Arts & Health

An International Journal for Research, Policy and Practice

ISSN: 1753-3015 (Print) 1753-3023 (Online) Journal homepage: www.tandfonline.com/journals/rahe20

Understanding drivers of early life course arts, culture and recreation participation in Aotearoa New Zealand

R. J. Evans , J. Tait , M. T. Zar & M. Victor

To cite this article: R. J. Evans , J. Tait , M. T. Zar & M. Victor (16 Feb 2026): Understanding drivers of early life course arts, culture and recreation participation in Aotearoa New Zealand, Arts & Health, DOI: 10.1080/17533015.2026.2631577

To link to this article: https://doi.org/10.1080/17533015.2026.2631577

ARTS & HEALTH
https://doi.org/10.1080/17533015.2026.2631577

Taylor & Francis
Taylor & Francis Group

Understanding drivers of early life course arts, culture and recreation participation in Aotearoa New Zealand

R. J. Evans[a], J. Tait[a], M. T. Zar[b] and M. Victor[b]

[a]Faculty of Design and Creative Technologies, Auckland University of Technology, Auckland, NZ, USA; [b]ECMS, Faculty of Design and CreativeTechnologies, Auckland University of Technology, Auckland, NZ, USA

ABSTRACT

Background: Participation in arts, culture and recreation activities (ACRs) supports youth wellbeing, however little is known about the drivers of participation across the life course. Longitudinal approaches provide nuanced insights into patterns of access and engagement, identifying where additional support is needed to sustain engagement in ACRs over time.

Methods: This study examines ACR participation from ages 8 to 12 in Aotearoa New Zealand, across Sports, Creative Arts and Community-based activities. Data came from the 8-year wave (-2017–2019) and 12-year wave (2021–2022) of the Growing Up in New Zealand longitudinal cohort study ($N = 3{,}738$). We assessed participation pathways (sustained, increasing, decreasing or disengaged), and analysed associations with identity (gender, ethnicity, disability) and sociodemographic factors (deprivation, household structure, rurality), using chi-squared tests of independence and standardised residuals analyses.

Results: Participation in all three activity types increased from ages 8 to 12. Identity and sociodemographic characteristics were significantly associated, but not rurality. Across participation pathways, engagement was not evenly distributed across the population, with structural, geographic, and cultural influences contributing to complex patterns of access and continuity. For example, children in extended family households showed higher increasing Creative Arts participation and higher sustained Community activity participation, highlighting the positive impacts of support from family.

Conclusions: Findings highlight both persistent inequities and promising enabling factors in access to ACRs amongst youth. Targeted, equity-focused interventions are needed to ensure all young people in Aotearoa can sustain meaningful participation in ACRs across the life course.

ARTICLE HISTORY
Received 28 September 2025
Accepted 9 February 2026

KEYWORDS
Participation; extracurricular activities; lifespan; demographics; children

Background

Over the past two decades, research has affirmed the value of artistic, creative, social and active endeavours across the life course. Participation in arts, culture and recreation

CONTACT R. J. Evans rebecca.evans@aut.ac.nz Faculty of Design and Creative Technologies, Auckland University of Technology, Auckland, NZ, USA

Supplemental data for this article can be accessed online at https://doi.org/10.1080/17533015.2026.2631577

activities (ACRs) is associated with enhanced wellbeing and quality of life (Barber et al., 2014; Lerner et al., 2005; Wilding et al., 2023), promoting outcomes such as social inclusion (Rivas, 2016), self-concept (Blomfield & Barber, 2011) and mental wellbeing (Ascolani et al., 2020). Engagement in activities also contributes to key health determinants, including reductions in stress and improved social capital (Sheppard & Broughton, 2020; Wilson et al., 2022). These findings have reinforced the understanding that access to diverse ACR opportunities plays a central role in fostering individual and collective wellbeing.

Childhood, in particular, is a critical period for establishing participation habits (Sheppard & Broughton, 2020). Aligned with positive youth development literature (Barber et al., 2014; Lerner et al., 2005), research shows that engagement in ACRs contributes meaningfully to children's relationships with peers and caregivers, their school engagement, cultural identity, and general health (Tait et al., 2025). Regular involvement in ACRs during this formative stage is also linked to better mental health outcomes and sustained wellbeing into adulthood (Jewett et al., 2014; LaForge MacKenzie et al., 2022), highlighting the importance of youth participation.

Although the benefits of participation are well established internationally, we currently have a limited understanding of how youth in Aotearoa New Zealand engage with activities across childhood and adolescence. Recently, Evans and colleagues (Evans et al., 2023) found that 97% of 12-year-olds regularly engaged in at least one ACR, and 83.3% participated in multiple types of activities (across sport, arts/craft/technology, music, and dance/drama), indicating broad participation in ACR activities. Recent national data show that participation in ACRs is known to shift across the life course (Matika & Rout, 2023; Sport New Zealand, 2022), with Creative Arts engagement peaking between the ages of 10 and 12 (Matika & Rout, 2023) and sports participation peaking later before dropping sharply by age 15 to 17 years (Sport New Zealand, 2022). However, while engagement, participation, and attendance in the arts have all increased since 2020, with New Zealanders reporting stronger personal connections to the arts and clear well-being benefits (Matika & Rout, 2023), persistent accessibility barriers mean not all young people can participate equally, making it a timely and important moment to better understand patterns of ACR engagement in Aotearoa.

Participation differences by identity

Identity-related factors such as gender, ethnicity and disability play a significant role in shaping young people's ACR participation (Evans et al., 2023), and can reflect broader experiences of inclusion or discrimination. Gender differences in arts participation have been highlighted in several studies, which may be driven by underlying societal attitudes. Langley and colleagues (Langley et al., 2020) found that girls receive stronger social support for arts participation from both peers and parents than boys. Girls are more active in music and the arts (Langley et al., 2020; Yu & Baxter, 2015) but have similar participation in sports (Sport New Zealand, 2022). However, in both activity types, girls report less confidence and a greater fear of judgment (Langley et al., 2020; Sport New Zealand, 2022). Gender diverse youth report facing even greater challenges, with much lower sports participation rates and higher experiences of discrimination or fear of differential treatment (Veale et al., 2019).

Recent research has found that participation patterns also vary by ethnicity, underscoring inequities in access and opportunities for inclusion. Although often underexamined, recent findings (Evans et al., 2023) show that compared to Sole European, Asian youth report being more active in community groups and music, while Māori and Pacific youth are more likely to engage in dance, drama, and arts, craft and technology activities.

Young people with a disability report lower participation in sports, and arts, craft and technology activities (Evans et al., 2023; Sport New Zealand, 2022), but music, dance and drama, and community group involvement are comparable. Importantly, many young people with disabilities express a strong desire to increase their ACR participation, despite identifying more barriers to engagement (Sport New Zealand, 2022). These patterns suggest that structural and attitudinal factors can limit equitable access to meaningful participation.

Sociodemographic determinants of participation

Beyond identity factors, household and community environments also shape ACR participation and can reflect broader societal disparities (Mak & Fancourt, 2021). Household composition is one such factor – young people in single-parent households often receive less parental support for physical activity, likely due to time constraints, limited access to transport, and additional parenting responsibilities (McMillan et al., 2016; Quarmby et al., 2011). In contrast, two-parent families may offer more opportunities for joint engagement (Quarmby et al., 2011). Family size may also affect involvement: Research in Canada (Xu et al., 2009) found that larger families report lower ACR engagement, whilst New Zealand data has found that extended family living together is associated with higher rates of participation in many activities (Evans et al., 2023).

Geographic location further shapes access and motivation for participation. In Australia, boys in outer regional areas preferred team sports, whereas city-based youth were more active in arts-based ACR activities (Baxter et al., 2011). In contrast, New Zealand research found that rural youth reported feeling isolated from activities and services, while urban youth had broader access but reported lower community engagement (Edwards et al., 2003). These mixed findings highlight the need for further context-specific research.

Socio-economic status has been found to play a key role in extracurricular activities, particularly outside of school (Mak & Fancourt, 2021), with cost being a major barrier for ACR participation (Barbalich & Ball, 2023). Families earning under NZ$50,000 are more likely to report financial limitations (Langley et al., 2020), with variation across ethnic groups. Māori families more often cite cost as a constraint, while Asian families report fewer financial barriers (Langley et al., 2020). Together, these findings suggest that participation in ACR activities is influenced by an interplay between cost, access, and an individual's socioeconomic status.

Whilst differences by socioeconomic status are consistently reported, the impact of these on participation varies by context, activity type and global location. Whilst studies of the global status of participation in ACRs has found significant disparities across countries (Mak, Bone, et al., 2025; Mak, Sajnani, et al., 2025), some studies found that disadvantaged youth within a single country engaged primarily in sports, and reported fewer activity options (Baldwin & O'Flaherty, 2018). Within New Zealand, however, advantaged youth

spend more time in sport than disadvantaged youth (Evans et al., 2023; Sport New Zealand, 2022), while youth in higher deprivation areas show stronger engagement in the arts (Evans et al., 2023). Economic hardship amplifies other barriers, such as transport challenges, caregiving responsibilities, and parents' irregular work schedules. Together, these factors limit young people's participation, pointing to a complex interplay between cost, context, and personal circumstance (Baldwin & O'Flaherty, 2018). As such, financial interventions alone are unlikely to be effective unless broader socioecological barriers – such as those tied to gender identity, ethnicity, and disability – are addressed (Barbalich & Ball, 2023).

Although research highlights variations in ACR participation by age, identity, and sociodemographic factors, longitudinal considerations remain limited. Tracking participation over time is vital for understanding how engagement shifts through key developmental and educational stages. Longitudinal insights will deepen our understanding of young people's evolving needs and experiences and identify where targeted support might sustain meaningful involvement in creative, cultural and sporting activities as children transition into adolescence.

Research approach and methodology

Aims of this research

There are notable inconsistencies in how different types of arts, culture and recreation (ACR) activities relate to sociodemographic and childhood characteristics – warranting deeper exploration than has occurred to date. This study investigated how both sociodemographic factors and identity characteristics influence evolving patterns of participation in ACR activities. Specifically, we asked: Which factors shape sustained, increasing, decreasing, or disengaged ACR participation from ages 8 to 12?

We aimed to:

- Describe changes in ACR participation from ages 8 to 12.
- Explore participation shifts across sports, community involvement, and creative arts.
- Examine the intersection of sociodemographic and childhood characteristics with ACR engagement.

Participants

Data was analysed from the Growing Up in New Zealand (GUiNZ) longitudinal cohort study, which recruited over 6500 pregnant mothers and their unborn children in 2009–2010, all of whom gave their informed consent in writing. The GUiNZ study is a large-scale longitudinal project designed to track children's development and well-being across the 21st century. Data were gathered at multiple collection waves, beginning in the antenatal period and continuing through childhood, recognising the importance of early experiences and the ongoing influence of family, community, environment, and wider society. Information was collected from the cohort children themselves as well as from their mothers/primary caregivers, their mothers' partners, teachers, and through interviewer observations, alongside physical measurements and

biological samples. For example, during the 12 year data collection wave conducted between September 2021 and July 2022, cohort members (average age 12.3 years) completed questionnaires that captured their own perspectives on identity, health, wellbeing, relationships, and priorities. This multiinformant, repeated design provides contemporary, populationrelevant insights into how young people in Aotearoa grow and thrive over time.

The GUiNZ study is largely representative of the diversity of births in New Zealand at the time of conception (Morton et al., 2015). The data utilised in this analysis focused on the information collected from mothers and children at ages 8 (the 8-year data collection wave, 2017–2019) and 12 (the 12-year data collection wave, 2021–2022). Only those with complete responses for key variables at both time points, with no missing data points, were included in the final analytic sample ($N = 3{,}738$). This final sample was sizeably different from the original cohort sample due to participant attrition, changing contact details, non-response, migration, mortality, missing data (e.g. participants respond to some but not all questions), and technical issues (e.g. incorrect skip logic).

Measures

Categories of arts, culture and recreation activities

Children and their mothers were asked questions about the child's regular participation in extracurricular (outside of school) activities. At age 8, mothers reported how often in the past 12 months their child had participated in extracurricular activities (organised team and individual sport, community groups, art, music or dance lessons, academic lessons and religious services or classes). At age 12, young people indicated which ACR activities they had participated in regularly (also over the past year), within each of 5 categories of activity, and were provided with several options (e.g. netball, rugby, soccer under Sports, and instrument lessons and orchestra under Music), including the options "other" and "none" within each category. To compare across time points in this paper, participation in ACR activities was classified into three broad categories: Community, Sport, and Creative Arts. Regular participation was defined as participation in an activity *once per week or more*. At age 12, self-report responses were collected in binary form, where participants responded that they did or did not participate in each activity "once per week or more often". At age 8, proxy responses from the main caregiver regarding the child's participation were recoded from a frequency scale to binary form to be consistent with this definition of *regular participation*.

Categorisation of longitudinal participation

To examine changes in children's engagement over time, each child's participation trajectory was classified into one of four distinct patterns based on binary indicators at both timepoints:

- Sustained participation: Those who responded yes at both ages 8 and 12.
- Increased participation: Those who began participating by age 12, having not participated at age 8.
- Decreased participation: Those who were participating at age 8 but not at age 12.

- Disengaged participation: Those who did not participate at either timepoint.

Sociodemographic characteristics

We also examined the associations between sociodemographic characteristics and participation pathways. We examined the sociodemographic characteristics household composition (Sole parent, Two or more parent(s), Parent(s) with extended family, Parent(s) with non-kin), rurality (Rural, Urban), and area-level deprivation (NZDep Quintiles 1–5), and the identity-based or child characteristics gender (Cisgender boy, Cisgender girl, Gender diverse), ethnicity (European, Māori, Pacific Peoples, Asian, Other Ethnicity), and disability (No disability, Disability). Whilst rurality, area-level deprivation and household structure were analysed without recoding, gender, ethnicity, and disability were recoded into these categories for this analysis.

Gender is a derived variable that reflects a participant's sex at birth and their gender identity at age 12. Participants were categorised as Cisgender boy, Cisgender girl or Gender diverse, which reflects all those who were transgender, non-binary or unsure of their gender at age 12.

Ethnicity was categorised based on administrative prioritisation of child self-report of ethnicity at age 12 (Atatoa Carr et al., 2018). Ethnicities with small numbers of participants were grouped and categorised as "Other". Prioritisation was conducted consistent with recommendations by Statistics NZ, resulting in the following order:1) Māori, 2) Pacific, 3) Asian, 4) Other, then 5) (Sole) European.

Disability was determined based on child self-report at age 12. Participants were classified as Disabled if the young person self-reported that they had "a lot of difficulty" doing or "cannot do at all" in any one of six areas of functioning – seeing, hearing, walking or climbing stairs, remembering or concentrating, self-care, or communication (Marks et al., 2023; Washington Group on Disability Statistics, 2022). If no significant difficulties were reported, the participant was classified as having No disability.

Statistical analysis

To evaluate whether differences in participation transitions across demographic groups were statistically significant, a chi-square test of independence was conducted. No violations of the assumption of independence were observed.

We then investigated the specific contributors to the observed differences in participation transitions using standardised residuals, enabling identification of the transition pathways that significantly deviate from expected frequencies within each group. This approach enabled us to determine the specific groups that were more likely to have sustained, increased, decreased or disengaged participation over the two time points.

The standardised residuals are given by:

$$r_{ij} = \frac{O_{ij} - E_{ij}}{\sqrt{E_{ij}}},$$

where:

O_{ij} is the observed count for the cell in row i and j,

E_{ij} is the expected count for the cell in row i and j, and

r_{ij} is the ordinary residual.

To enhance interpretability, one-tailed test *p*-values associated with the standardised residuals were computed for each characteristic and transition type combination. This determines whether the observed frequencies were significantly greater or smaller than expected.

Results

Overview of arts, culture and recreation participation

From ages 8 to 12, participation increased across all three ACR activity types, with Creative Arts showing the largest growth and Sports maintaining the highest overall engagement at both time points (see Figures 1a–1c; for cross-sectional participation rates see Appendix A, Tables A1-A2).

Community activity participation rose from 52.9% to 60.9%, driven by a greater proportion of youth increasing (26.2%) rather than decreasing (18.2%) their participation. However, 21% of participants were disengaged, having not participated at either time point.

Creative Arts participation experienced the most pronounced increase, rising from 50.4% at age 8 to 79.9% at age 12. Only 6.9% reported decreased participation, while 13.2% remained disengaged.

Sports had the highest rate of sustained participation, with 72.6% engaged consistently across both time points. Whilst disengagement was low (5.3%), 15.1% increased their participation, contributing to an overall rise from 79.4% to 87.8%. Figures 1a–1c.

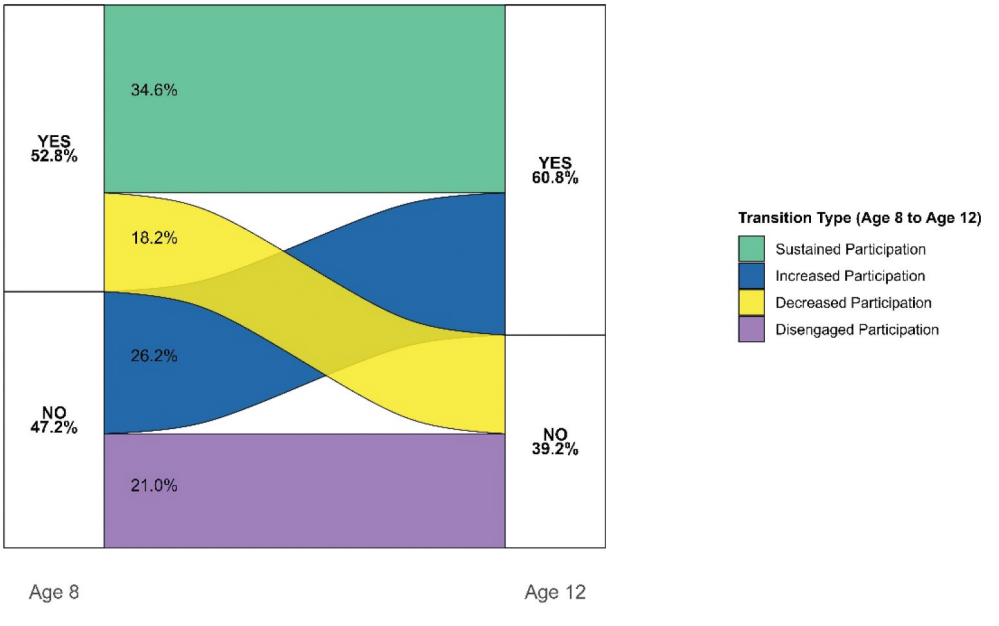

Figure 1a. ACR activity participation from ages 8 to 12 – Community activities ($n = 3{,}738$).

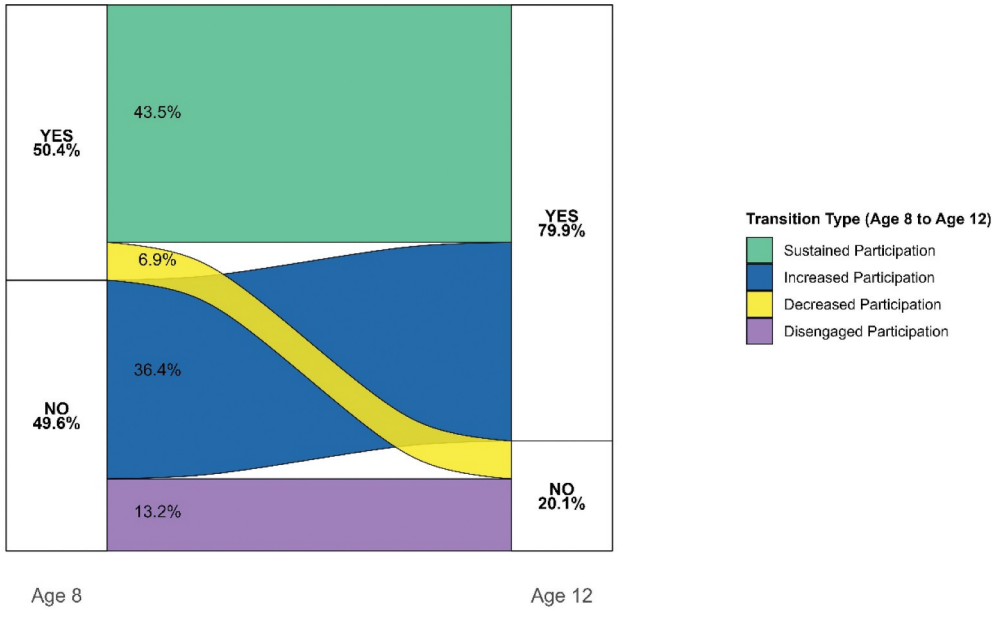

Figure 1b. ACR Activity Participation from ages 8 to 12 – Creative Arts activities (n = 3,738).

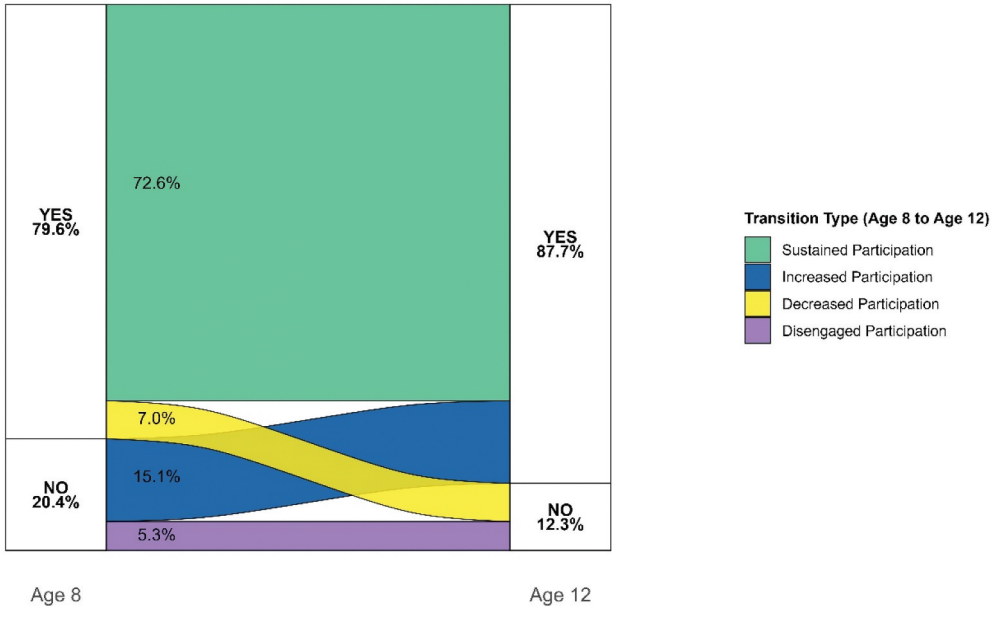

Figure 1c. ACR Activity Participation from Ages 8 to 12 – Sports activities (n = 3,738).

Transitions of ACR activity participation from ages 8 to 12 (n = 3,738), 1a) Community; 1b) Creative Arts; 1c) Sport.

Understanding barriers and enablers to participation

Participation patterns across time points varied across activity types and characteristics, revealing distinct barriers and enablers to engagement. Full test statistics are available in Appendix B, Tables 3–5. With regards to Community activities, differences were seen by gender ($p < 0.001$), ethnicity ($p < 0.001$), area-level deprivation ($p=0.024$) and household structure ($p=0.009$). In Creative Arts, participation differed significantly by gender, ethnicity, area-level deprivation, and household structure (all $p < 0.001$). Sports participation was consistently high at both age points; however, significant variation was observed across all demographic factors (all $p < 0.001$).

Gender

Notable differences were observed across all three types of ACR activities by gender (see Figures 2–3). In the context of Community activities, relatively small but statistically significant distinctions emerged. Cisgender boys ($n = 1{,}702$) were more likely to be disengaged (24.7%, $p < 0.001$) from Community activities, higher than the average. In contrast, Cisgender girls ($n = 1{,}423$) were more likely to exhibit sustained participation (36.8%, $p = 0.020$) or increasing participation over time (28.2%, $p = 0.015$). Gender diverse youth ($n = 599$) had the highest proportion in the sustained participation group (37.4%), though this difference did not reach statistical significance.

Participation in Creative Arts activities revealed clearer disparities (see Figure 2). At age 8, Cisgender boys were notably less involved in Creative Arts. They exhibited significantly higher rates of increasing participation (41.4%, $p < 0.001$) and

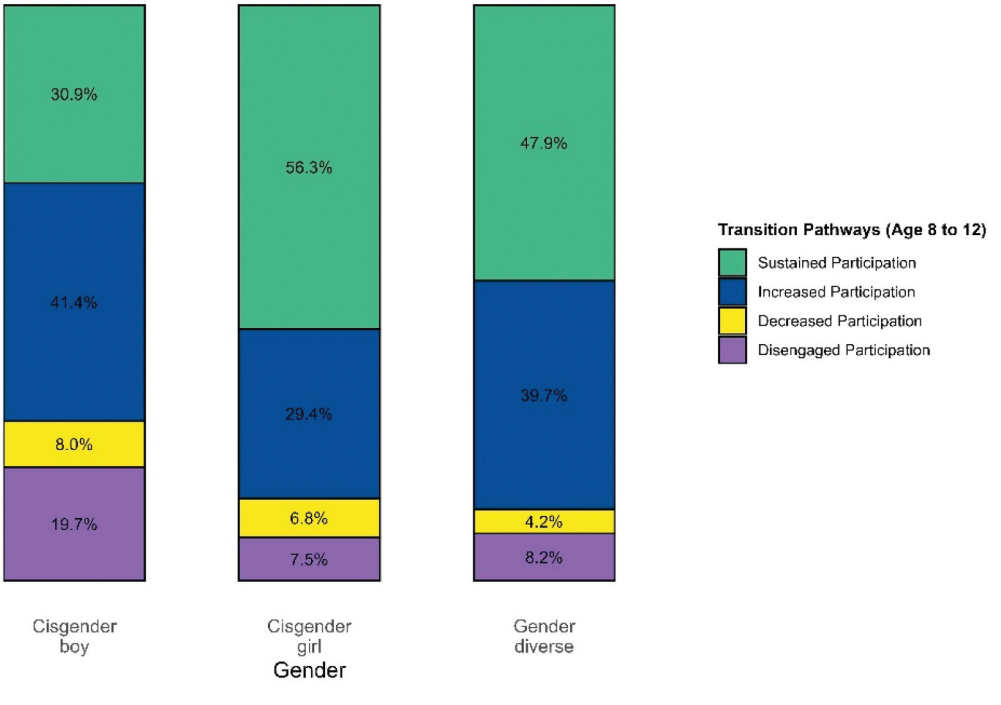

Figure 2. Participation pathways in Creative arts activities from ages 8 to 12, by gender ($n = 3{,}724$).

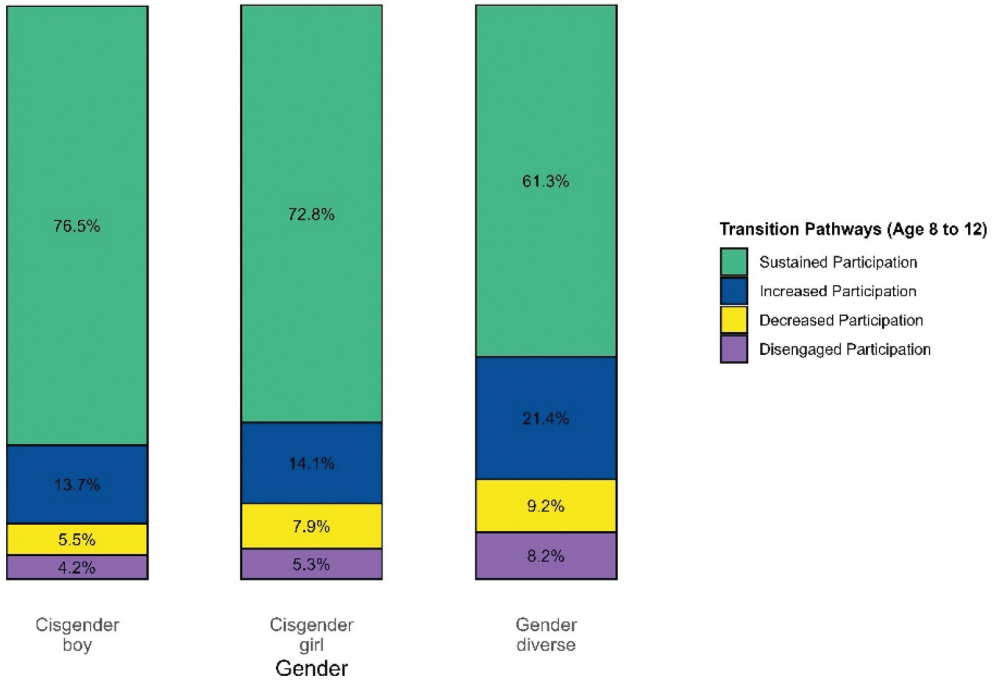

Figure 3. Participation pathways in Sports activities from ages 8 to 12, by gender ($n = 3{,}724$).

disengaged participation (19.7%, $p < 0.001$), alongside a lower proportion of sustained participation (30.9%, $p<0.001$), suggesting later uptake for boys. Cisgender girls and Gender diverse youth demonstrated more consistent involvement. A significantly higher proportion of Cisgender girls (56.3%, $p<0.001$) and Gender diverse young people (47.9%, $p = 0.007$) had sustained participation in Creative Arts across time. Additionally, many showed increasing participation, with uptake in Creative Arts activities by age 12 (29.4% of Cisgender girls and 39.7% of Gender diverse youth).

Among Cisgender boys and girls, participation in Sports at Age 12 remained high, with only 9.7% and 13.2%, respectively, reporting non-participation. In contrast, Gender diverse young people showed lower engagement, with 17.4% not participating at Age 12. However, a notable and encouraging trend emerged: Gender diverse youth had the highest rate of increased participation (21.4%, $p < 0.001$), suggesting expanding opportunities and growing inclusivity in sporting environments.

Ethnicity

Ethnicity was a statistically significant factor for participation across all three ACR activity types (see Figures 4–6).

Approximately one-third of European ($n_E = 2{,}038$; 31.8%) and Māori ($n_M = 796$; 29.5%) participants demonstrated sustained participation in Community activities, which was significantly lower than expected ($p < 0.001$). Disengagement from Community activities was also notably high among these groups (European: 23.3%, p=0.000; Māori: 23.5%, p=0.0119).

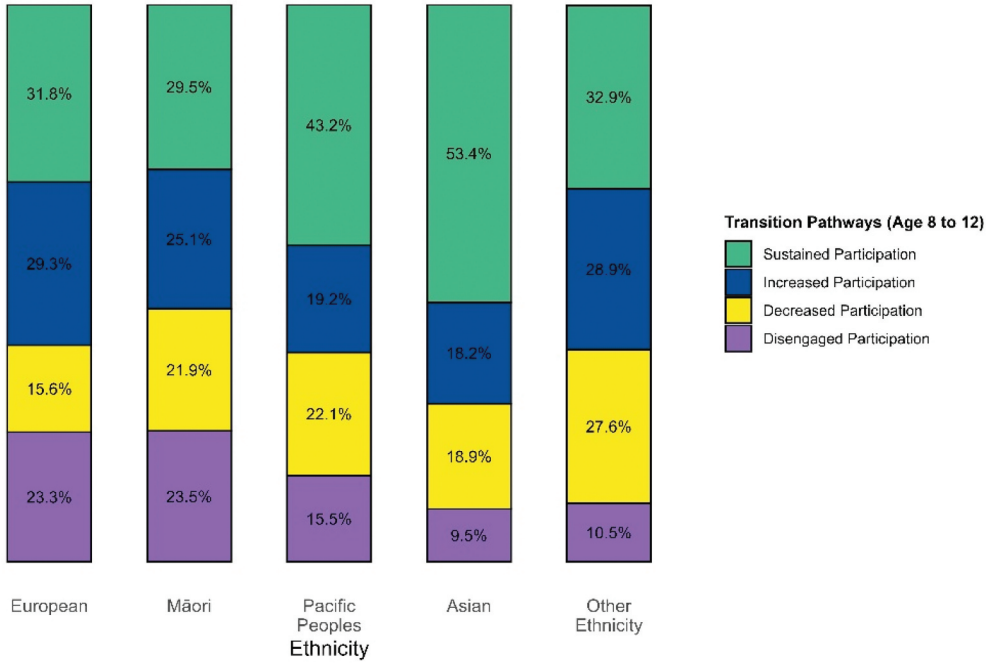

Figure 4. Participation pathways in Community activities from ages 8 to 12, by ethnicity ($n = 3,639$).

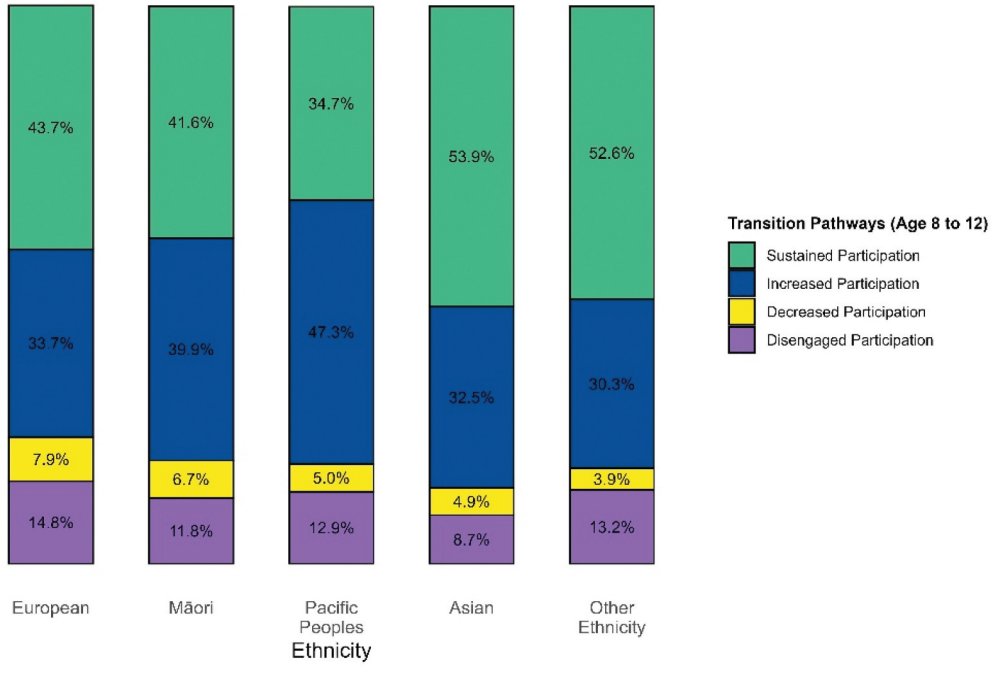

Figure 5. Participation pathways in Creative Arts activities from ages 8 to 12, by ethnicity ($n = 3,639$).

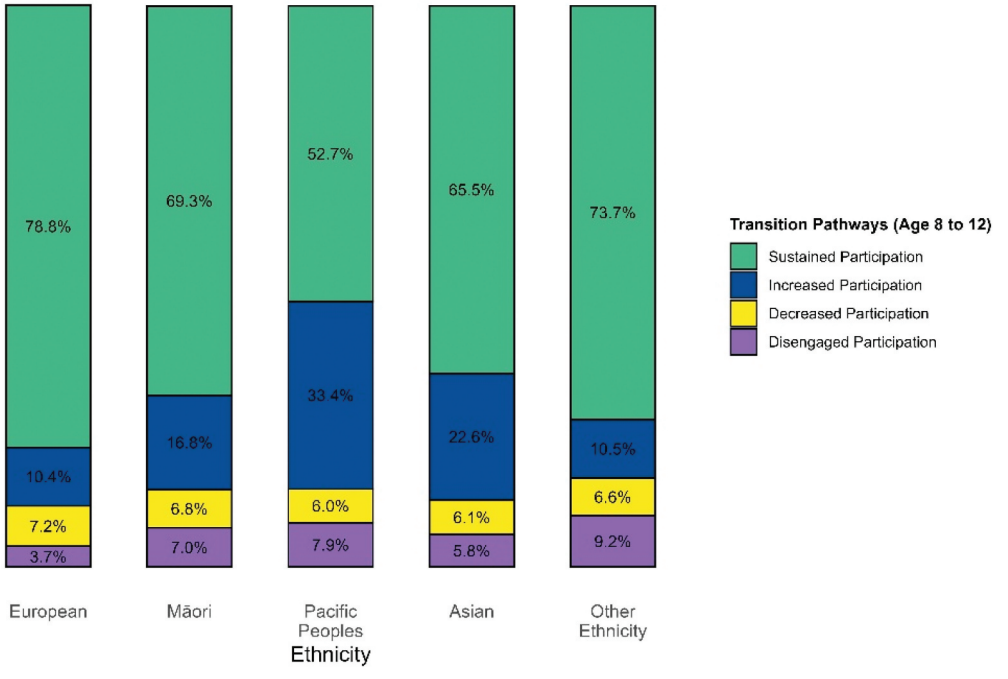

Figure 6. Participation pathways in Sports activities from ages 8 to 12, by ethnicity ($n = 3{,}639$).

In contrast, Pacific $(n_P = 317)$ and Asian $(n_A = 412)$ participants were more likely than average to be actively engaged in Community activities at age 8, with comparatively low dropout rates. Asian youth had the highest rate of sustained participation (53.4%, $p < 0.001$), followed by Pacific youth (43.2%, $p < 0.001$). Both groups showed lower than expected rates of increasing (Pacific: 19.2%, $p = 0.001$; Asian: 18.2%, $p < 0.001$) and disengaged participation (Pacific: 15.5%, $p = 0.009$; Asian: 9.5%, $p < 0.001$).

While overall participation in Creative Arts was broadly similar across ethnic groups, statistically significant differences emerged in the nature and timing of engagement. Pacific young people had lower than expected sustained participation (34.7%, $p < 0.001$), while increasing participation was significantly higher (47.3%, $p < 0.001$), suggesting a strong trend toward later uptake between ages 8 and 12. Similarly, Māori participants had higher than expected rates of increasing participation (39.9%, $p = 0.005$), indicating a delayed entry into Creative Arts activities during this developmental window.

In Creative Arts, Asian youth had higher than expected sustained participation (53.9%, $p < 0.001$), and lower than expected increasing participation (32.5%, p=0.032), suggesting consistent early engagement. Participation trends for European youth were less favourable with lower-than-expected increasing participation (33.7%, $p < 0.001$), alongside higher-than-expected decreasing (7.9%, p=0.003) and disengaged participation (14.8%, p=0.001).

Patterns of participation in Sport varied significantly by ethnicity, especially in terms of the timing and sustainability of involvement. Pacific youth had lower than expected sustained participation (52.7%, $p < 0.001$) but the highest proportion of increased participation (33.4%, $p < 0.001$). This suggests many Pacific youth began participating in Sports

later, though rates became comparable to other groups by age 12. European youth had the highest rate of sustained participation (78.8%, $p < 0.001$) and the lowest rate of increased participation (10.4%, $p < 0.001$), indicating more consistent early engagement in Sport from age 8 onward.

Disability

Disability was not a statistically significant factor in Creative Arts or Community activity participation. However, notable differences emerged in Sports engagement. Only 57.6% of young people with a disability $(n_d = 354)$ had sustained Sports participation, significantly lower than the 74.1% seen among those with no disability ($n_n = 3,384$; $p < 0.001$) (see Figure 7). Youth with disabilities were more likely to report reduced engagement (decreased: 9% or disengaged: 9.3%) in Sport, compared to those with No disability (decreased: 6.8%; disengaged: 4.9%). Encouragingly, 24% of youth with disabilities reported increased participation in Sport ($p < 0.001$), notably higher than their non-disabled peers (14.2%), suggesting growing accessibility and engagement between ages 8 and 12.

Household structure

Household structure was significantly associated with participation across all three ACR activity domains (see Figures 8–9).

Young people living with extended family $(n_x = 376)$ had the greatest proportion of people with sustained engagement in Community activities (40.4%, p=0.006), and

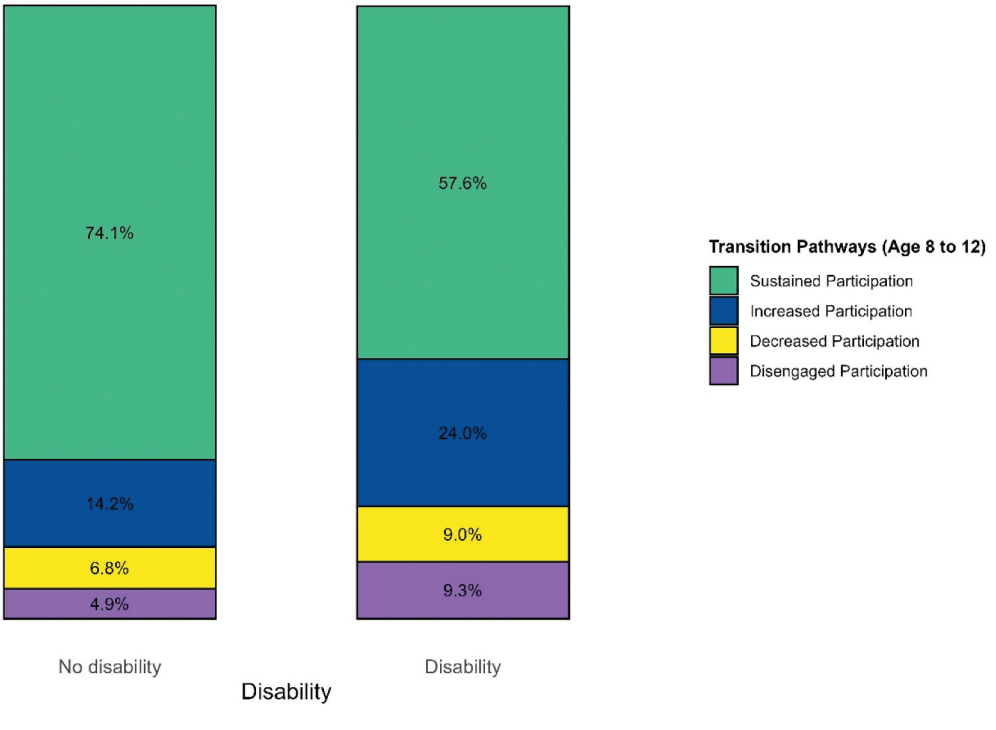

Figure 7. Participation pathways in Sports activities from ages 8 to 12, by disability (n = 3,738).

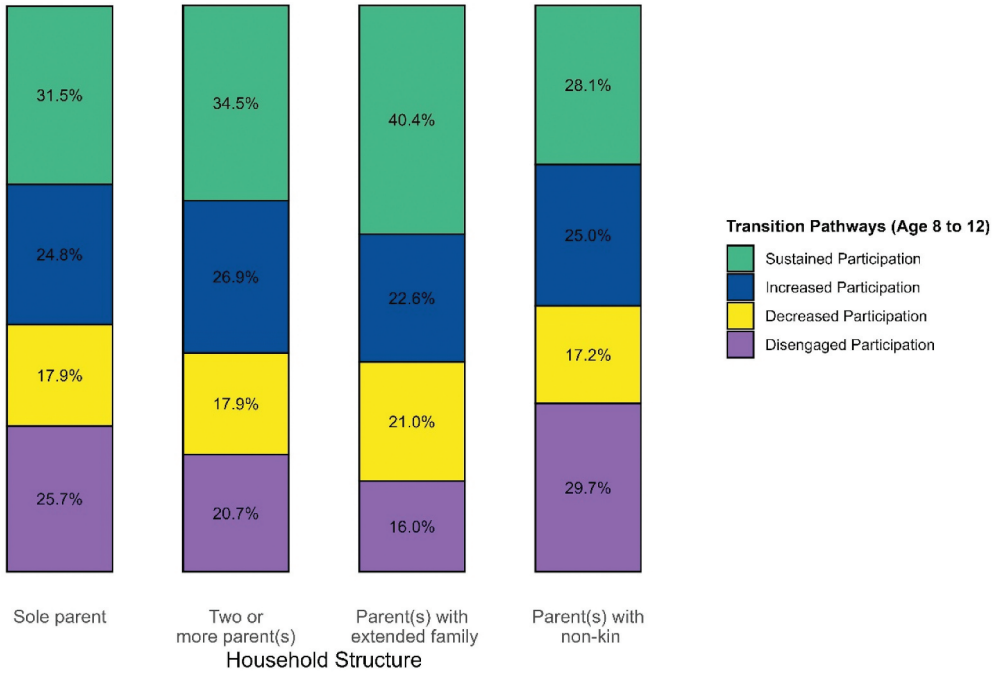

Figure 8. Participation pathways in Community activities from ages 8 to 12, by household structure ($n = 3{,}712$).

the lowest rates of disengaged participation (16.0%, p=0.006), suggesting that extended family environments may offer greater support or stability conducive to long-term engagement. In contrast, those residing with sole parents ($n_s = 447$; 25.7%, p=0.004) or with parent(s) and non-kin ($n_{nk} = 64$; 29.7%, p=0.042) had significantly higher than expected rates in the disengaged group. These findings indicate that structural family differences may influence the continuity and consistency of ACR involvement, potentially reflecting disparities in time, resources, or emotional support.

Within Creative Arts participation, the most striking differences were among young people living in sole-parent households. They were less likely to report sustained participation in Creative Arts (36.5%, $p < 0.001$) and more likely to be disengaged (18.1%, $p < 0.001$), suggesting potential barriers to continuity in artistic pursuits within these family environments.

In Sport, young people living with two or more parents (n=2,825; 76.7%, $p < 0.001$) showed notably high rates of sustained Sports participation, reinforcing the link between traditional household structures and consistent engagement. In contrast, those living with parents and non-kin caregivers had the lowest sustained Sport participation rate (54.7%) and the highest proportion of disengaged participation (18.8%), underscoring challenges in maintaining regular activity in these environments.

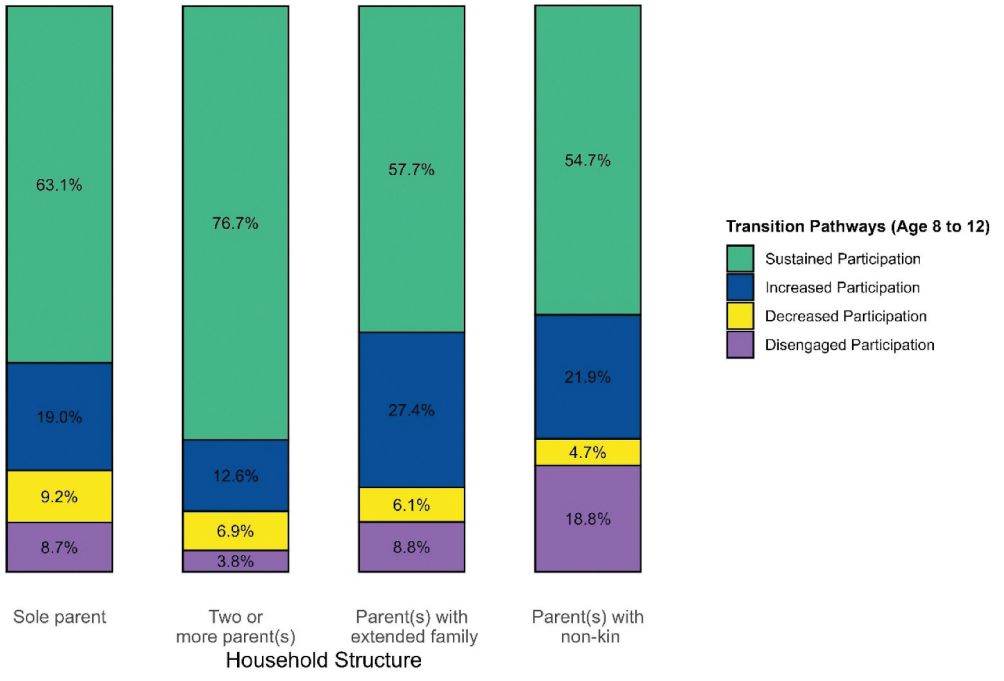

Figure 9. Participation pathways in Sports activities from ages 8 to 12, by household structure ($n = 3{,}712$).

Rurality

Rurality showed significant associations with Sport participation only; no statistical differences were found for Creative Arts or Community activity involvement.

Young people living in rural areas ($n_r = 704$) were more likely than average to report sustained Sport participation (78.6%, $p < 0.001$). They were also significantly less likely to report increasing (12.6%, $p < 0.001$) or disengaged (3.1%, $p = 0.002$) participation – suggesting stable and consistent engagement for those living rurally.

Conversely, those living in urban centres ($n_u = 2,971$) showed lower rates of sustained participation (71.1%, $p < 0.001$) and elevated proportions in both the increasing (15.9%, $p = 0.016$) and disengaged (5.8%, $p = 0.002$) groups. This pattern may reflect more dynamic or fragmented engagement pathways in urban contexts.

Area-level deprivation

Area-level deprivation showed significant associations with participation in all three ACR activity types, pointing to underlying disparities in access and engagement (see Figures 10–11). For Community activities, although the relationship was statistically significant ($p = 0.024$), no discernible pattern emerged across different levels of deprivation. However, clear trends were evident in participation in Creative Arts and Sports.

Across both Creative Arts (31.5%) and Sports (50.9%), youth living in areas of highest deprivation (quintile 5; $n_5 = 552$) were the least likely to report sustained participation, indicating barriers to consistent engagement. At the same time, this group demonstrated

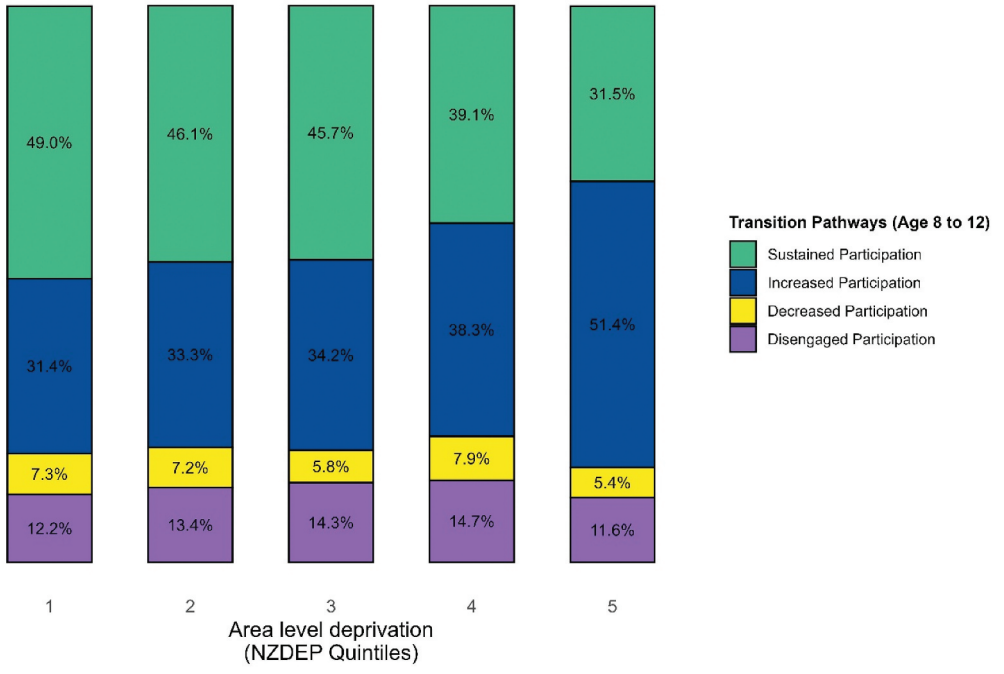

Figure 10. Participation pathways in Creative Arts activities from ages 8 to 12, by area-level deprivation ($n = 3,675$).

the highest rates of increasing participation—51.4% in Creative Arts and 32.1% in Sports. This suggests that despite limited early access, young people in these communities became more involved, possibly due to delayed opportunities or targeted interventions that promote later uptake.

Furthermore, in Sports those living in high area-level deprivation (quintile 5) had the highest proportion of both disengaged participation (8.7%) and decreasing participation (8.3%).

Discussion

This study has sought to highlight the dynamic influence of sociodemographic and identity factors on participation in creative, community and sporting pursuits, through the transition from childhood to early adolescence. Overall, participation increased across all activity types from ages 8 to 12, with Sports showing the highest sustained engagement, and Creative Arts experiencing the largest overall growth.

In Community activities, Cisgender girls, Pacific youth, Asian young people, and those living with parent(s) and extended family showed notably higher than average Sustained participation and were less likely to be disengaged. Conversely, those more likely to be disengaged from Community activities (Cisgender boys, European and Māori youth, those living with a sole parent and those living with parent(s) and non-kin) were also less likely to have sustained participation. Increasing participation was more common among

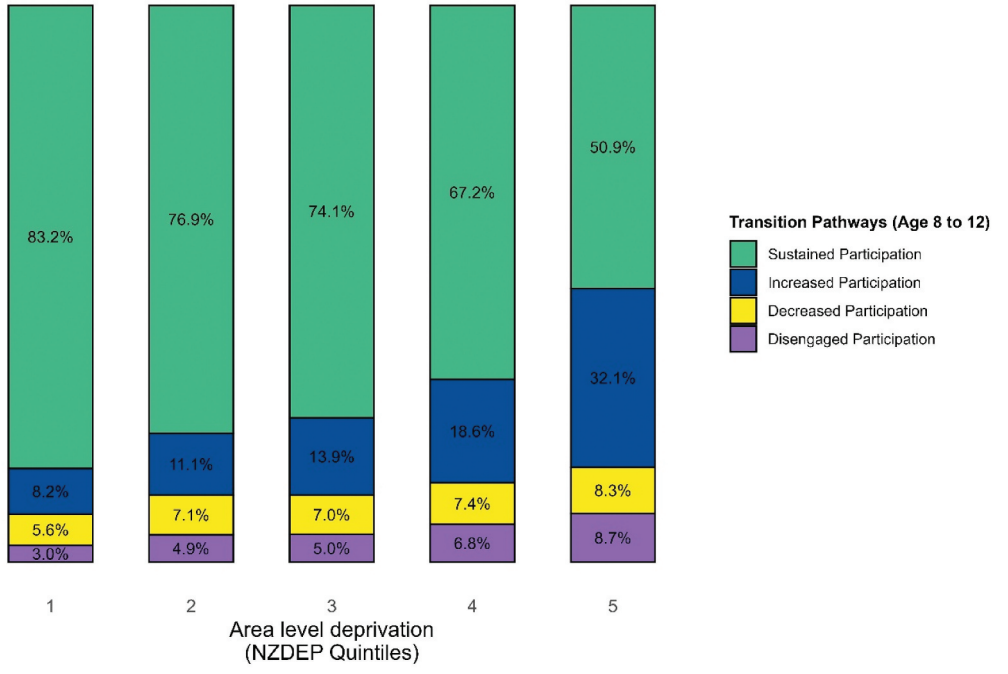

Figure 11. Participation pathways in Sports activities from ages 8 to 12, by area-level deprivation (n = 3,675).

Cisgender girls and European youth, while Māori youth and those living in high deprivation areas were more likely than average to have decreasing participation.

In Creative Arts, sustained participation was highest among Cisgender girls, Gender diverse youth, Asian young people, and those living in low area-level deprivation. Disengagement was more common among Cisgender boys and young people living with sole parents. Notably, groups with increasing participation – including Māori and Pacific youth, Cisgender boys, those in extended family households, and those in high deprivation areas – had later uptake in Creative Arts pursuits. Very few young people experienced decreasing participation in Creative Arts, indicating low dropout between ages 8 and 12.

In Sports, Cisgender boys, European youth, those without disability, rural residents, those in low deprivation areas, and those living with two or more parents had the highest sustained participation. Groups with lower initial participation but higher increasing rates included Gender diverse youth, Pacific and Asian young people, disabled youth, urban residents, and those living with a sole parent or extended family, and those in high deprivation areas. While most youth reported low disengagement (3–9%), higher rates were observed among those with self-perceived disabilities and children living with parent(s) and non-kin.

These findings highlight the importance of targeted support to foster inclusive, sustained engagement. Investing in culturally-relevant programming, disability-inclusive environments, and flexible pathways for late starters may help reduce disparities and promote lifelong participation.

Enablers and barriers to participation

Societal attitudes and gender stereotypes

Some participation trends across gender and ethnicity suggest shifting societal norms and the growing responsiveness of institutions. Cisgender boys, Māori, and Pacific youth showed higher rates of increasing participation in Creative Arts, while Asian and Gender diverse youth were more likely to increase participation in Sports. These patterns may reflect changing attitudes, improved outreach by agencies, and enhanced accessibility.

However, groups with sustained participation tended to align with traditional gender roles: Cisgender girls and Gender diverse youth in Creative Arts and Community activities, and boys in Sports. Notably, Gender diverse youth maintained high engagement in Creative Arts and Community spaces – indicating that these environments may be more inclusive. In contrast, Cisgender boys were more likely to disengage from Creative Arts and Community activities, and Gender diverse youth were less likely to sustain participation in Sports. These disparities align with previous findings that highlight how entrenched stereotypes can restrict access, underscoring the need to challenge gender norms and expand welcoming environments for all identities (Ministry of Social Development, 2020).

Inclusive practices and cultural values

Participation could also reflect the cultural values of the communities involved. In this paper, Asian and Pacific young people sustained higher participation in Community and Creative Arts, while European youth were more likely to sustain Sports involvement. However, Māori youth showed concerning trends in Community activities and Sports – lower sustained participation, higher disengagement, and decreasing involvement – which contrasts sharply with traditional Māori values of whānau and communal engagement. This highlights the need for culturally-grounded, multifaceted access strategies, alongside targeted support that addresses broader inequities (Barbalich & Ball, 2023). This finding also strengthens the argument for encouraging engagement in culturally-relevant activities (Highfield & Webber, 2021). Ngā toi Māori (Māori arts and cultural activities) such as kapa haka and mau rākau, involve physical activity, community engagement and artistic practice, and provide culturally-grounded contexts for meaningful involvement.

Young people with self-perceived disabilities had comparable participation rates in Creative Arts and Community activities, reflecting strong inclusion in these domains. Though disengagement from Sports was higher for disabled youth, increasing participation suggests improved access and growing inclusion between ages 8 and 12.

Importantly, participation in ACRs has been associated with positive health and well-being (Tait et al., 2025). Therefore, it is essential that we find ways to promote and support ACR participation with young people who have lower rates of sustained participation, such as indigenous youth (Māori) in Sports and Community activities, and those with a disability in Sports.

Family structure and support

Household composition played a notable role in sustained participation. Living with two or more parents or with extended family was linked to stronger engagement in Sports and Community activities. Those in sole parent or parent(s) with non-kin households faced higher disengagement across activity types – highlighting the need for targeted support that recognises caregiving contexts and provides scaffolding for youth in under-resourced households.

Interestingly, extended family structures, in particular, appeared to promote Creative Arts uptake and sustained Community activity participation, which when placed alongside previous research, supports the positive impact of intergenerational support and relational networks on youth development (Walker et al., 2021).

Cost and socioeconomic access

Area-level deprivation remains a critical barrier to sustained participation. Youth in high-deprivation areas were more likely to demonstrate increased participation, and least likely to have sustained participation, pointing to delayed entry likely driven by cost constraints. As affordability changes with age – or as families reprioritise spending – access appears to improve, but the early gaps reflect systemic inequities. ACR involvement has been shown to positively impact the self-worth of youth from disadvantaged backgrounds (Blomfield & Barber, 2011), especially for those in low-SES schools. These activities offer compensatory experiences and connections not otherwise available – making their inclusion essential (Barbalich & Ball, 2023; Blomfield & Barber, 2011).

Furthermore, young people rely heavily on their immediate community for participation. As Matthews (2003) argues, youth wellbeing may be more tightly tied to the condition of their neighbourhoods than adults (therefore in areas of social deprivation, the impact may be amplified). Positive community engagement is crucial – and empowering youth through inclusion in local initiatives builds collective resilience.

Limitations

Whilst broadly generalisable to the births at the time of recruitment (Morton et al., 2015), this data set has been affected by participant attrition and retention (Napier et al., 2023), as is often the case in longitudinal studies. These findings reflect the experiences of those who maintained participation in the study; missing participants may have held different views, experiences, and outcomes that are not captured here.

We also acknowledge limitations in the selection of variables. The use of the self-report of the Washington Group Short Set on Functioning is not validated for use in this age group (Washington Group on Disability Statistics, 2022). However, the decision to use this definition of disability was made due to the methodological focus on self-perceived health and wellbeing, an approach consistent with previous research conducted by the authors (Evans et al., 2023; Marks et al., 2023; Tait et al., 2025). Whilst we recognise that this does not allow for the expression of multiple ethnicities, the use of administratively prioritised ethnicity was selected as the analytic technique demanded mutually exclusive ethnicity groups. Similarly, it is possible that participants were involved in arts, culture and recreation activities during school hours that were not captured by the responses to the ACR activity questions.

This study has additional statistical limitations. To meet data quality standards and chi-square test assumptions, contingency table cells with counts below 10 were recoded to zero rather than excluded. This approach preserved the full 4×N contingency table structure, ensuring valid chi-square analysis across all demographic groups. Second, the data collection methods differed between cohorts: responses at age 8 were reported by mothers, whilst at age 12, responses were self-reported by children. This variation in reporting source introduces potential inconsistencies due to differing perspectives, which may affect the comparability of responses over time.

Future research opportunities

This study offers a foundation for deeper investigation into ACR participation pathways. Longitudinal research at subsequent ages could explore whether increased engagement among underserved groups reflects sustained involvement or temporary spikes. Further analysis could also explore drivers of participation for specific groups, such as Māori and Pacific youth, or those with a disability – and to understand how family, culture, and inclusion shape participation over time.

Exploring program-level factors such as accessibility and responsiveness in different geographic and socioeconomic contexts could clarify how structural conditions influence engagement. Future studies might further investigate connections between longitudinal participation and outcomes like wellbeing or educational achievement to strengthen the case for inclusive ACR programs.

Finally, adopting intersectional approaches that examine how combined sociodemographic factors and identity characteristics influence engagement would enable more nuanced understandings of childhood participation. Building this evidence base is vital to ensure all young people have equitable access to the developmental benefits of sustained ACR involvement.

Conclusion

This analysis highlights how ACR participation among young people is shaped by personal and socioecological factors. Engagement was not evenly distributed across the population, with structural, geographic, and cultural influences contributing to complex patterns of access and continuity. While identity-related trends can reflect societal attitudes and issues of inclusion, sociodemographic patterns reflect contextual systemic disparities linked to cost, financial security, supportive home environments, and accessibility. These variations underscore the importance of examining participation through an equity lens.

When considered collectively, the data exposes more than isolated disparities. It reveals systemic barriers consistently affecting specific groups. Gendered activity preferences, cultural exclusions, and the constraints imposed by household and community contexts point to long-standing issues in the way opportunities are structured and accessed. Understanding these influences is essential for developing inclusive programs that foster sustained participation.

Encouragingly, several underserved groups, such as young people with disabilities and those in high-deprivation areas, demonstrated notable increases in participation over time, pointing to the influence of inclusive initiatives and the

possibility of delayed opportunities. These patterns underscore the need for equity-driven, targeted support systems that recognise and respond to the diverse social contexts of young people's lives. Ensuring meaningful, sustained access to ACR activities is not only essential for personal development but also critical for addressing broader disparities in wellbeing and opportunity.

Acknowledgements

We extend our sincere appreciation to the young people and families participating in the Growing Up in New Zealand birth cohort study, whose ongoing contributions make this research possible. We also acknowledge the wider Growing Up in New Zealand research team for their rigorous work in collecting, managing and preparing the data, including the development and derivation of analytical variables. We further acknowledge our early collaborators Dr Kahla Redman, Jane Goulding, Emma Wethey and Dr Lauren Sweetman at Manatū Taonga, Ministry for Culture and Heritage, who provided valuable support and advice.

Author contributions

CRediT: **R. J. Evans:** Conceptualization, Formal analysis, Investigation, Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing; **J. Tait:** Conceptualization, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing; **M. T. Zar:** Formal analysis, Methodology, Writing – original draft, Writing – review & editing; **M. Victor:** Formal analysis, Methodology, Writing – review & editing.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by the Faculty of Design and Creative Technologies, AUT, under the Faculty Special Projects Grant 2025.

Data availability statement

This research was conducted using the Growing Up in New Zealand datasets, which are publicly available, see here for more information: https://www.growingup.co.nz/using-data Information about the cohort can be found here: (Morton et al., 2012) doi:10.1093/ije/dyr206

Ethics statement

The Growing Up in New Zealand study was conducted according to the guidelines of the Declaration of Helsinki, with ethics approval granted by the NZ Ministry of Health Northern Y Regional Ethics Committee (NTY/08/06/055): All participants gave their informed consent. Approval for this research was obtained from the Growing Up in New Zealand study's Data Access Committee.

References

Ascolani, F., Cacovean, C., Passaretti, A., Portaluri, T., Sacco, P. L., Uboldi, S., & Zbranka, R. (2020). Art consumption and well-being during the covid-19 pandemic [Internet]. *Art and Wellbeing Research Report*. Cluj Cultural Center. Retrieved July 4, 2025, from https://art-wellbeing.eu/research-covid-19-pandemic/

Atatoa Carr, P. E., Bandara, D. K., Berry, S. D., Kingi, T. K., Grant, C. C., & Morton, S. M. B. (2018). Ethnic identification complexity across generations: Evidence from Growing Up in New Zealand. Official newsletter of the New Zealand demographic society [Internet]. New Zealand Population Review. Report No.: 43. 35–61. https://population.org.nz/wp-content/uploads/2017/12/NZPR-Vol-43-Final.pdf

Baldwin, E., & O'Flaherty, M. (2018). Enriching the rich? A review of extracurricular activities, socio-economic status and adolescent achievement. Retrieved July 4, 2025, from https://espace.library.uq.edu.au/view/UQ:732588

Barbalich, I., & Ball, J. (2023). The activity gap in Aotearoa New Zealand: What it is, why it matters and what we can do about it. *Kōtuitui: New Zealand Journal of Social Sciences Online*, *18*(3), 327–336. https://doi.org/10.1080/1177083X.2022.2145228

Barber, B. L., Abbott, B. D., Neira, C. J. B., & Eccles, J. S. (2014). Meaningful activity participation and positive youth development. In M. J. Furlong, R. Gilman, & E. S. Huebner (Eds.), *Handbook of positive psychology in schools* (2nd ed., pp. 235–252). Routledge.

Baxter, J., Gray, M., & Hayes, A. (2011). Families in regional, rural and remote Australia [Internet]. Melbourne Australian Institute of Family Studies. Retrieved July 4, 2025, from https://childandfamily-sa.org.au/wp-content/uploads/2022/10/AIFS_Families-in-regional-rural-and-remote-Australia.pdf

Blomfield, C. J., & Barber, B. L. (2011). Developmental experiences during extracurricular activities and Australian adolescents' self-concept: Particularly important for youth from disadvantaged schools. *Journal of Youth and Adolescence*, *40*(5), 582–594. https://doi.org/10.1007/s10964-010-9563-0

Edwards, S., Jensen, V., Peterson, V., Moewaka Barnes, H., Anae, M., & Watson, P. (2003). Themes in young people's accounts of wellbeing in their lives [Internet]. Alcohol & Public Health Research Unit and Whariki. http://www.shore.ac.nz/projectsAnVIHP%20August%2003%20Final.pdf].

Evans, R. J., Redman, K., Miller, S., Wang, Y., Sweetman, L., & Fenaughty, J. (2023). Arts, culture and recreation participation in the Growing Up in New Zealand cohort at 12-years [Manatū Taonga Bespoke Report] [Internet]. Growing Up in New Zealand. Retrieved March 5, 2024, from https://www.mch.govt.nz/publications/arts-culture-and-recreation-participation-growing-new-zealand-cohort-12-years

Highfield, C., & Webber, M. (2021). Mana Ūkaipō: Māori Student connection, belonging and engagement at school. *New Zealand Journal of Educational Studies*, *56*(2), 145–164. https://doi.org/10.1007/s40841-021-00226-z

Jewett, R., Sabiston, C. M., Brunet, J., O'Loughlin, E. K., Scarapicchia, T., & O'Loughlin, J. (2014). School Sport participation during adolescence and mental health in early adulthood. *Journal of Adolescent Health*, *55*(5), 640–644. https://doi.org/10.1016/j.jadohealth.2014.04.018

LaForge MacKenzie, K., Tombeau Cost, K., Tsujimoto, K. C., Crosbie, J., Charach, A., Anagnostou, E., Birken, C. S., Monga, S., Kelley, E., Burton, C. L., Nicolson, R., Georgiades, S., & Korczak, D. J. (2022). Participating in extracurricular activities and school sports during the COVID-19 pandemic: Associations with child and youth mental health. *Frontiers in Sports and Active Living*, *4*, 936041. https://doi.org/10.3389/fspor.2022.936041

Langley, E., Fuller, K., & Ryde, A. (2020). New Zealanders and the arts young persons survey: Attitudes, attendance and participation: Ko Aotearoa me ōna toi: Waiaro, wairongo, waiuru - te aro taiohi. Creative New Zealand. [Internet]. https://www.creativenz.govt.nz/-/media/Project/Creative-NZ/CreativeNZ/PublicationsFiles/final_young_persons_nzers_and_the_arts_2020_17022021.pdf

Lerner, R. M., Almerigi, J. B., Theokas, C., & Lerner, J. V. (2005). Positive youth development a view of the issues. *The Journal of Early Adolescence*, *25*(1), 10–16. https://doi.org/10.1177/0272431604273211

Mak, H. W., Bone, J. K., Noguchi, T., Kim, J., So, R., Walker, E., Smith, C., Bower, M., Botha, F., Sajnani, N., Fietje, N., & Fancourt, D. (2025). Global inequalities in arts, music or educational organization

membership: An epidemiological analysis of 73, 825 adults from 51 countries. *BMC Global and Public Health*, *3*(1), 68. https://doi.org/10.1186/s44263-025-00187-1

Mak, H. W., & Fancourt, D. (2021). Do socio-demographic factors predict children's engagement in arts and culture? Comparisons of in-school and out-of-school participation in the taking part survey. *PLOS ONE*, *16*(2). https://doi.org/10.1371/journal.pone.0246936

Mak, H. W., Sajnani, N., Fietje, N., & Fancourt, D. (2025). Global inequalities in arts and creative engagement in and outside school: Analyses of 441, 183 15-year-olds across 73 countries [Internet]. SocArXiv Retrieved December 8, 2025, from https://osf.io/bj4dp_v1

Marks, E., Tait, J., Miller, S., Liang, R., Bullen, P., & Fenaughty, J. (2023). *Now we are 12: The impact of disability on young people and their family. Snapshot 8. Supplementary material*. Growing Up in New Zealand. https://doi.org/10.17608/k6.auckland.26046973.v1

Matika, C., & Rout, J. (2023). New Zealanders and the Arts | Ko Aotearoa me ōno Toi: Survey findings for young New Zealanders [Internet]. Creative New Zealand & Verian. Retrieved April 22, 2025, from https://creativenz.govt.nz/-/media/project/creative-nz/creativenz/publicationsfiles/2024-nzers-and-the-arts/20240320_nzersandthearts_youngpersons.pdf .

Matthews, H. (2003). Children and regeneration: Setting an agenda for community participation and integration. *Children & Society*, *17*(4), 264–276. https://doi.org/10.1002/CHI.745

McMillan, R., McIsaac, M., & Janssen, I. (2016). Family structure as a correlate of organized Sport participation among youth. *PLOS ONE*, *11*(2). https://doi.org/10.1371/journal.pone.0147403

Ministry of Social Development. (2020). Social inclusion in New Zealand [Internet]. https://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/research/social-inclusion-in-new-zealand-a-rapid-evidence-review/social-inclusion-in-nz-rapid-evidence-review-report.pdf

Morton, S. M. B., Ramke, J., Kinloch, J., Grant, C. C., Carr, P. A., Leeson, H., Lee, A. C. L., & Robinson, E. (2015). Growing Up in New Zealand cohort alignment with all New Zealand births. *Australian and New Zealand Journal of Public Health*, *39*(1), 82–87. https://doi.org/10.1111/1753-6405.12220

Napier, C., Yao, E., Prasad, R., Kedia, A., Fenton, D., & Black, S. (2023). *Now we are, 12: Introduction to the Growing Up in New Zealand 12-year data collection wave* [Internet]. (Now We Are 12). Growing Up in New Zealand. https://doi.org/10.17608/k6.auckland.25999804.v1

Quarmby, T., Dagkas, S., & Bridge, M. (2011). Associations between children's physical activities, sedentary behaviours and family structure: A sequential mixed methods approach. *Health Education Research*, *26*(1), 63–76. https://doi.org/10.1093/her/cyq071

Rivas, R. A. (2016). The impact of participation in theatre arts on the social skills development of students with significant cognitive disabilities [Internet], California State University Retrieved July 4, 2025, from https://search.proquest.com/openview/871b8cd04c7eca928644800dda5fddab/1?pq-origsite=gscholar&cbl=18750&casa_token=H8y_n2lxaPAAAAAA:nmZMc8eAhezctKlXEpX5rq1gxytf2dj_W9FBulvk-F_Hs9UfbAyp53ktHBmzd5ROhWDHUQ5Rw

Sheppard, A., & Broughton, M. C. (2020). Promoting wellbeing and health through active participation in music and dance: A systematic review. *International Journal of Qualitative Studies on Health and Well-Being*, *15*(1), 1732526. https://doi.org/10.1080/17482631.2020.1732526

Sport New Zealand. (2022). Active NZ changes in participation: The New Zealand participation survey 2021 [Internet]. Retrieved April 22, 2025, from. https://sportnz.org.nz/media/5108/active-nz-updating-the-participation-landscape-2021.pdf

Tait, J., Redman, K., Patrakova, N., Wang, Y., Meissel, K., & Abraham, H. (2025). Arts, culture and recreation participation and wellbeing amongst 12-year-olds [Manatū Taonga Bespoke Report]. Auckland. https://www.mch.govt.nz/publications/arts-culture-and-recreation-participation-and-wellbeing-amongst-12-year-olds-2025

Veale, J., Byrne, J. L., Tan, K. K., Guy, S., Yee, A., & Nopera, T. M. L. (2019). Counting ourselves: The health and wellbeing of trans and non-binary people in Aotearoa New Zealand [Internet]. Transgender Health Research Lab. Retrieved July 4, 2025, from https://researchcommons.waikato.ac.nz/items/e07ce438-c4bc-4625-ac9f-8a925cb4256c

Walker, N., Dubey, N., Bergquist, M., Janicot, S., Swinburn, B., & Napier, C. (2021). Life during lockdown: Findings from the GUiNZ COVID-19 wellbeing survey. Part 1, Health and Wellbeing. https://doi.org/10.17608/k6.auckland.25762560.v1

Washington Group on Disability Statistics. (2022). The Washington group short set on functioning - enhanced (WG-SS enhanced) [Internet]. http://www.washingtongroup-disability.com/

Wilding, A., Munford, L., & Sutton, M. (2023). Estimating the heterogeneous health and well-being returns to social participation. *Health Economics*, *32*(9), 1921–1940. https://doi.org/10.1002/hec.4695

Wilson, O. W. A., Whatman, C., Walters, S., Keung, S., Enari, D., Chiet, A., Millar, S.-K., Ferkins, L., Hinckson, E., Hapeta, J., Sam, M., & Richards, J. (2022). "Balance is better": The wellbeing benefits of participating in a breadth of Sports across a variety of settings during adolescence. *International Journal of Environmental Research and Public Health*, *19*(14), 8597. https://doi.org/10.3390/ijerph19148597

Xu, L., Gauthier, A. H., & Strohschein, L. (2009). Why are some children left out? Factors barring Canadian children from participating in extracurricular activities. *Canadian Studies in Population*, *31*(3–4), 325. https://doi.org/10.25336/P6CW3H

Yu, M., & Baxter, J. (2015). Australian children's screen time and participation in extracurricular activities. *The longitudinal study of Australian children, annual statistical report*, 99–125.