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Comparing what nine year olds prefer to do, and what they actually do, outside school.

Growing Up in Ireland conference, November 2025

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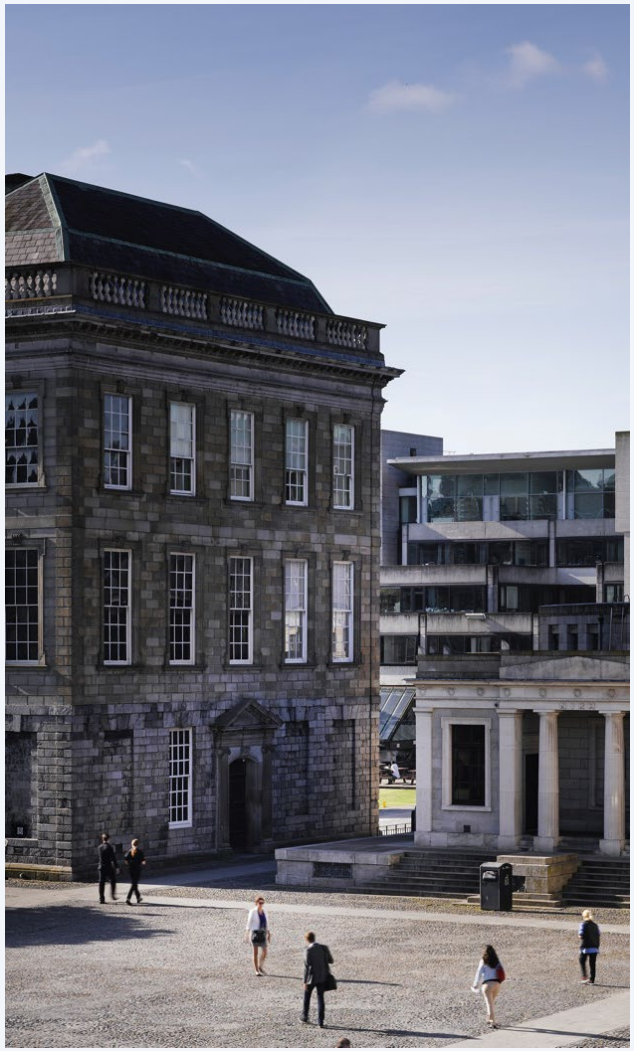
This brief study is part of wider PhD research



- Broader PhD research in TCD examining how the quantitative study of childhood disability can embrace the social model
- Sidelining 'impairment' as **the** key feature of disability, in favour of 'unequal participation' - a feature of disability definitions that unites 50 years of scholarship, from early British social model thinkers to the rights-based UNCRPD
- Exploring how differences in 'participation' between children evolve over time, and how impairment & environmental factors influence these – asking is there evidence of a 'disablement process'
- **Exploring potential of GUI out-of-school activity data as a way to operationalise 'equal participation'**

Literature Review – measuring participation

- Participation is “a complex multidimensional construct that is discussed & applied as both a process and an outcome” (Imms et al. 2017)
- Out-of-school activity is only one way to examine it
- For disabled children participation tends not to be viewed as an outcome: studies on all children “usually set their goal as studying children’s overall daily activities” while “studies on a specific population of children . . tend to look on children’s time-use as a variable influencing something else” (Ben-Arieh, Asher, and Anat Ofir. 2002)
- Multiple tools claiming to assess ‘participation’ – many do focus on activities - but not always clear how these relate to the child’s own perspective

Literature Review – what GUI Cohort '98 9-yr olds *do, & like to do*

Fás Aníos in Éirinn
Growing Up in Ireland

What they do: a 2012 cluster analysis of 'how often' activity variables found 5 clusters: a TV/sports group; social networker group; sports/computer games group; cultural activities group & a 'busy lives' group. Groups differed by gender & social background, & were also associated with learning impairment (but not physical impairment). McCoy, Quail and Smyth (2012)

What they like to do: a 2012 analysis of the 120 qualitative interviews found that while some children chose their structured activities, others did it because siblings did or because parents wanted them to.

In contrast, children described their free time as "their own time when they could choose who to play with and what to do. In other words, this time was marked by children's exercise of choice and control. And, very importantly, this was when they played with their friends." McAuley, McKeown & Merriman 2012.

Literature Review – what disabled children *like* to do

2*small sample, qualitative, disability-specific studies exploring participation from the pov of children with impairment:

A child's self-reported 'involvement' (or lack of involvement) in activities is not always perceptible by others. Finding an activity absorbing generally means it is enjoyable, but not always. Simpson, Imms & Keen 2022 (n=4 children 'on the autism spectrum', aged 9-14, using video recordings)

"The main elements of meaningful participation are: enjoyment, capability, social involvement and autonomy". Vänskä, Salla & Haataja 2020 (n=9 children aged 5-10 years using photo-elicitation interviews)

Research Aims

To guide my operationalisation of 'equal participation' by:

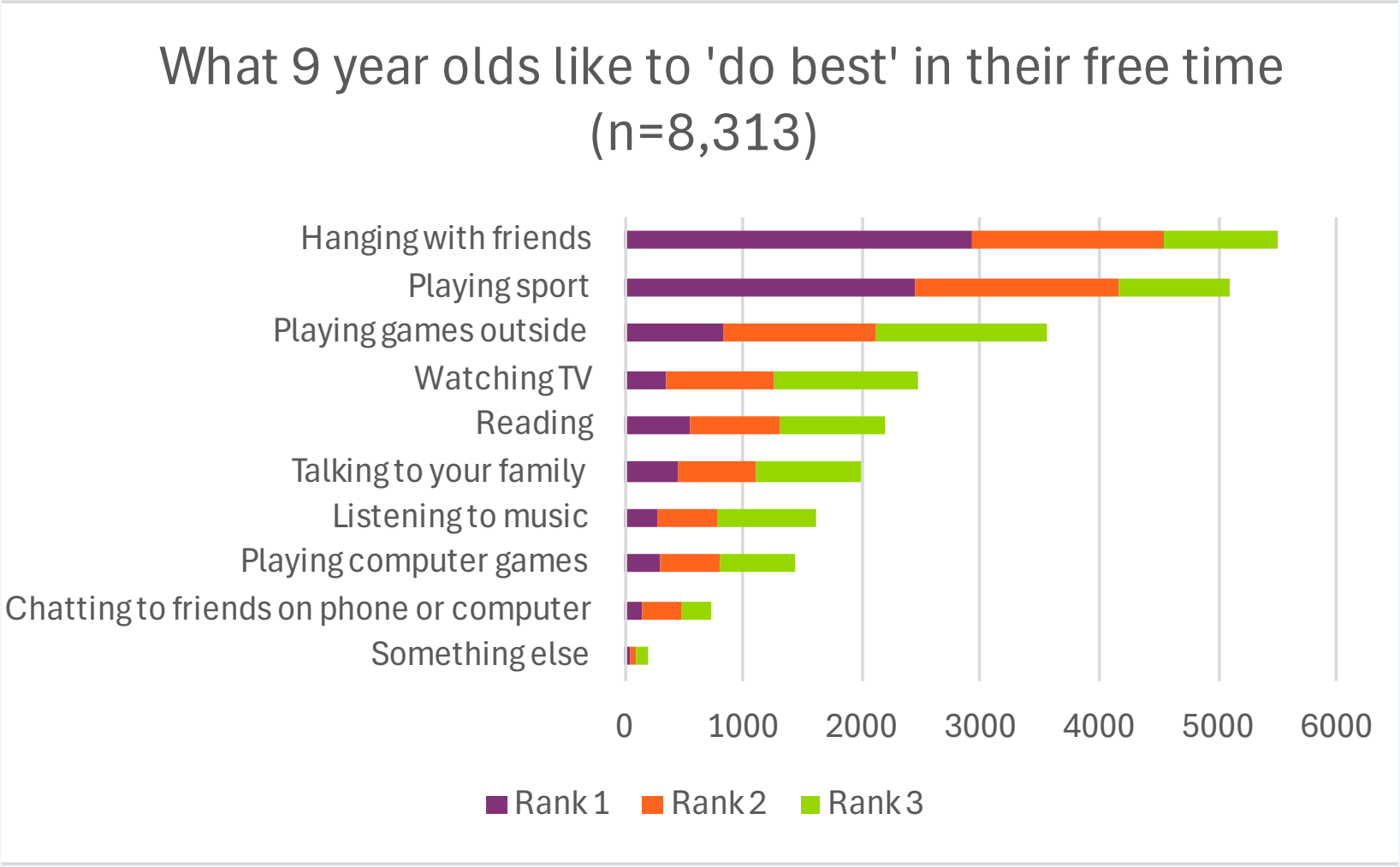
1. Exploring which particular activities the Growing Up in Ireland Cohort '98 children like doing best at age 9
2. Seeing whether what they *actually* do matches with their preferences
3. Examining the relationship between impairment and preferred activities

Methodology

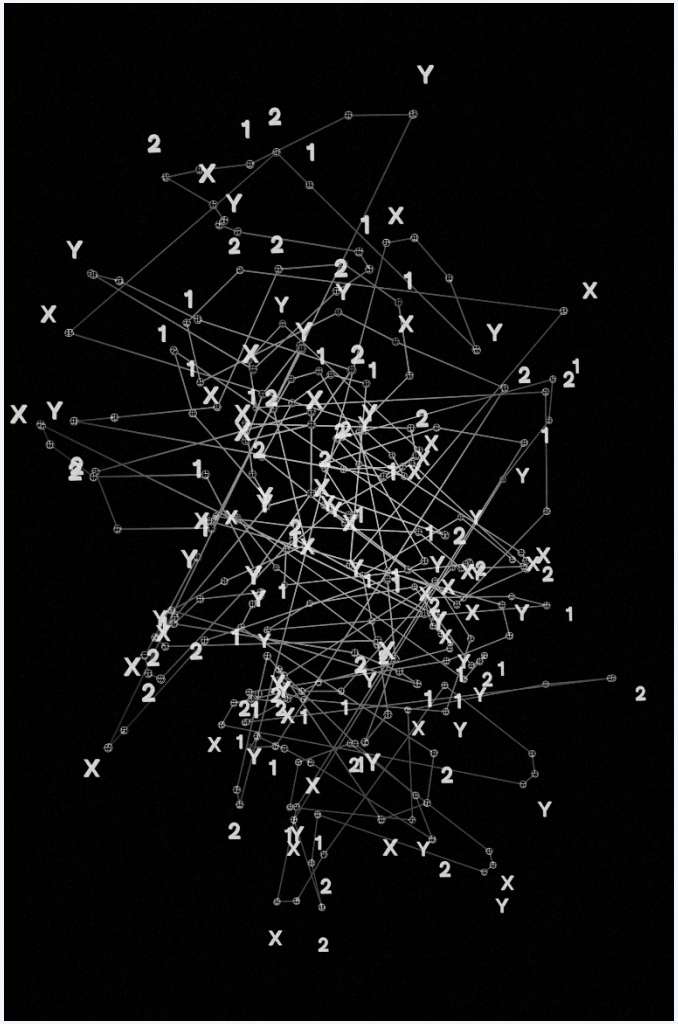
Cluster analysis of responses to question at age 9 "Here are some things that children could do in their free time. Can you please tell me which of these you like to do best, second best and third best."

- Hanging out with friends
- Chatting to friends on phone or computer
- Playing sport
- Watching TV
- Playing computer games
- Reading
- Playing games outside
- Listening to music
- Talking to your family
- Something else

Most popular activities (n=8,313)



Methodology



Method: hierarchical cluster analysis (unweighted data) (n=8313)

Distance measure: Gower (accommodates ordinality)

Grouping: Ward's minimum variance method

Unranked items: treated as a single tied group below the top 3. Each unranked item was assigned the average of ranks 4–10 (ie. 7) (Sensitivity analyses comparing this and a maximum rank (10) coding of unranked items was conducted)

Treatment of 'Other' category: ranked by <2.5% of participants, but retained to maintain the full structure, although interpreted cautiously

Choice of cluster solution: based on ASW & dendrogram. 6 & 8 cluster solutions compared using key cluster validity indices. Better in most cases for the 8 cluster solution

Child activity measures in GUI

Activity type - preferences	Reported time spent	Time use (parent)
Hanging with friends	Times per wk (parent)	-
Chatting on phone/online	-	(Email/Bebo/MSN/texting/on the phone – only 7% engaged in this activity at all on the diary day)
Sport	Times per wk (child)	Physical play /exercise/sports
TV	No. hrs per day (parent)	Watching TV/videos/Dvds
Computer games	No. hrs per day (parent)	Computer/internet /play station/ Xbox
Reading	No. hrs per day (parent) Times per wk/month (child)	Reading books, comics,magazines
Playing outside	-	-
Listening to music	-	-
Talking to family	-	(Family outing/visit relative's house)

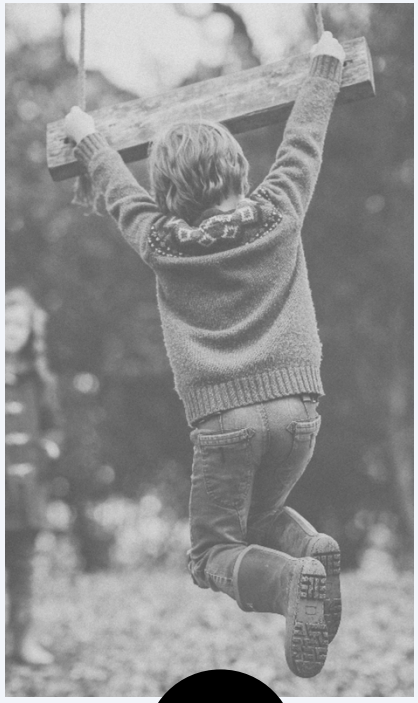
Other measures

Impairment (n=713 of 6,581 cases)

- Devised for an earlier research study
- Captures only children with a persistent & named impairment from W1 to W2 (physical impairment, speech or language difficulty, general or specific learning disability, autism spectrum disorder, emotional & behavioural difficulty)
- Reduces the analytical sample for the final regression by a large 2,000 cases, but is retained for comparability with planned future longitudinal analyses.

Other measures (drawn from the literature)

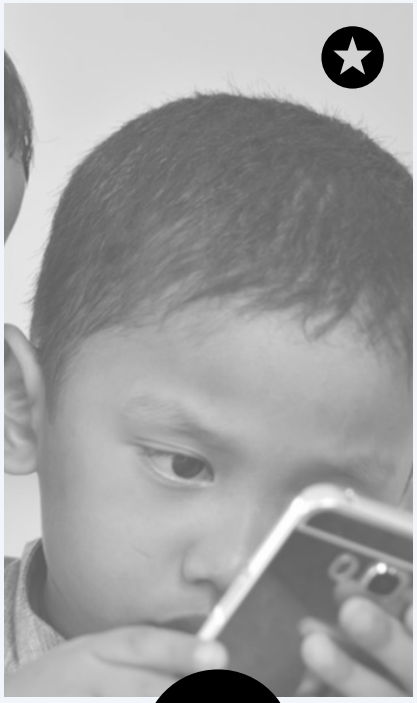
Gender: know to be strongly associated with activity profiles
Family social class: 3-category variable
Parental education: educational attainment of the mother (6-category)
Location: urban / rural



1

Time with friends & playing outside

(n=1,586)



2

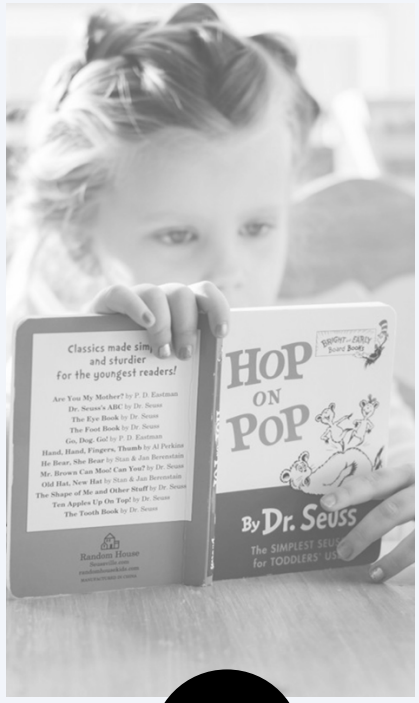
Socialisers in person and online/by phone

(n=1,303)

3

Sport & gaming

(n=1,251)



4

Reading

(n=1,240)

5

Family-oriented

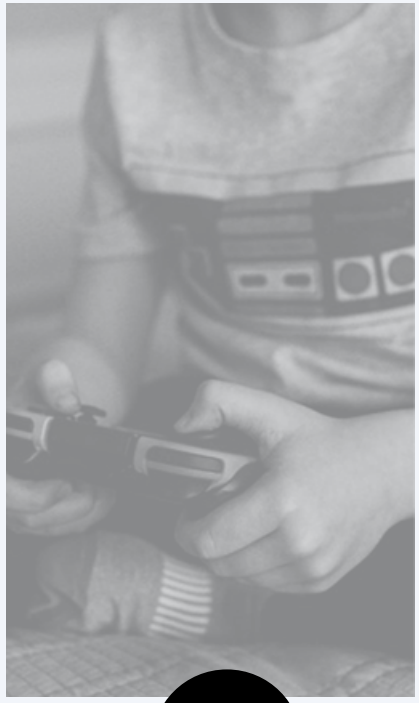
(n=1,043)

6

Music enthusiasts
(n=981)

7

'Against the grain' (no ranks for sport or 'hanging with friends')
(n=516)



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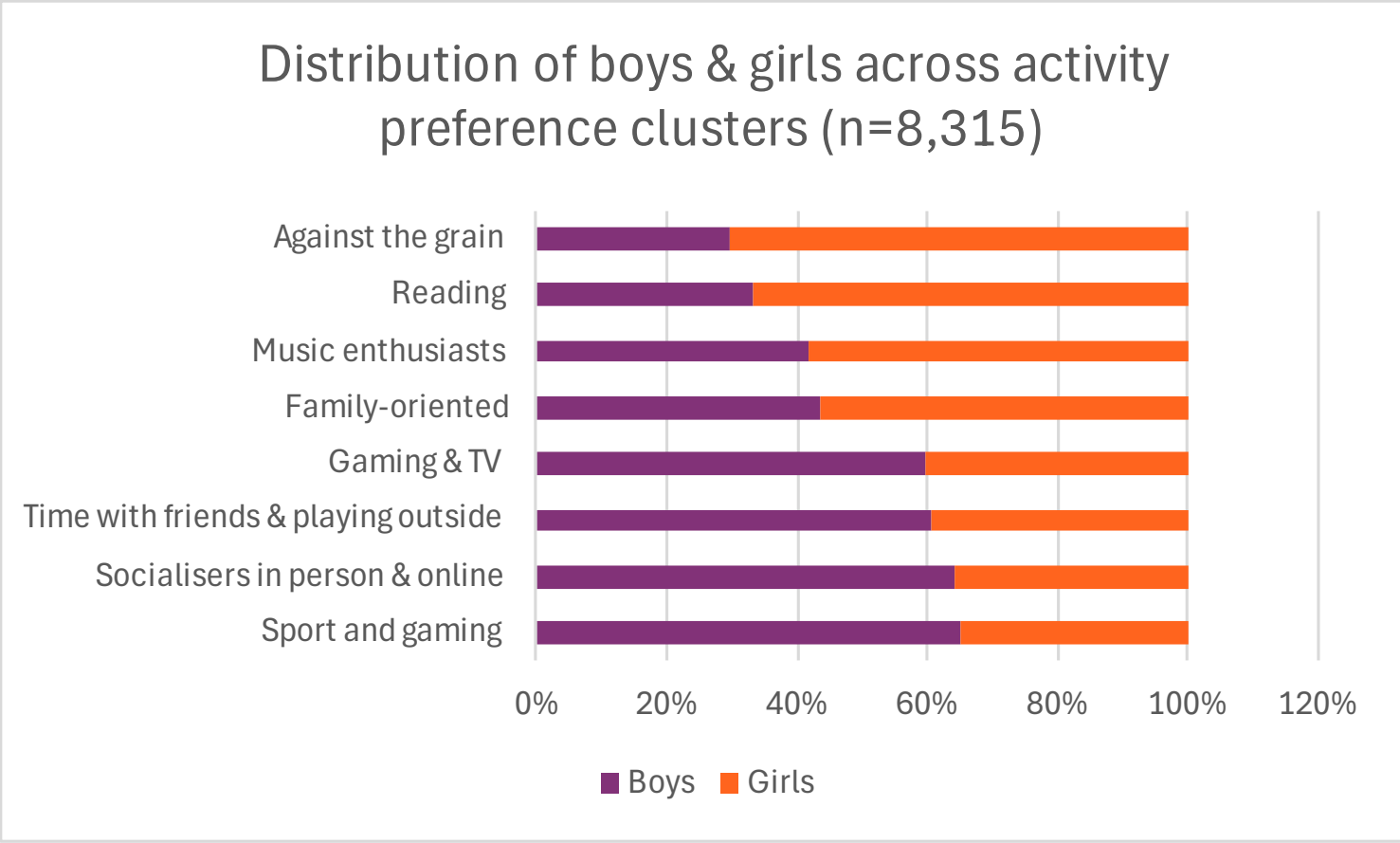
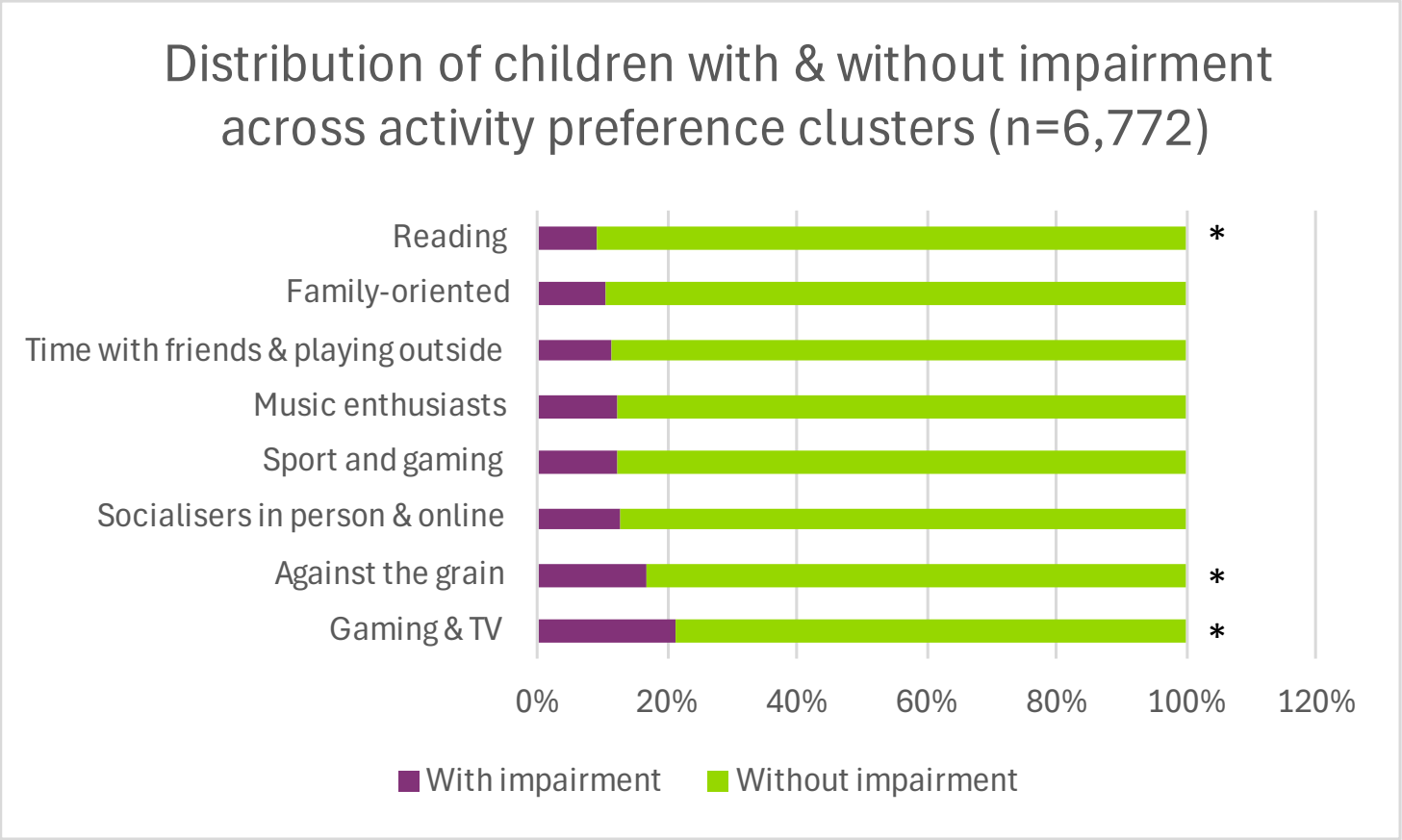
Gaming & TV (no ranks for sport, low for friends)
(n=393)

Relationship with gender



$\chi^2(7) = 569.009$, $p < .001$. All column percentages are significantly different (Bonferroni-adjusted z-tests, $p < .001$). Cramer's V=.262 (moderate). (Weights applied)

Relationship with impairment



$\chi^2(7) = 43.440$, $p < .001$. * indicates column percentages that are significantly different (Bonferroni-adjusted z-tests, $p < .001$). Cramer's V=.080 (small). (Weights applied)

Assumptions

- **Independent observations:** confirmed
- **Adequacy of expected frequencies:** 0 cells have counts <5 in cross-tabulations, but SPSS reported a small percentage of empty sub-population cells
- **Absence of multi-collinearity:** all tolerance values exceed 0.78 and VIFs range from 1.00 to 1.25, so no evidence of multicollinearity
- **Outliers / influential cases:** none of significance
- **Linearity of the continuous variables with respect to the logit of the dependent variable: (**no continuous independent variables)

Multinomial logistic regression predicting cluster membership (n=6,581)

Statistic	Value	Comment
Model χ^2	χ^2 (63) =666.070, p < .001	Model prediction is better than chance
Nagelkerke R^2	.098	Only 10% of variance explained – quite modest
Goodness-of-Fit (Pearson)	$\chi^2(728)=9520.2$, p=.306	Adequate

The model fits the data reasonably well overall and the predictors collectively improve prediction, but the explained variance is very modest.

Multinomial logistic regression predicting cluster membership (n=6,581) - predictors

Predictor	Value
Gender	χ^2 (7) = 502.360, p < .001
Mother's education	χ^2 (28) = 62.959, p < .001
Social class	χ^2 (14) = 32.523, p < .005
Impairment	χ^2 (7) = 29.980, p < .001
Urban/rural	χ^2 (7) = 16.590, p < .05

All five predictors were significantly associated with cluster membership. Gender showed the strongest association, followed by mother's education, social class, impairment, and urban/rural location.

Impairment & cluster membership

Cluster	Odds-ratio
Time with friends & playing outside	Reference
Socialisers in person and online/by phone	1.26
Sport & gaming	1.18
Reading	0.94
Family-oriented	1.11
Music enthusiasts	1.34*
'Against the grain'	1.72**
Gaming & TV	2.22***

Children with impairments were substantially more likely to belong to the **Gaming & TV** (OR = 2.22, p<.001) and **Against the Grain** (OR = 1.72, p = .002) clusters, and marginally more likely to belong to the **Music Enthusiasts** cluster (OR = 1.34, p = .048).

Preference cluster relationships with activities

Heatmap of 'frequent' participants in activities based on 'frequency' questions

	Does something with friends 6/7 times per week	Read for fun every day (child report)	Spend >1 hr reading for pleasure every day	Plays sport almost every day (child report)	Spend >3 hrs watching TV per day	Spend > 1 hr per day playing computer games
Music enthusiasts	27%	22%	25%	41%	14%	24%
Against the grain	18%	39%	41%	32%	11%	13%
Sport and gaming	21%	30%	26%	51%	9%	21%
Time with friends & playing outside	31%	23%	25%	53%	9%	20%
Reading	20%	57%	51%	35%	10%	15%
Gaming & TV	19%	28%	33%	20%	9%	26%
Socialisers in person & online	25%	24%	25%	52%	11%	26%
Family-oriented	22%	34%	29%	41%	6%	15%

Weights applied. Almost all bivariate relationships significant but effect sizes are very small.

Preference cluster relationships with activities

Heatmap of 'mean time (minutes)' in activity on the time diary day (weekdays in termtime only) (about 3,000 cases depending on the total time variable)

	Sport	Computer games	Watching TV	Reading
Music enthusiasts	55	18	60	15
Against the grain	46	14	53	25
Sport and gaming	60	16	55	20
Time with friends & playing outside	72	18	62	15
Reading	54	14	53	29
Gaming & TV	44	29	67	19
Socialisers in person & online	68	18	62	15
Family-oriented	55	18	52	18

Time use weights applied. Almost all bivariate relationships significant but effect sizes are very small.

Are they doing what they like to do? (frequency qs)

Time with friends & playing outside: 34% do something with friends 6/7 days per week (vs 27% overall) $\chi^2(28) = 227.344, p < .001$, *Cramer's V = .083* (parent report) *

Sport & gaming: 50% play sport 'almost every day' (vs 44% overall) $\chi^2(21) = 511.694, p < .001$, *Cramer's V = .143* (child report) * ('Socialisers' & 'time with friends' contain more 'higher frequency' sports participants)

Gaming & TV: 30% spend > 1 day playing computer games (vs 22% overall). $\chi^2(7) = 126.042, p < .001$, *Cramer's V = .123* (parent report) * (Socialisers also contains 'high frequency' gamers)

Gaming & TV: 11% spend > 3 hrs per day watching TV, same as for the full sample. $\chi^2(7) = 330.057, p < .001$, *Cramer's V = .063* (parent report) (3 clusters contain more frequent TV watchers)

Readers: 55% read every day (vs 30% overall). $\chi^2(35) = 607.783, p < .001$, *Cramer's V = .121* (child report) *

**** Indicates column percentages that are significantly different (Bonferroni-adjusted z-tests, p < .001). Data is weighted in this analysis.***

Are they doing what they like to do? (mean time on a weekday in termtime)

Sport & gaming: spent avg 60 mins doing sport on the diary day-same as for the whole sample. *Welch's $F(7, 1378.400) = 15.390$, $p < .001$, $\eta^2 = 0.026$*

Gaming & TV: spent avg 29 mins playing computer games on the diary day (vs 18 mins overall). *Welch's $F(7, 1355.535) = 7.262$, $p < .001$, $\eta^2 = 0.015$*

Sport & gaming*:* spent avg 16 mins playing computer games on the diary day – same as for the whole sample (see above)

Gaming & TV: spent avg 67 mins watching TV on the diary day (vs 57 mins overall). *$F(7, 4027) = 6.062$, $p < .001$, $\eta^2 = 0.01$*

Reading: spent avg 29 mins reading on the diary day (vs 19 mins overall). *Welch's $F(7, 1352.350) = 12.646$, $p < .001$, $\eta^2 = 0.026$*

Data are weighted with time-use weights.

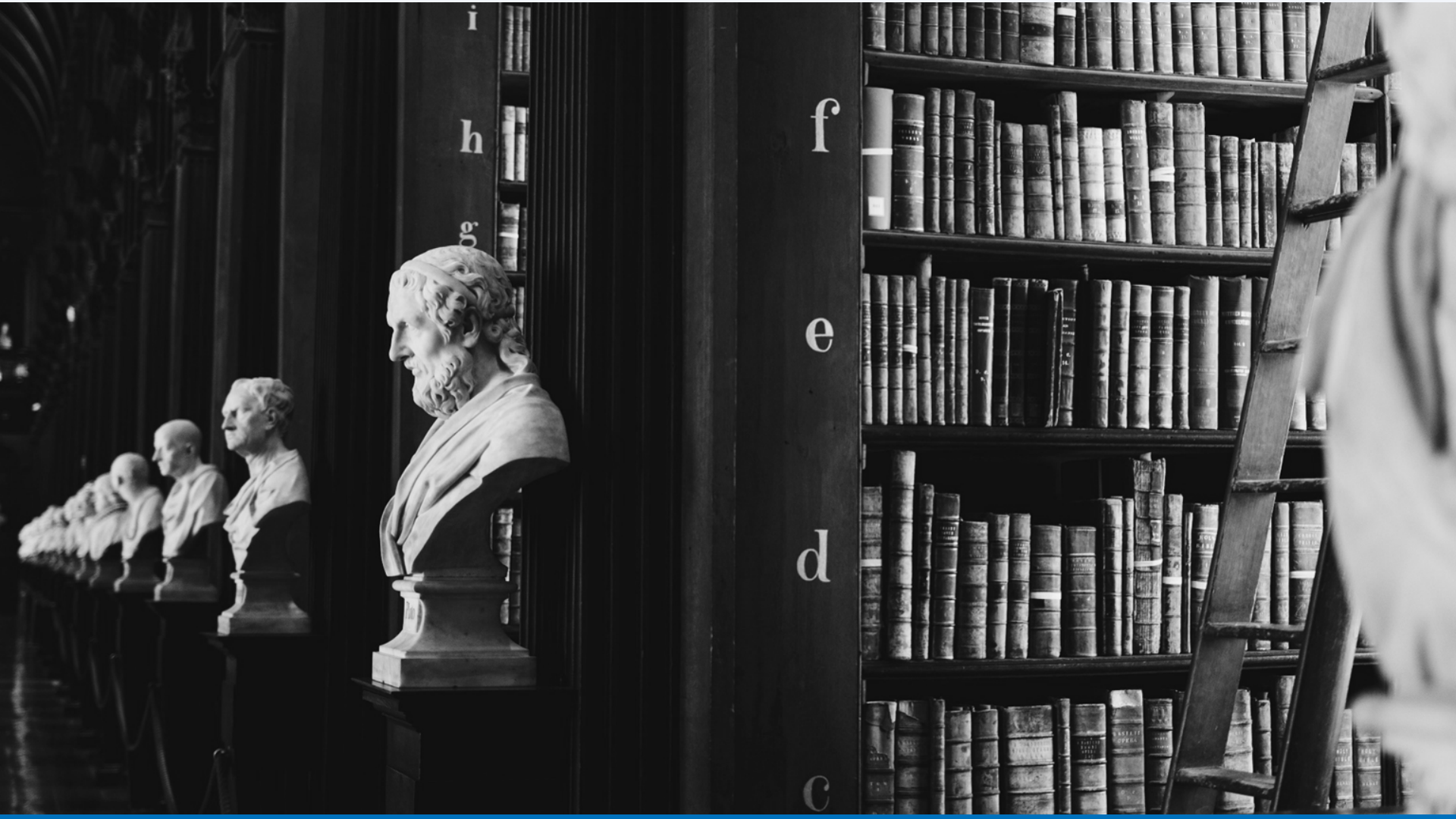
Discussion

- Resonates with previous literature showing that **gender** is **strongly associated** with ***what*** children do, & from this research we see that it is also strongly associated with what they say they ***prefer*** to do
- Although sport is popular, it is enjoyment of **spending time with friends that defines the largest two clusters** – perhaps echoing the qualitative research
- However, while there are **children with impairment** distributed across all the clusters, they are **particularly strongly represented in the 2 more 'solitary' clusters**. The multivariate analysis shows that this holds true, over & above other factors. Indicates that prioritising being with friends is not universal for all 9 year olds
- Where we have the data, we can see that **mostly the GUI 9-year olds are doing what they enjoy** – but the data is limited (for example, there is no time-use variable for 'hanging with friends', 'playing outside' or 'spending time with family' at wave 1 (they were introduced in subsequent waves). There is also no variable at all for 'listening to music'. Associations are mostly significant but weak.

Conclusion

- Any operationalisation of 'equal participation' in further research needs to **balance** considerations of the **child's preferences**, with what society believes may be in their **best interests**
- In this, there may be a tension in **Article 7 of the CRPD** which calls for society to act in their best interests, but also that "children with disabilities have the right to express their views freely on all matters affecting them, their views being given due weight in accordance with their age and maturity, on an equal basis with other children"
- **For my further research, this brief study suggests that both social activities *and* more solitary activities (such as gaming, or listening to music) should be part of any operationalisation of 'equal participation' for children with impairment, if the research is to reflect the child's preferences.**

References & photo credits



References

Ben-Arieh, A., & Ofir, A. (2002). Opinion, dialogue, review: Time for (more) time-use studies - Studying the daily activities of children. Childhood, 9(2), 225–248.

Imms, C., Granlund, M., Wilson, P. H., Steenbergen, B., Rosenbaum, P. L., & Gordon, A. M. (2017). Participation, both a means and an end: a conceptual analysis of processes and outcomes in childhood disability. Developmental Medicine & Child Neurology, 59(1), 16–25.

McAuley, C., McKeown, C., & Merriman, B. (2012). Spending time with family and friends: Children's views on relationships and shared activities. Child Indicators Research, 5(3), 449–467.

McCoy, S., Quail, A., and Smyth, E. (2012). Growing Up in Ireland: Influences on 9-year-olds' Learning: Home, School and Community. Dublin: Department of Children and Youth Affairs.

Simpson, K., Imms, C., & Keen, D. (2022). The experience of participation: eliciting the views of children on the autism spectrum. Disability and Rehabilitation, 44(9), 1700–1708.

Vänskä, N., Sipari, S., & Haataja, L. (2020). What Makes Participation Meaningful? Using Photo-Elicitation to Interview Children with Disabilities. Physical and Occupational Therapy in Pediatrics, 40(6), 595–609.

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