

Unequal opportunities for play? How children spend their time in Ireland

Rokicki, S., & McGovern, M. (2018). Unequal opportunities for play? How children spend their time in Ireland. *Children's Research Digest*, 5(2), 11. [1].

Published in:
Children's Research Digest

Document Version:
Publisher's PDF, also known as Version of record

Queen's University Belfast - Research Portal:
[Link to publication record in Queen's University Belfast Research Portal](#)

General rights

Copyright for the publications made accessible via the Queen's University Belfast Research Portal is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The Research Portal is Queen's institutional repository that provides access to Queen's research output. Every effort has been made to ensure that content in the Research Portal does not infringe any person's rights, or applicable UK laws. If you discover content in the Research Portal that you believe breaches copyright or violates any law, please contact openaccess@qub.ac.uk.

Unequal opportunities for play?

How children spend their time in Ireland

Slawa Rokicki and Mark McGovern

Introduction

The way children spend their time impacts their cognitive and non-cognitive skills (often defined in terms of brain and socio-emotional development, respectively). Play, sports and other prosocial activities promote positive growth by creating opportunities for belonging, helping others, and skill building (Fredricks and Eccles, 2006). Beneficial pastimes can help to foster skills such as the ability to focus on tasks, the ability to work with others, self-regulation, and self-esteem (Posner and Vandell, 1999). Unstructured play time has also been linked to greater self-esteem and resilience (Malone, 2007).

There is substantial evidence documenting socioeconomic status (SES) differences in the developmental resources available to children (Heckman, 2008). Moreover, data point to ever increasing disparities in time spent in skill-promoting activities by parental education (Altintas, 2016; Putnam, 2016; Ramey and Ramey, 2010). Because early life experiences contribute to later outcomes, systematic differences in the extent to which children are able to engage in activities such as play and sports may be contributing to inequality among adults. The present study examines whether children in Ireland from different family backgrounds have the same opportunities to engage in play and other activities using data from the Growing Up in Ireland (GUI) study. GUI captures diary information that allows for the investigation of how children spend their time from age 9 to age 13.

Literature

Engaging in activities such as play which promote the development of non-cognitive skills during childhood has been shown to be important in later life, contributing to increases in education and wages, as well as improving health. Participation in sports, school-based leadership and spirit activities, and academic clubs is associated with an increased likelihood of being enrolled full-time in college at age 21. Similarly, participation in prosocial activities is

associated with lower rates of alcohol and drug use (Eccles et al., 2003). In particular, when girls participate in sports, they have a higher chance of attending college and being employed (Pfeifer and Cornelißen, 2010; Stevenson, 2010).

Play and engaging in sport can also be important for health in the long run. High levels of physical activity at ages 9 to 12 among Finnish children is associated with increased physical activity when they reach adulthood (Telama, R., Yang, X., Viikari, J., Välimäki, I., Wanne, O. and Raitakari, O. 2005). Evidence from a randomised trial shows that children exposed to stimulating early environments that emphasize development of language, emotional regulation, and cognitive skills have significantly lower prevalence of risk factors for cardiovascular and metabolic diseases in their mid-30s (Campbell et al., 2014).

Other types of play can also be important for both cognitive and non-cognitive development. Some evidence suggests that time spent using a computer (for any reason) at age 5 positively impacts test scores at age 7, while time spent watching television or playing video games has a negative effect on test scores (Fiorini, 2010). Other research suggests that some types of television programme can be beneficial for cognitive skills like reading and mathematics (Wright et al., 2001).

Finally, unstructured time may have benefits too. Independent mobility is associated with increases in physical activity for 10-12 year olds (Page et al., 2010; Wen et al., 2009). Additionally, exposure to risks and challenges without adult supervision may build problem solving skills and resilience (Malone, 2007). Studies have found that a lack of experience of autonomy and independence in childhood may contribute to a lack of self-confidence, self-esteem, anxiety during transitions, and reduced social competence in young adulthood (Lang and Deitz, 1990; Malone, 2007). Finally, unstructured social activities may promote self-discovery and personal expressiveness with peers (Coatsworth et al., 2005).

Data and methods

The nationally representative GUI survey collects time use diary data from children and their parents. The survey comprises two cohorts followed longitudinally, one who were age 9 at baseline in 2007/2008, and another who were age 9 months. In this analysis we focus on the child cohort, which comprises 8,568 nine-year-olds at wave 1. Wave 2 was conducted when the children were aged 13. Both wave 1 and wave 2 captured time use information.

The GUI time use diary recorded details of the activities of participants over a 24-hour period, dividing the day and night into 15-minute intervals. In the first wave, parents were asked to complete the diary with their children (where possible); at the second wave, the 13-year-old children were asked to complete the diary with the help of their parents (if necessary).

The lists of possible activities were not the same across the two waves, therefore in order to compare time use at ages 9 and 13 we consolidated the activities into 12 categories: sleeping, care (which includes eating, traveling, and personal care), school, homework, sport/exercise, unstructured playing time (general play, playing board games or cards, playing with a pet, and hanging out with friends), leisure (hobbies and music lessons), media (which includes watching TV and videos, using the computer/internet, using phones and social media, and listening to music), reading for pleasure, housework, family time (which includes shopping trips and outings), and other (Table 1). This allows us to establish the time spent in activities such as play for the average child, but also to examine whether the time use patterns differ according to family background. In constructing these categories, we were limited by the activities defined in the survey; for example, at age 9 children marked whether they spent time in “physical play/exercise/sports” so there is no way to distinguish physical play on a playground from organised sports. The exact phrasing of the activities provided in the survey is shown in Table 1 for each wave. Further details are described in Rokicki and McGovern (2017).

In this paper, we evaluate the average time spent in sport, reading, using media, and unstructured playing time for girls and boys in wave 1 and wave 2. We examine differences in time use by maternal education, which has been used extensively as a proxy for socio-economic status in the literature on children's development (Hupp et al., 2011; Madden, 2017).

Results

Figure 1 shows the time use pattern for girls. We find important differences by SES (as measured by maternal education) in both the amount of time spent in various activities, as well as the trends over time. Girls at age 9 spend about 50 minutes playing sports each day, without much difference by SES (Figure 1). By age 13, average sports time is reduced dramatically for all girls; however, girls from lower SES backgrounds spend even less time playing sports at age 13 (12 minutes) than their counterparts from higher SES backgrounds (29 minutes). Conversely, for time spent using media, the picture is reversed: all girls increase the time spent using media from age 9 to 13, however children from lower SES backgrounds spend more time on media (108 minutes) than their counterparts (86 minutes) by age 13.

Category	Wave 1 (Age 9)	Wave 2 (Age 13)
Sleeping	Sleeping	Sleeping/Resting
	Resting/relaxing (doing nothing, 'time out')	
Care	Personal care (washing, dressing, toilet)	Personal care or getting ready
	Eating/drinking/having a meal	Eating
	Traveling to and from school	Traveling (to or from school or elsewhere)
	Other traveling	
School	At school	At school
Homework	Homework	Doing homework or study
Sport	Physical play/exercise/ sports (playground, running, chasing, football, judo, ballet, dance)	Playing sport or doing physical exercise (training, matches)
Unstructured playing time	Playing board games, cards, etc	Just hanging around with friends (outside or inside)
	General play (with toys, dolls, cars, dressing up, 'playing house', imaginary/make believe games)	Playing with or exercising a pet
Leisure	Hobbies and other leisure activities (crafts, model making, painting, music practice, etc)	Music Lessons (or practicing music), drama, classes
		Hobbies and other leisure activities
Media	Computer/internet/ playstation/xbox	Using the internet/emailing (including social networking, browsing)
	Email/bebo/msn/texting/ on the phone	Playing computer games
	Watching tv and videos/ dvds etc	Talking on the phone or texting
		Watching tv, films, videos, or dvds
		Listening to music

Category	Wave 1 (Age 9)	Wave 2 (Age 13)
Reading	Reading books, comics, magazines	Reading for pleasure or interest
Housework	Household chores/ housework	Housework
Family	Visits to relative's house for purposes other than play	Spending time with family
	On a family outing	On an outing (to beach, mountains, shopping, theatre, match)
	On a shopping trip	Out shopping to buy things
Other	Religious activity	Other (religious activity, medical appointment, babysitting, GUI activity)
	Not sure/missing	Don't know/missing

Table 1 Categorisation of Activities for Waves 1 and 2

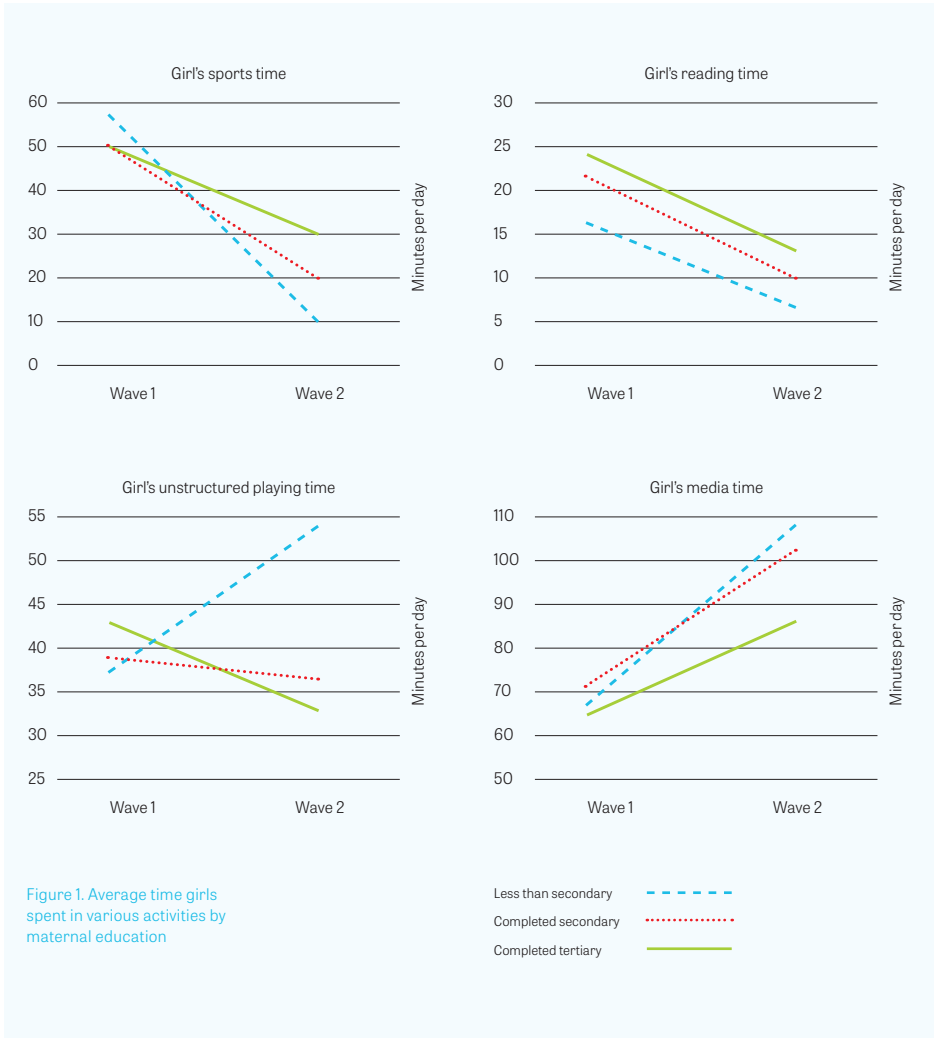


Figure 1: Average time girls spent in various activities by maternal education

Interestingly, the gaps in reading time are already evident for girls by age 9: girls from lower SES backgrounds spend about 7 minutes less in reading than their counterparts. This gap persists at age 13.

Finally, for unstructured playing time, the trends by SES diverge even more. While girls from low SES backgrounds increase their unstructured playing time from age 9 to age 13 by 15 minutes per day, girls from average and high SES backgrounds decrease their unstructured playing time by 2 and 10 minutes, respectively.

We find very similar results for boys across the four categories of activities.

Discussion

Although a large international literature has documented that the developmental opportunities are not equally available to all children, there has been relatively little quantitative evidence on how children in Ireland spend their time. Data from the GUI study shed light on disparities in the capacity to engage in different types of activities by family background. Given the potential impact of skills learned as part of time spent in skill-promoting activities on adult outcomes, this issue is particularly relevant for intergenerational transmission of disadvantage.

In this analysis, we find there are substantial differences in time spent in play activity by family background. This is especially the case by age 13, at which point gaps in reading, sports, media and unstructured play are all apparent. However, gaps in time spent reading are evident by age 9 for both girls and boys. Both girls and boys from disadvantaged backgrounds spend less time in sport activities and more time using media at age 13. For unstructured playing time, girls from high SES backgrounds reduce time spent in this category from age 9 to 13, while girls from low SES backgrounds substantially increase this time.

Spending less time in sports and reading are likely to be a disadvantage for the child's physical health and cognitive development, given that the literature has specifically linked these activities to future health and wellbeing. From this perspective, the systematic differences in time spent in these activities is concerning and supports the hypothesis that not all children are receiving an equal opportunity to engage in the types of play that would best support their development. Widening gaps as children age indicate increasing disparities. Some studies have suggested that increased media time is linked to worse outcomes, although further evidence is required.

Time spent in unstructured play may be helpful for promoting skills such as independence, resilience, and social competence (Coatsworth et al., 2005; Lang and Deitz, 1990; Malone, 2007). More evidence in the Irish context is needed, and future research would benefit from more consistent and precise definitions of what constitutes unstructured play. In the data, those from higher SES backgrounds have less opportunity to engage in this type of activity and therefore may be disadvantaged by missing out on the potential developmental benefits that it may provide. Likewise, those from lower SES backgrounds may be gaining most from this type of activity, which in turn could be helping to lessen gradients in other activities such as reading.

Our study has some limitations. In the time use survey, activity descriptions changed from wave 1 to wave 2, and therefore categories are not perfectly aligned. In addition, time use data were self-reported by caregivers and children and may suffer from inconsistencies and recall error.

Most of the literature we cite which relates childhood play and activities to later outcomes comes from international evidence. While further work is required to establish the causal pathways linking childhood time use to adult characteristics, even descriptive data on this subject are lacking for Ireland. Future research along these lines would help to establish the

extent to which different types of activities and play are beneficial for children during childhood across the life cycle. Such analyses may also form the basis of policy and/or interventions aimed at promoting skill development in early life in Ireland.

References

- Altintas, E. (2016) *Widening education-gap in developmental childcare activities in the US*. Journal of Marriage and Family, Vol. 78(1), pp. 26–42.
- Campbell, F., Conti, G., Heckman, J.J., Moon, S.H., Pinto, R., Pungello, E. and Pan, Y. (2014) *Early Childhood Investments Substantially Boost Adult Health*. Science, Vol. 343(6178), pp. 1478–1485.
- Coatsworth, J.D., Sharp, E.H., Palen, L.-A., Darling, N., Cumsille, P. and Marta, E. (2005) *Exploring adolescent self-defining leisure activities and identity experiences across three countries*. International Journal of Behavioral Development, Vol. 29(5), pp. 361–370.
- Eccles, J.S., Barber, B.L., Stone, M. and Hunt, J. (2003) *Extracurricular Activities and Adolescent Development*. Journal of Social Issues, Vol. 59(4), pp. 865–889.
- Fiorini, M. (2010) *The effect of home computer use on children's cognitive and non-cognitive skills*. Economics of Education Review, Vol. 29(1), pp. 55–72.
- Fredricks, J.A. and Eccles, J.S. (2006) *Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations*. Developmental Psychology, Vol. 42(4), pp. 698–713.
- Heckman, J.J. (2008) *Schools, skills, and synapses*. Economic Inquiry, Vol. 46(3), pp. 289–324.
- Hupp, J.M., Munala, L., Kaffenberger, J.A. and Wessell, M.B.H. (2011) *The Interactive Effect of Parental Education on Language Production*. Current Psychology, Vol. 30(4), pp. 312–323.
- Lang, M.A. and Deitz, S. (1990) *Creating environments that facilitate independence: the hidden dependency trap*. Children's Environments Quarterly, Vol. 7(3), pp. 2–6.
- Madden, D. (2017) *Childhood obesity and maternal education in Ireland*. Economics and Human Biology, Vol. 27 Pt A, pp. 114–125.
- Malone, K. (2007) *The bubble-wrap generation: children growing up in walled gardens*. Environmental Education Research, Vol. 13(4), pp. 513–527.
- Page, A.S., Cooper, A.R., Griew, P. and Jago, R. (2010) *Independent mobility, perceptions of the built environment and children's participation in play, active travel and structured exercise and sport: the PEACH Project*. International Journal of Behavioral Nutrition and Physical Activity, Vol. 7, p. 17.
- Pfeifer, C. and Cornelißen, T. (2010) *The impact of participation in sports on educational attainment—New evidence from Germany*. Economics of Education Review, Vol. 29(1), pp. 94–103.
- Posner, J.K. and Vandell, D.L. (1999) *After-school activities and the development of low-income urban children: A longitudinal study*. Developmental Psychology, Vol. 35(3), pp. 868–879.
- Putnam, R.D. (2016) *Our Kids: The American Dream in Crisis*. Simon and Schuster. New York.
- Ramey, G. and Ramey, V.A. (2010) *The Rug Rat Race*. Brookings Papers on Economic Activity, Vol. 1, pp. 129–176.
- Rokicki, S. and McGovern, M. (2017) *Heterogeneity in Early Life Investments: A Longitudinal Analysis of Children's Time Use*. CHARMS Working Paper 17-02.
- Stevenson, B. (2010) *Beyond the classroom: Using Title IX to measure the return to high school sports*. The Review of Economics and Statistics, Vol. 92(2), pp. 284–301.

Telama, R., Yang, X., Viikari, J., Välimäki, I., Wanne, O. and Raitakari, O. (2005) *Physical activity from childhood to adulthood: a 21-year tracking study*. American Journal of Preventive Medicine, Vol. 28(3), pp. 267–273.

Wen, L.M., Kite, J., Merom, D. and Rissel, C. (2009) *Time spent playing outdoors after school and its relationship with independent mobility: a cross-sectional survey of children aged 10–12 years in Sydney, Australia*. International Journal of Behavioral Nutrition and Physical Activity, Vol. 6, p. 15.

Wright, J.C., Huston, A.C., Murphy, K.C., St. Peters, M., Piñon, M., Scantlin, R. and Kotler, J. (2001) *The Relations of Early Television Viewing to School Readiness and Vocabulary of Children from Low-Income Families: The Early Window Project*. Child Development, Vol. 72(5), pp. 1347–1366.

Author information

Slawa is a Post-Doctoral Fellow in Health Economics. She received her PhD in Health Policy from Harvard University in 2016. In her work, she applies both experimental and quasi-experimental approaches to explore research questions in the areas of reproductive health and maternal/child health.

Mark McGovern is a Lecturer in Economics at Queen's Management School, Queen's University Belfast, and the UKCRC Centre of Excellence for Public Health (Northern Ireland). His main research interests are in maternal/child health and development.