Trinity College Dublin
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Digital use and digital inequality among Irish children from different ethnic backgrounds

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OVERVIEW

Building upon previous research on **child and adolescent digital use in Ireland** (Bohnert & Gracia 2021, Bohnert & Gracia 2023) and achievement gaps amongst children of migrant backgrounds in Ireland (Sprong & Skopek 2022, Sprong & Skopek 2023), this study uses data from the 2008 Infant Cohort of the Growing Up in Ireland (GUI) study to examine:

1) **digital use behaviours** across **migrant background**

2) how associations between child digital use and **psychosocial difficulties** vary across migrant backgrounds

Background:
Ireland and Migration

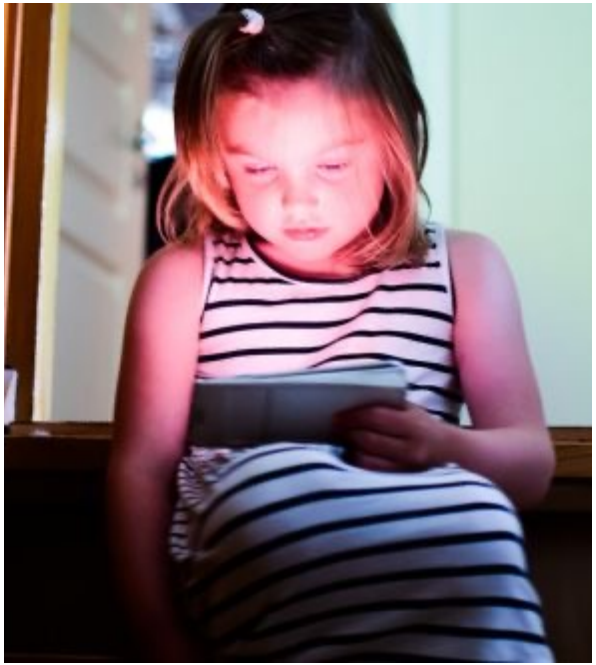
- The Irish migrant population is sizeable, with almost **one in four** babies born in Ireland being born to mothers of non-Irish nationality (CSO, 2019).
- The UK and Poland are the two most important places of origin, but immigrants in Ireland come from a wide range of social, cultural and ethnic backgrounds and tend to be **relatively highly educated** (McGinnity et al., 2020).
- Ireland provides an interesting study context for research on migrant and ethnic populations due to its **short history of large-scale immigration** and the ethnically diverse and **highly educated composition** of the immigrant population

Background:
Migrant background and outcomes

- However, there are also some reasons for concern: children with a migration background in Ireland are more likely to live in **specific urban areas** (Devine, 2013) and to be concentrated in schools serving **socioeconomically disadvantaged** groups (Byrne et al. 2010).
- Further, Irish evidence migrant and ethnic gaps in child well-being and mental health is minimal, although a study by Masaud et al. (2015) found children with migration background in Ireland to have slightly **higher developmental problems and internalizing difficulties** than Irish children.

Background

Child digital use and outcomes in Ireland



- Previous studies have found that **heavy screen-time** is associated with increased psychosocial difficulties (Bohnert & Gracia, 2021), and that there are key **sociodemographic differences** in digital behaviours and digital effects (Bohnert & Gracia, 2023).
- **Immigration status, race, and ethnicity** have also been found to influence digital practices and norms (Fong et al. 2020; Swindle et al. 2014; Garg & Sangupta 2019).
- To date, there are **no studies** that examine migrant and ethnic differences child and adolescent digital use in Ireland, and no studies globally that centralize migrant background and ethnicity in the **association between digital use and well-being**.

DATA:

- Thus far, we utilize the 2008 Infant Cohort of the Growing Up In Ireland (GUI) study at **age 9** (N=8,032). We utilize this cohort and wave because it contains both more detailed data on **children's digital lives**, as well as a large sub-sample of children of migrant backgrounds (N = 2,281)
- In some analyses, we differentiate between migrant and non-migrant background, and other we differentiate by specific ethnic background:
  - **Irish White** (N = 6,400)
  - **Other White** (N = 522)
  - **African/Black** (N = 183)
  - **Asian** (N = 139)
  - **Other/Mixed** (N = 768)

DATA:
Key variables

- **Screen-time:** the GUI includes categorical self-reports of digital screen-time, in line with previous literature (Bohnert & Gracia 2021; Przybylski & Weinstein 2017) that separates screen-time into five categories: non-users, less than hour, 1 to 2 hours, 2 to 3 hours, and 3+ hours.
- **Activities:** the GUI also includes some measures of what digital activities children are engaging in. These include: watching TV/videos, streaming music, educational digital activities, digital communication, social media, gaming (alone), and social gaming (gaming with others).

DATA:
Key variables

- To measure psychosocial difficulties, we utilize the **Strengths and Difficulties Questionnaire:** 'a concise and well-validated tool' used to measure socioemotional well-being of children and adolescents (Goodman and Goodman 2011).
- We have also utilized further subscales of the SDQ as outcomes variables: Total Difficulties Score (TDS), Internalizing Difficulties, Externalizing Difficulties, and Prosocial Functioning.

METHODOLOGY:

First, we descriptively examine differences in digital use across migrant background and ethnicity.

Next, we conduct multiple logistic regression models to examine the statistical significance of descriptive differences.

Finally, we utilize multivariate linear regression models to investigate differences in associations of child digital use on SDQ across migrant background and ethnicity.

All analyses control for gender, SES, parental education, and parenting style.

RESULTS:

Table 1: Descriptive statistics - Migrant background and digital use

	No migrant background	Migrant background
Digital screen-time		
None	25.1	25.0
< 1 hour	48.4	45.0
1 to 2 hours	19.0	21.0
2 to 3 hours	5.5	5.8
3 + hours	2.1	2.9
Activities		
Watch TV/videos	82.7	84.5
Stream music	20.1	18.2
Education/information	62.3	65.5
Communication	26.3	26.0
Social media	10.3	9.7
Video games (alone)	80.0	79.0
Video games (with others)	40.2	45.9
N	5,751	2,281

Data: Growing Up in Ireland (GUI) Survey.

RESULTS:

Logistic regressions by migrant background

Table 2: Multiple logistic regression – Migrant background on screen-time

	None	Less than an hour (Ref)	1 to 2 hours	2 to 3 hours	3+ hours
No migrant background (Ref)					
Migrant background	1.094	-	1.275**	1.137	1.729***
N	7,349				

Table 3: Logistic regression models for migrant background on digital activity engagement

	Watch TV/videos	Stream music	Education	Comm-unication	Social media	Gaming (alone)	Gaming (with others)
No migrant background (Ref)							
Migrant background	1.157*	0.895	1.132*	1.032	1.003	0.987	1.302***
N	6,621	6,629	6,621	6,629	6,626	6,630	6,630

RESULTS:

Logistic regressions by ethnicity

	None	Less than an hour (Ref)	1 to 2 hours	2 to 3 Hours	3+ hours
Irish White (Ref)					
Other White	0.996		1.322*	1.402	1.604
African/Black	1.823**		1.506	1.618	1.569
Asian	1.141		0.856	0.772	2.305**
Other/Mixed	0.987		1.236*	1.276	1.649
N	7,332				

	Watch TV/videos	Stream music	Education	Comm-unication	Social media	Gaming (alone)	Gaming (with others)
Irish White (Ref)							
Other White	1.578**	0.906	1.603***	1.191	1.294	1.050	1.658***
African/Black	1.219	1.668**	1.851**	1.060	0.747	1.082	1.443*
Asian	1.743	0.521*	1.075	1.158	0.741	0.778	1.964**
Other/Mixed	1.117	0.890	1.106	0.959	0.856	0.889	1.142
N	6,606	6,614	6,606	6,614	6,611	6,615	6,615

RESULTS:

Table 6: Multivariate linear regression sub-group analysis of screen-time on SDQ by migrant background

	TDS	Internalizing	Externalizing	Prosocial
No migrant background (N = 5,311)				
Digital screen-time				
None (ref)				
Less than an hour	0.202	0.082	0.121	-0.066
1 to 2 hours	0.547**	0.302**	0.244	-0.174**
2 to 3 hours	1.368***	0.786***	0.581**	-0.423**
3+ hours	2.975***	1.516***	1.459***	-0.476**
Migrant background (N = 2,037)				
Digital screen-time				
None (ref)				
Less than an hour	0.383	0.373	0.010	-0.086
1 to 2 hours	0.429	0.488**	-0.058	-0.133
2 to 3 hours	0.809	0.739*	0.071	-0.425**
3+ hours	2.709***	1.820***	0.889*	-0.790***

RESULTS:

Table 7: Multivariate linear regression sub-group analysis of screen-time on SDQ by ethnicity

	TDS	Internalizing	Externalizing	Prosocial
Other White (N = 453)				
Digital screen-time				
None (ref)				
Less than an hour	-0.162	0.003	-0.164	0.146
1 to 2 hours	-0.422	-0.060	-0.362	-0.035
2 to 3 hours	1.589	0.167	1.421*	-0.331
3+ hours	3.564*	2.488**	1.076	-0.293
African/Black (N = 143)				
Digital screen-time				
None (ref)				
Less than an hour	0.766	1.018	-0.251	0.537*
1 to 2 hours	1.478	0.890	0.588	-0.182
2 to 3 hours	-0.535	-0.021	-0.515	0.379
3+ hours	0.381	0.742	-0.361	-0.322
Asian (N = 115)				
Digital screen-time				
None (ref)				
Less than an hour	0.415	0.801	-0.386	-0.054
1 to 2 hours	0.591	0.372	0.219	-0.534
2 to 3 hours	-0.028	1.211	-1.240	-0.358
3+ hours	1.170	0.560	0.610	-1.188
Other/Mixed (N = 709)				
Digital screen-time				
None (ref)				
Less than an hour	0.786	0.655*	0.131	-0.258*
1 to 2 hours	0.676	0.542	0.134	-0.117
2 to 3 hours	-0.354	0.695	-1.050*	-0.278
3+ hours	3.332**	2.385**	0.946	-0.996**

DISCUSSION:

- First, we find some significant differences in **digital screen-time** across migrant backgrounds in Ireland
  - Children from migrant backgrounds tend to have **higher rates of screen-time**, than children with no migrant background
  - Further, we find that **African/Black children** tend to have significantly higher rates of non-use, and **Asian children** engage significantly more in 'heavy' screen-time (3+ hours)

DISCUSSION:

- Second, we find some significant differences in **digital activities** across migrant background and ethnicity in Ireland
  - Children from migrant backgrounds tend to engage more in **watching videos**, **social gaming** and **educational** digital activities than children with no migrant background
  - Additionally, we find that the **'Other White'** category is the main driver of the above differences. **African/Black** children also engage significantly more in social gaming, education, and **streaming music.** Asian children engage significantly less in streaming music and engage more in social gaming than Irish White children.

DISCUSSION:

- Finally, we find some differences in the **association of digital use on psychosocial difficulties** by migrant background and ethnicity
  - Associations between screen-time and **externalizing difficulties** is smaller for children from migrant backgrounds, whereas heavy screen-time (3+ hours daily) appears to have a more negative association on **prosocial functioning** for migrant children.
  - Children from **African/Black** and **Asian** backgrounds were found to have no significant associations between screen-time and psychosocial difficulties, though this is likely due to **issues of small sample size** (N = 143, 115).

DISCUSSION:

Overall, our study reveals some significant differences in how the children from different migrant and ethnic backgrounds use and are affected by digital technology, though **further analyses are ongoing.**

NEXT STEPS:

- Look at differences in **educational outcomes** across migrant background and ethnicity
- We plan to incorporate the newly available age 13 wave for **longitudinal analyses**

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Thank You!

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Questions and comments?

E.g. why might we see that children from some migrant groups are more likely to engage in gaming and educational activities?