73 (91.3%)				56 (70.0%)			
Area deprivation	NZDep 1-2 (lowest deprivation)	1,012 (95.3%)	34.38	5	<0.01	994 (93.7%)	34.19	5	<0.01	970 (91.3%)	6.81	5	0.24	849 (80.0%)	48.10	5	<0.01

	NZDep 3-4	909 (92.9%)				900 (92.0%)				865 (88.4%)				727 (74.3%)			
	NZDep 5-6	779 (91.5%)				778 (91.4%)				771 (90.6%)				608 (71.4%)			
	NZDep 7-8	647 (90.5%)				653 (91.3%)				643 (89.9%)				482 (67.4%)			
	NZDep 9-10 (highest deprivation)	674 (88.2%)				660 (86.4%)				694 (90.8%)				523 (68.5%)			
DHBS/ Region	Auckland	961 (93.9%)	44.2	1 9	<0. 01	944 (92.3%)	23.6	1 9	0.26	923 (90.2%)	27.5	1 9	0.12	915 (89.4%)	328. 8	1 9	<0.01
	Bay of Plenty	128 (94.1%)				123 (90.4%)				123 (90.4%)				68 (50.0%)			
	Canterbury	66 (95.7%)				63 (91.3%)				61 (88.4%)				44 (63.8%)			
	Capital and Coast	36 (94.7%)				34 (89.5%)				35 (92.1%)				20 (52.6%)			
	Counties Manukau	1,091 (89.4%)				1,089 (89.3%)				1,090 (89.3%)				928 (76.1%)			
	Hawke's Bay	36 (87.8%)				39 (95.1%)				36 (87.8%)				24 (58.5%)			
	Hutt Valley	13 (100%)				13 (100%)				13 (100%)				<10			
	Lakes	54 (90.6%)				52 (88.1%)				53 (89.8%)				32 (54.2%)			
	MidCentral	29 (90.6%)				29 (90.6%)				30 (93.8%)				21 (65.6%)			
	Nelson Marlborough	27 (93.1%)				27 (93.1%)				25 (86.2%)				11 (37.9%)			
	Northland	82 (92.1%)				84 (94.4%)				81 (91.0%)				55 (61.8%)			
	South Canterbury	<10				<10				<10				<10			
	Southern	42 (97.7%)				43 (100%)				43 (100%)				30 (69.8%)			
	Tairāwhiti	<10				<10				<10				<10			
	Taranaki	25 (80.6%)				28 (90.3%)				23 (74.2%)				14 (45.2%)			
	Waikato	1,124 (92.4%)				1,120 (92.0%)				1,111 (91.3%)				772 (63.4%)			
	Wairarapa	<10				<10				<10				<10			
Waitemata	273 (94.1%)	262 (90.3%)	263 (90.7%)	227 (78.3%)													
West Coast	<10	<10	<10	<10													
Whanganui	13 (86.7%)	14 (93.3%)	11 (73.3%)	<10													
Urban/rural	Urban	3,279 (91.5%)	7.2	1	0.01	3,239 (90.4%)	18.2	1	<0.0 1	3,218 (89.8%)	4.7	1	0.03	2,664 (74.3%)	18.9	1	<0.01
	Rural	737 (94.4%)				743 (95.1%)				721 (92.3%)				521 (66.7%)			

<sup>b</sup>Compared to sole European. *Note.* MELAA = Middle Eastern, Latin American, or African.

Table 12. Child, household and neighbourhood characteristics by extracurricular ACR activities.

Variable	Category	Community group or club	Stat. test		Dance or drama	Stat. test		Sports	Stat. test		Music	Stat. test		Arts, craft and technology	Stat. test	
		<i>n</i> (%)	$\chi^2$ (df)	<i>p</i> -value	<i>n</i> (%)	$\chi^2$ (df)	<i>p</i> -value	<i>n</i> (%)	$\chi^2$ (df)	<i>p</i> -value	<i>n</i> (%)	$\chi^2$ (df)	<i>p</i> -value	<i>n</i> (%)	$\chi^2$ (df)	<i>p</i> -value
Ethnicity	Māori <sup>c</sup>	534 (55.1%)	9.1 (1)	<0.01	427 (44.1%)	26.5 (1)	<0.01	834 (86.2%)	5.5 (1)	0.02	520 (53.7%)	2.4 (1)	0.12	600 (61.9%)	34.9 (1)	<0.01
	Pacific <sup>c</sup>	434 (60.36%)	0.0 (1)	0.84	332 (46.2%)	31.5 (1)	<0.01	628 (87.5%)	1.4 (1)	0.24	384 (53.4%)	26.7 (1)	<0.01	476 (66.2%)	11.8 (1)	<0.01
	Asian <sup>c</sup>	447 (69.8%)	17.5 (1)	<0.01	228 (35.6%)	0.3 (1)	0.61	558 (87.2%)	1.8 (1)	0.18	370 (57.8%)	47.6 (1)	<0.01	465 (47.7%)	39.4 (1)	<0.01
	MELAA <sup>c</sup>	53 (73.6%)	4.9 (1)	0.03	26 (36.1%)	0.1 (1)	0.78	63 (87.5%)	0.2 (1)	0.67	31 (43.1%)	0.0 (1)	0.90	49 (68.1%)	2.4 (1)	0.12
	Other <sup>c</sup>	51 (65.4%)	0.7 (1)	0.40	32 (41.0%)	1.4 (1)	0.24	67 (85.9%)	0.8 (1)	0.40	39 (50%)	1.8 (1)	0.18	53 (68%)	2.5 (1)	0.11
	Sole European	1,369 (60.8%)	REF	REF	778 (34.5%)	REF	REF	2,006 (89.1%)	REF	REF	955 (42.4%)	REF	REF	1,329 (59.0%)	REF	REF
Gender	Boy/Mostly boy	1,278 (57.2%)	26.2 (2)	<0.01	572 (25.6%)	281.7 (2)	<0.01	2,021 (90.4%)	33.0 (2)	<0.01	979 (43.8%)	35.5 (2)	<0.01	1,293 (57.8%)	75.4 (2)	<0.01
	Girl/Mostly girl	1,295 (65.0%)			1,005 (50.5%)			1,702 (85.4%)			1,030 (51.7%)			1,327 (66.6%)		
	Trans/Non-binary/Unsure	133 (60.2%)			91 (41.2%)			174 (78.7%)			117 (52.9%)			171 (77.4%)		
Disability	No	2,428 (60.5%)	1.1 (1)	0.29	1,494 (37.3%)	0.9 (1)	0.34	3,536 (88.2%)	13.3 (1)	<0.01	1,920 (47.9%)	0.2 (1)	0.70	2,479 (61.8%)	14.0 (1)	<0.01
	Yes	276 (63.2%)			173 (39.6%)			359 (82.2%)			205 (46.9%)			310 (70.9%)		
Material hardship	No/little material hardship	2,130 (61.0%)	3.2 (2)	0.20	1,301 (37.3%)	0.7 (2)	0.72	3,090 (88.4%)	8.3 (2)	0.02	1,652 (47.3%)	1.5 (2)	0.47	2,161 (61.8%)	0.8	0.66
	Material hardship	100 (54.3%)			67 (36.4%)			155 (84.2%)			89 (48.4%)			115 (62.5%)		
	Severe material hardship	75 (61.0%)			50 (40.7%)			100 (81.3%)			65 (52.8%)			81 (65.9%)		
Household structure	Sole parent	319 (56.9%)	5.3 (3)	0.15	211 (37.6%)	9.7 (3)	0.02	463 (82.5%)	23.7 (3)	<0.01	264 (47.1%)	20.3 (3)	<0.01	337 (60.1%)	25.0 (3)	<0.01
	Two or more parents	2,013 (61.6%)			1,201 (36.8%)			2,908 (89.0%)			1,526 (46.7%)			2,011 (61.5%)		



	Living with extended family	304 (61.4%)			215 (43.5%)			425 (85.9%)			282 (57.0%)			358 (72.3%)		
	Living with non-kin	45 (56.3%)			25 (31.3%)			65 (81.3%)			32 (40.0%)			56 (70.0%)		
Area-level deprivation	NZDep 1-2 (lowest deprivation)	658 (62.0%)	20.9 (5)	<0.01	385 (36.3%)	9.8 (5)	0.08	960 (90.5%)	22.2 (5)	<0.01	522 (49.2%)	8.5 (5)	0.13	647 (61.0%)	17.3 (4)	<0.01
	NZDep 3-4	594 (60.7%)			350 (35.8%)			864 (88.3%)			443 (45.3%)			588 (60.1%)		
	NZDep 5-6	553 (65.0%)			321 (37.7%)			750 (88.1%)			409 (48.1%)			538 (63.2%)		
	NZDep 7-8	407 (56.9%)			258 (36.1%)			616 (86.2%)			324 (45.3%)			443 (62.0%)		
	NZDep 9-10 (highest deprivation)	435 (57.0%)			318 (41.7%)			636 (83.5%)			384 (50.4%)			526 (68.9%)		
	DHBs/ Region	Auckland	670 (65.5%)	38.8 (19)	0.01	410 (40.2%)	30.1 (19)	0.07	924 (90.3%)	32.3 (19)	0.04	542 (53.0%)	30.7 (19)	0.06	659 (64.4%)	21.1 (19)
	Bay of Plenty	76 (55.9%)			50 (36.8%)			114 (83.8%)			62 (45.6%)			79 (58.1%)		
	Canterbury	39 (56.5%)			18 (26.1%)			59 (85.5%)			32 (46.4%)			39 (56.5%)		
	Capital and Coast	23 (60.5%)			17 (44.7%)			36 (94.7%)			16 (42.1%)			20 (52.6%)		
	Counties Manukau	765 (62.7%)			441 (36.1%)			1,039 (85.2%)			551 (45.2%)			776 (63.6%)		
	Hawke's Bay	24 (58.5%)			13 (31.7%)			37 (90.2%)			22 (53.7%)			23 (56.1%)		
	Hutt Valley	<10			<10			12 (92.3%)			<10			11 (84.6%)		
	Lakes	29 (49.2%)			25 (42.4%)			51 (86.4%)			35 (59.3%)			38 (64.4%)		
	MidCentral	17 (53.1%)			14 (43.8%)			24 (75.0%)			17 (53.1%)			17 (53.1%)		
	Nelson Marlborough	16 (55.2%)			<10			24 (82.8%)			14 (48.3%)			15 (51.7%)		
	Northland	54 (60.7%)			27 (30.3%)			79 (89.8%)			41 (46.1%)			64 (71.9%)		
	South Canterbury	<10			<10			<10			<10			<10		
	Southern	20 (46.5%)			11 (25.6%)			41 (95.3%)			22 (51.2%)			24 (55.8%)		
	Tairāwhiti	<10			<10			<10			<10			<10		

	Taranaki	15 (48.4%)			10 (32.3%)			29 (93.5%)			14 (45.2%)			20 (64.5%)		
	Waikato	694 (57.0%)			458 (37.6%)			1,069 (87.8%)			541 (44.5%)			739 (60.7%)		
	Wairarapa	<10			<10			<10			<10			<10		
	Waitemata	171 (59.0%)			109 (37.6%)			257 (88.6%)			148 (51.0%)			192 (66.2%)		
	West Coast	<10			<10			<10			<10			<10		
	Whanganui	10 (66.7%)			<10			13 (86.7%)			<10			11 (73.3%)		
Urban/rural	Urban	2,182 (60.9%)	0.8 (1)	0.37	1,369 (38.2%)	5.3 (1)	0.02	3,113 (86.9%)	10.9 (1)	<0.01	1,734 (48.4%)	3.8 (1)	0.05	2,272 (63.4%)	3.6 (1)	0.06
	Rural	462 (59.2%)			264 (33.8%)			711 (91.2%)			348 (44.6%)			467 (59.8%)		

<sup>c</sup>Compared to sole European.

*Note.* MELAA = Middle Eastern, Latin American, or African.