Do Boys' and Girls' Daily Activities Differ?

Cross-Country Evidence

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Abstract

This study uses 2009-2015 time-diary data to examine gender differences in daily activities among children and adolescents aged 10-17 in Finland, Spain and the UK (N = 3,517). Gender differences in child time use are strong in all three countries. Boys are more involved in screen-based time and exercising, and girls in domestic work, non-screen educational time, personal care and socializing. The UK shows the largest gender differences in child time use, including domestic work (60% gender gap), exercising (57%), non-screen educational time (35%), screen-based time (31%), personal care (27%) and socializing (21%). Finland resembles the UK in domestic work (58% gap) and non-screen educational time (34%), showing smaller gender gaps in other activities, without significant gender differences with Spain and UK. Spain exhibits the smallest gender differences in child time use, with significant differences with the UK in screen-based time (16% gap), socializing (6%) and personal care (14%). Demographic and socioeconomic factors contribute little to explain these findings. While gender differences in child time use are moderately smaller in 'egalitarian' Finland than in 'liberal' UK, 'family-oriented' Spain presents interestingly the smallest gender gaps. The complex role of social contexts and life-course stages in shaping gendered activities is discussed.

Keywords: Children, Cross-National, Daily Activities, Gender Differences, Time Use

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1. Introduction

Time-use patterns remain markedly gendered in contemporary societies, despite progress towards gender equality over recent decades (England, 2010; Goldscheider et al., 2015). Gender inequalities in activities like employment, domestic work or leisure increase during the transition to parenthood and remain quite stable afterward (Dotti-Sani, 2018; Grunow & Evertsson, 2016; Kùhirt, 2011). We know that gender gaps in adults' time use differ across societies. Countries with more gender egalitarian policies and norms tend to exhibit the highest levels of gender symmetry in activities like paid work, childcare and housework (Anxo et al., 2011; Craig and Mullan, 2010; Esping-Andersen et al., 2013; Hook, 2006; Kan et al., 2011). Although cross-national differences in adult men's and women's time use are well documented, much less is known on whether boys' and girls' daily activities differ across national contexts. Our study contributes to fill this important gap.

In this study, we examine gender differences in child and adolescent time use from a cross-national approach. Previous studies emphasised the importance of *gender role socialization*. Children are socialized in contexts where families, schools, communities and the media display gender-typed norms, which leads children to enact and reproduce gendered actions through daily interactions with individuals and institutions (Goffman, 1977; West & Zimmerman, 1987). Other studies considered *socio-biological factors*. This research highlights how gender differences in puberty interplay with sociocultural contexts that bring boys and girls to display gendered behaviours in activities like sports, consumption or leisure preferences (e.g., Becker et al., 2016).

Previous research shows that gendered patterns in time use start early in the life course (Solaz & Wolff, 2015). Studies with US data found that female teenagers are more active in domestic chores, reading and doing homework, while male teenagers are more involved in screen-based activities (Wight et al., 2009). Research using Italian data found that girls spend less time than boys on active leisure and sports, and more time on domestic chores, with gender differences increasing remarkably

from childhood to youth (Dotti-Sani, 2018; Mencarini et al., 2019). In a study with Canadian data, boys and girls were also found to have gendered leisure patterns (Hilbrecht et al., 2008). However, this literature has largely omitted a cross-country comparison.

Only one study –to our knowledge– has examined gender differences in children’s time use in cross-national perspective. Rees’ (2017) study with 2013/15 data from sixteen countries of different income levels found some important cross-country similarities (i.e., girls did more domestic chores than boys everywhere), but also interesting cross-country differences (i.e., some less gender egalitarian countries were more gender symmetrical in children’s time use, compared to more gender egalitarian countries). This suggests weak associations between gender gaps in children’s activities and gender inequality indexes. While Rees’ (2017) study is relevant, it presents a relevant weakness; it uses data with stylised time-use measures where respondents report their general frequency of time allocated to specific activities. Instead, time diaries are more robust and less subject to desirability bias than surveys based on stylised questions. Time-diary surveys measure individuals’ daily activities by gathering information through a 24-hours diary of activities, where respondents indicate their exact activities during specific slots throughout the day (Gershuny, 2000; Sevilla-Sanz, 2014).

Our study examines high-quality nationally representative time-diary data from 2009-2015 to compare the daily activities of boys and girls aged 10-17 across Finland, Spain and the UK. Gender gaps in children’s time use are likely to differ across societies with different policy and cultural contexts. Countries with distinct welfare and gender regimes shape men’s and women’s roles in the public and private spheres in ways that impact *gender equality* in health, lifestyles, education, politics and employment (Cooke, 2011; Esping-Andersen, 1999; Grunow et al., 2018; Hook, 2006; Lewis, 2009; World Economic Forum, 2017). Children and adolescents might integrate the gender egalitarian norms and attitudes of their country through daily social interactions within families, communities, schools or the media. From this perspective, boys and girls might have more similar ways of spending

time in activities like domestic work, reading or using electronic devices in more gender egalitarian countries (i.e. Finland) than in less gender egalitarian countries (i.e. Spain).

Yet, gender relations are complex and multidimensional. Gender gaps in children's daily activities might not reproduce the overall gender equality levels of society. The scarce cross-country evidence on gender differences in child daily activities, although based on stylised measures that are less robust than our time-diary measures, suggests that gender equality levels are not associated with gender gaps in child time use (Rees, 2017). Other studies show a strong persistence in adolescents' gendered roles across countries with different policy and cultural contexts (Kagesten et al., 2016). Further, certain gender-typed attitudes and expectations (i.e., career and educational aspirations) have been found to emerge strongly in advanced post-industrial societies, which show high levels of 'self-expressive' values embracing gender egalitarianism (Cech, 2013; Charles, 2011; Charles & Bradley, 2009; Stoet & Gary, 2018). In short, apart from gender equality levels, other factors might influence gender differences in child and adolescent time use across countries.

We argue that how post-industrial societies structure *children's autonomy and daily routines* can influence gender differences in children's activities. Across countries, even in the most gender egalitarian, children reproduce marked gender roles and ideologies through socialisation mechanisms, be this within families, schools, peer groups or the media (Kagesten et al., 2016). Yet, children could more easily engage in gendered routines in societies that give them strong discretion and space to spend time in their own activities, either alone or with peers. While children's early socialisation in families and schools shape their gendered roles, identities and preferences (DiPrete & Buchmann, 2013; Platt & Polavieja, 2016), children's time in these institutions would be relatively uniform by gender, with school activities being educationally oriented and family activities involving routines that often include both boys and girls (i.e., family socializing, dinners, TV time). By contrast, children's free time outside schools and families (i.e., alone or with peers) might leave more diversity and

autonomy among children to choose their preferred leisure activities, which could lead to a stronger reproduction of gendered routines in which boys engage more in male-typed activities (i.e., video-gaming) and girls in female-typed activities (i.e., personal care). This suggests that in countries where young people are strongly encouraged to participate in their own leisure activities with peers or alone (outside families and schools), children might have higher opportunities to ‘do gender’ in their free time in ways that are not necessarily reflecting a country’s gender equality levels.

The three countries in our study –Finland, Spain and UK– illustrate three Western European contexts with different policy, cultural and gender regimes. Finland exhibits a strong *egalitarian* public policy framework supporting gender equality in domestic work, leisure and employment (Esping-Andersen, 1999; Sullivan et al., 2018). Also, Finland has a culture that embraces strong ‘self-expressive’ orientations among young people, with children’s routines occurring disproportionately alone and outside parental supervision (Gracia et al., 2019; Inglehart et al., 2014; Triandis, 2018). The UK, labelled as a *liberal* welfare regime, tends to show more gender egalitarian arrangements and norms than Spain, but is less gender egalitarian than Finland, with a cultural context found to have the highest levels of self-expressive values of these three countries (Inglehart et al., 2014; Lewis 2009; Triandis, 2018). Finally, Spain is the country of the three where children spend more hours with parents and at school on a random day of the year, and where the family plays a more important role in structuring social relations (Gracia et al., 2019; Jurado Guerrero & Naldini, 2018; OECD, 2014).

Overall, our study is the first cross-national time-diary analysis of gender differences in child and adolescent time use. We focus on three high-income Western European countries –Finland, Spain and UK– to better understand how national contexts influence gender differences in time use. We argue that gender gaps in child and adolescent daily routines are not necessarily a function of policy and cultural contexts of gender equality, and that how societies structure young people’s autonomy and daily routines needs to be considered to understand children’s gendered time use.

2. Three National Cases: Finland, Spain and the UK

Our study focuses on three Western European countries with distinct policy, gender and cultural contexts: Finland, Spain and the UK. We can summarize important differences across these three countries in two main axes: (1) gender egalitarianism in work, values and behaviours, (2) variations in degrees of self-expressive values and organisation of children's daily routines.

Finland represents the *Scandinavian model*, based on a 'social-democratic' policy tradition (Esping-Andersen, 1999). The Finnish case shows internationally high rates of dual-earner couples, with high female employment participation rates (Eurostat, 2017). While previous research documents that Finland exhibits gender inequalities in (un)paid work (Mustosmaki et al., 2016), this country has among the highest levels of job autonomy and flexibility among both genders (Anttila et al., 2015), and high gender equality in the division of unpaid labour (Kansala & Oinas, 2016). Finland has high levels of individual autonomy and 'self-expressive' values that promote young people's autonomous choices (Inglehart et al., 2014; Triandis, 2018), with some research indicating high levels of gender segregation in individuals' career preferences in Finland (Charles & Bradley, 2009). In Finland, students spend few total hours per week in school, as well as many hours alone and socializing with individuals outside parents' supervision (Gracia et al., 2019; OECD, 2014).

The UK captures the *Anglo-Saxon model* with a 'liberal-oriented' policy approach (Esping-Andersen, 1999). While the UK has relatively high levels of female employment, British mothers are disproportionately employed as part-time workers (Lewis, 2009). In terms of the gender division of domestic labour, the UK is less egalitarian than Scandinavian countries like Denmark or Finland, but also more egalitarian than Southern European countries, like Italy or Spain (Esping-Andersen et al., 2013; Kan et al., 2011). Studies found the UK to exhibit among the highest levels of self-expressive values, especially in relation to more family-oriented Spain (Inglehart et al., 2014). On an average week of the year, British pupils aged 10-17 spend about 20 hours a week at school, just like their

Finnish counterparts, while their Spanish counterparts spend about 25 weekly hours at school (Gracia et al., 2019)¹. In the UK, like Finland, children spend more time than in Spain socializing without parents, spending less time with parents than Spanish children (Gracia et al., 2019).

Spain captures the *Southern European model* with a ‘family-oriented’ policy approach (Esping-Andersen, 1999). Spain is the country of our study with the highest rates of male-breadwinner couples, even if maternal full-time employment is more common in Spain than in the UK (Lewis, 2009). Spain is less gender egalitarian than Britain, and especially Finland, in the couple’s division of labour, with a family-based model of care and social relations (Bueno and Grau-Grau, 2020; Garcia-Roman et al., 2017; Kan et al., 2011). The presence of self-expressive values emphasising young people’s autonomy outside the context of families is tinier in Spain than in Finland and the UK (Inglehart et al., 2014). Finally, apart from spending more time in school, Spanish children share more time with parents than their British and Finnish counterparts (Gracia et al., 2019).

[Figure 1, around here]

Figure 1 contextualises the gender differences in adults’ time use across the three countries included in our study. The figure shows the average gender gaps in paid work, domestic work and leisure time among adults in the three countries, using a ratio of women’s relative to men’s time allocation. We observe that, for every hour that men spend on unpaid domestic work in Spain, women spend 2.7 hours (2.7), with lower gaps in the UK (1.8) and the lowest gaps in Finland (1.5). Finnish women spend 0.78 hours of paid work for every hour spent by men in paid work (0.78), with larger paid work gaps in the UK (0.64), and especially in Spain (0.60). For leisure time, the male advantage is largest in Spain (0.80) compared to Finland (0.89) and the UK (0.89). To sum up, Finland seems the

¹ OECD (2014) data reveal that Spanish students in lower secondary education spend a total of 4,245 annual hours at school, compared to 2,736 annual schooling hours in the UK, and 2,533 annual hours in Finland. The average age of lower secondary students is essentially the same as the average age of children in our sample (about 13.5 years old). While Finland and the UK do not differ remarkably in this regard, Spain is clearly an outlier. Our analyses, as in the data on schools’ hours that are provided in the text, refer to children’s daily minutes in random days, weeks and months (see the Methods section).

most gender equal country with regards to adults' time use allocation, followed by the UK, while Spain is the least gender egalitarian in this respect.

In short, Finland, Spain and the UK differ in policies, norms and attitudes regarding gender equality among adults, but also in the emphasis placed on young people's self-expressive values and in the social structure of children's daily routines. These differences justify our analytical framework on gender differences in child time across these three countries.

3. Hypotheses

Our study examines gender differences in child and adolescent time use in cross-national perspective by focusing on six gendered activities: (1) 'screen-based activities' ; (2) 'non-screen educational time'; (3) 'socializing' (4) 'exercising' ; (5) 'unpaid domestic work' (6) 'personal care time' (Dotti-Sani, 2018; Hilbrecht et al., 2008; Mencarini et al., 2019; Wight et al., 2009). We develop hypotheses regarding (1) gender gaps in child time use without addressing country variations, and (2) gender gaps in child time by considering country variations. For reasons of space, we refer generally to levels of *gender (dis)similarity* in child daily activities.

3.1. Gender Differences in Children's Time Use

We generally expect boys and girls to differ in their time-use patterns. Children grow up embedded in gendered contexts that shape their norms and attitudes (West & Zimmerman, 1987). For example, children might (un)consciously internalize that girls should be active in domestic chores and boys in computing, as a result of their exposure to such gendered norms and practices through daily personal and media interactions. Accordingly, girls might disproportionally engage in 'female-typed' activities (i.e. domestic work, personal care, homework, reading) and boys in 'male-typed' activities (i.e. sports, screen-based time). Although boys and girls differ in their socializing styles and can give different meaning to social relations (Hilbrecht et al., 2008), gendered differences in how often boys and girls

engage in socializing activities are likely to be small. We expect gender differences in child time use to apply to all three countries and to persist after controlling for demographic factors.

H1 – Overall Gender Differences: Boys disproportionately engage in exercising and screen-based activities and girls in non-screen educational activities, domestic work and personal care.

3.2. Cross-Country Gender Variations in Children’s Time Use: Two Alternative Scenarios

We propose two alternative hypotheses regarding gender differences in children’s daily activities across our three countries of study, namely Finland, Spain and the UK: (i) the *gender equality hypothesis*, and (ii) the *child autonomy hypothesis*.

The *gender equality hypothesis* argues that gender equality at the country level brings higher gender symmetry in child time use. This hypothesis expects boys and girls in Finland to have less gendered time-use patterns than boys and girls in the UK, particularly compared to their Spanish counterparts, mirroring cross-national variations in adults’ time use and gender roles. For example, if adults exhibit more egalitarian behaviours in domestic work and gender norms in Finland than in Spain, these gender inequalities among adults might be transmitted to the younger generations via intergenerational socialization processes, which in turn might lead to smaller gender differences in child and adolescent domestic work in Finland, compared to Spain. Therefore, compared to the UK, and especially to Spain, children in Finland might perceive less gender pressure to engage in activities like exercising, playing video games, brushing their hair or reading books, leading to smaller gender gaps in child time use in Finland, compared to the UK, and especially to Spain.

H2a – Cross-Country Gender Equality: Gender differences in child time use are smaller in Finland, followed by the UK, and highest in Spain.

The *child autonomy hypothesis* holds that national contexts influence children’s gendered time use through the social organisation of children’s daily routines and free time. Gender differences in

child daily activities do not seem to be associated with gender egalitarian policies and norms at the national level (Rees, 2017), contrary to adults' time use (Anxo et al. 2011; Hook, 2006; Kan et al., 2011). Studies found that post-industrial societies with marked 'self-expressive' values display strong gendered educational preferences, irrespective of their gender equality levels (Cech, 2013; Charles, 2011; Charles & Bradley, 2009; Stoet & Gary, 2018). Thus, besides gender equality levels, other factors might contribute to explain gender differences in child time use across countries.

One could argue that children are more inclined to develop gendered time-use patterns in countries offering support and time to young people to develop their own leisure with peers or alone, outside the context of schools and families. While activities in schools are strongly standardised for both boys and girls (i.e., educational activities) and parents often arrange relatively homogenous family routines with children (i.e., family dinners, screen time, homework, playing time), children's free time outside schools and families (alone or with peers) gives more space to reproduce gendered leisure preferences through their participation in boy-typed activities (i.e., video-gaming) and girl-typed activities (i.e., personal care) (Hilbrecht et al., 2008). If children in different policy and cultural contexts integrate gender-typed ideologies and preferences through family, school, peer-group or media socialisation (Kagesten et al., 2016), societies that promote child's own space during their free time –alone or with peers– might disproportionately reinforce children's gendered time use.

The 'child autonomy hypothesis', following the argument above, expects gender differences in child time use to be largest in the UK, followed by Finland, and smallest in Spain. First, if young people in the UK, compared to young people in Spain, receive more ample support, time and autonomy to explore their leisure activities outside families and schools (Gracia et al., 2019; Inglehart, 2014), children's time use could be more gendered in the UK than in Spain. Second, if Spanish children spend more time in family activities and at school, and Finnish children are encouraged to participate more in their own activities alone and with peers (Gracia et al., 2019), Finnish children could have more

space and time to reproduce gendered time-use patterns, compared to Spanish children. Third, while Finland and the UK have similar cultural contexts in emphasising young people's autonomy in their free time (Inglehart, 2014), the more gender egalitarian context of Finland could partly translate into slightly lower gender differences in children's time use in Finland than in the UK.

H2b – Cross-Country Child Autonomy: Gender differences in children's time use are largest in the UK, followed by Finland, and smallest in Spain.

4. Data and Methods

4.1. Data

We use time-diary data from Finland (2009/10), Spain (2009/10) and United Kingdom (2014/15) from the Harmonized European Time Use Survey (HETUS)². These data combine comparable individual and household level measures with the most precise and robust statistical sources available to measure individuals' daily activities (Bianchi et al., 2006; Robinson & Godbey, 1997). Respondents reported detailed diaries of activities along the 1,440 minutes (24 hours) of a random day by indicating what (with whom and where) children were doing along 10-minutes time slots. Our sample contains diaries filled by boys and girls aged 10-17 who were students, not employed, and living in a single-mother or a different-sex/two-parent family at the moment of the interview. We further excluded cases with missing data in any of our variables of study, most of them on maternal employment hours. This implied dropping observations of 8 children in Spain, 14 in Finland and 73 in the UK. While additional analyses with these missing cases in the model –controlling for maternal work status and not maternal work hours– yielded comparable results (not shown), we excluded these cases in the interest of adding all our covariates in the models. The final sample includes 3,517 diaries (830 diaries in Finland; 1324 diaries in Spain; 1363 diaries in the UK).

² Changes in gendered time-use patterns occur at the mid and long run (Sullivan et al., 2018). We do not expect that the 5-years gap between the UK survey and the Finnish and Spanish surveys plays a major role in country-gender differences in child time use.

The surveys from Finland and UK had two diaries completed by children (one on a weekday and another on a weekend), while respondents in the Spanish survey filled one diary (either on a weekday or weekend). Analyses fully account for the clustered nature of the samples at the household level and the existence of two individual diary observations in Finland and the UK. Surveys from all countries contain household samples, which means there could be multiple children in some households of observation (i.e., siblings)³. By conducting weighted analyses our models measure a random distribution of days, weeks and seasons in all three countries, as well as demographic weights correcting for a potential selection in responses in each country⁴.

4.2. *Dependent Variables*

Our *dependent variables* include six continuous measures of children's daily minutes on a random day allocated to: (1) 'screen-based time' (i.e. TV, videos, electronic activities, using iPads, mobile phone use, video gaming); (2) 'non-screen educational time' (i.e. studying, reading, library time, cultural spectacles, arts, music); (3) 'socializing time' (i.e. informal social relations, playing with others, social games, volunteering activities); (4) 'exercising time' (i.e. exercising, active sports); (5) 'unpaid domestic work' (i.e. housework, child care); (6) 'personal care time' (i.e. putting on make-up, dressing up, combing/brushing hair, showering). We refer only to the main activity, as secondary activities, namely those synchronized with the main activity, can produce estimation bias due to different sample criteria (Kitterod, 2001). Table A1 presents our strategy for the coding of activities.

4.3. *Independent and Control Variables*

Regarding our *independent variables*, 'gender' is our main covariate at the individual level: "girls" (= 1) and "boys" (= 0), while we employ a dummy measure of 'country'. We use *control variables* as adjustments on the statistical associations between child gender and time use across countries. 'Age':

³ All models were estimated using clustered sandwich estimator techniques with *Stata 15*. This estimator specifies that the standard errors are allowed to correlate at the individual and household level in ways that relax the usual requirement that observations need to be independent from each other. This specification could moderately inflate the standard errors, but not the regression coefficients.

⁴ While using weights or not did not alter the general results, we use weights to account for response selection in our sample.

continuous variable; boys and girls differ significantly in their time-use patterns across developmental stages (Dotti-Sani, 2018); ‘Family structure’: 0 = “two-parent family” and 1 = “single-mother family”; family structure can influence children’s gendered time-use patterns (Mencarini et al., 2019); ‘Maternal weekly work hours’: 0 = “mother not employed”; 1 = “mother works 1-30 hours”; 2 = “mother works 31-37 hours”; 3 = “mother works over 37 hours”; maternal work hours impact child time use and are distributed differently across the three countries (Lewis, 2008); ‘Maternal education’: 0 = “not college degree”; 1 = college degree”; education impacts child time use and might reflect different gender norms across countries (Bianchi et al., 2006); ‘Number of children’: number of children aged 0-17 at home (ordinal); ‘Number of adults’: number of adults at home aged 18 or older (ordinal); the number of individuals and children at home differs across countries and is considered to be a predictor of teenagers’ time use (Wight et al., 2009). ‘Day of the week’: 0 = “weekday” (Monday-Friday); 1 = “weekend” (Saturday-Sunday). ‘Quarter’: 0 = “1st Quarter (Jan – March)”; 1 = “2nd Quarter (April – June)”; 2 = “3rd Quarter (July – September)”; 3 = “4th Quarter (October – December)”; children tend to have different behaviours depending on the day of week and season of the year, so adding this control variable is relevant (Gracia et al., 2019).

4.4. Empirical Strategy

Our analyses follow four steps: (1) we conduct *descriptive analyses*; (2) we run *linear prediction models* by plotting predicted values by child gender, after controlling for all demographic and socioeconomic measures, to examine gender gaps between and within countries; (3) we present the gender and country *interaction effects* numbers; (4) we run a set of *robustness checks*.

5. Results

5.1. Descriptive Analyses

Table 1 shows the summary statistics with means and standard deviations of the study measures. Our three countries differ across demographic variables (i.e., maternal work, family structure, educational

levels), all included in our regression models (Table A2 shows OLS models for our six dependent variables with all study variables and gender as a control variable). Figure 2 presents boys' and girls' average daily minutes for our six dependent variables across Finland, Spain and the UK. We do not discuss Figure 2, for reasons of space. Yet, there is a clear similarity between the results of the descriptive analyses and those of the regression models.

[Table 1 and Figure 2, about here]

5.2. Multivariate Analyses: Gender and Country Gaps in Child Time Use

Figure 3 shows the full predicted linear models of children's daily minutes in the six study activities with gender and country interactions, adding predicted values and Confidence Intervals (CI) at the 95% level. At the top of Figure 3, we observe that boys in the UK and Finland spent more time in *screen-based activities* (229 and 222 minutes, respectively) than boys in Spain (171). Finnish girls were the most active in screen-based activities (190 minutes), followed by British girls (169) and then Spanish girls (146). In *educational activities*, girls spent about 20 minutes more than boys in all three countries. Spanish boys and girls allocated more time in educational activities (above 100 minutes) than boys and girls in Finland and the UK, with British boys being the least involved in these activities (57). *Socializing activities* show dissimilar patterns by country. While girls in Finland (119 minutes) and UK (105) were more active than boys in socializing, in Spain boys (90) spent marginally more time in socializing activities than girls (85). At the bottom of Figure 3, we see that Spanish boys were the most active in exercising (58 minutes) and British boys were the least active in these activities (43 minutes), with clear gender gaps across countries. For *domestic work*, girls in the UK spent the highest amount of time (67 minutes), adding about 10 minutes more than Finnish girls and 15 minutes more than Spanish girls. Finnish and Spanish boys were the least active in domestic work (32 minutes), slightly below British boys (36). In *personal care*, British girls were the most involved (101 minutes), adding about 30 minutes more in these activities than girls in Finland and Spain.

Figure 3 shows relevant variations in the CIs. For *screen-based time* (boys doing more), gender differences in time use were largest, with CIs not overlapping in the UK, while Finland and Spain showed more moderate gaps. For *non-screen educational time* (girls doing more), we found similar gender differences by country, yet gender gaps were largest in both Finland and UK, with all CIs around 95% levels. Gender differences in child *socializing* were marginal in Spain, while moderate differences were found in both Finland and UK (girls doing more than boys), even if CIs did not show statistical differences at the 95% level. For *exercising time* (girls doing more) we observed the largest gaps in UK (CIs with clear differences at 95%). As for *domestic work* (girls doing more), gender differences were large in all countries and significant at 95% levels, with larger differences in both UK and Finland, compared to Spain. Finally, regarding *personal care* (boys doing more), gender gaps were larger in the UK, showing non-overlapping CIs at the 95%.

[Figure 3, about here]

Table 2 complements Figure 2 by showing the net gender percentage gaps in child time use in each country. The gender gap in child time use is largest as it distances more from 0, with positive values indicating that boys spent more time in the activity, and negative values when girls were more involved in the activity. First, we observe that net percentage differences in children's time use are statistically significant (at 95% levels of higher) in all countries and activities, except for socializing time in Finland and in Spain. Second, and not less important, the *magnitude* of these percentage gender gaps differs across the three countries. Percentage gender gaps in child time use are generally highest in the UK, including domestic work (60% gap), exercising time (57%), non-screen educational time (35%), screen time (31%), personal care (27%) and socializing (21%). By contrast, Spain shows the lowest time-use differences between boys and girls, ranging from only 6% in socializing activities to 48% in domestic work. Finland falls in between Spain and UK in terms of gender gaps in child and adolescent time use, with some activities showing gaps closer to Spain, such as screen-based time

(16% gap), other activities at the level of the UK, like domestic work (58%) and non-screen educational time (34%), and most activities being in between Spain and UK, including exercising (36%), personal care (21%), and socializing (13%).

[Table 2, about here]

Table 3 presents the country and gender interaction effects with all control variables included in the models. These analyses allow us to test the magnitude of gender differences in child time use in minutes, instead of percentage gaps, as well as their statistical significance. The omitted baseline category is Spanish boys. We observe that gender gaps in children's time use are clearly larger in the UK than in Spain, but only statistically significant at the 95% or higher for screen-based activities ($\beta = -37.77$; $p < 0.01$), socializing ($\beta = 26.94$; $p < 0.05$) and personal care ($\beta = 15.07$; $p < 0.05$), not for non-screen educational time, exercising, and domestic work. Gender differences between Finland and Spain are meaningful for some activities, especially socializing ($\beta = 24.99$), but are not statistically significant at the 95% level. Similarly, gender interactions show differences in child time use between Finland and the UK, but not statistically significant at the 95% level. Overall, gender and country interactions are meaningful in various activities, but these are only statistically significant when comparing Spain and UK in screen-based activities, socializing and personal care.

5.3. Additional Analyses: Child Age, Family Structure, Maternal Work and Activity Context

We conducted various additional analyses to better understand the social processes influencing cross-country gender differences in child time use. First, we addressed the moderating role of child age to explain gendered activities across countries, as research reveals that child age-specific developmental processes in time use are gendered (Gracia, 2014; Dotti-Sani, 2018). Figure 4 shows predicted values of three-way interactions with age ('10-13' against '14-17'), gender and country. Only in the UK were gender gaps in screen-based time substantially larger for older respondents. Gender differences in domestic work were most salient among older children in the UK, and especially in Finland, with

robust differences at the 95% CI levels, while such gendered age gradient was not found in Spain. Overall, even if UK and Finland show slightly larger gender variations by age (among older teenagers), cross-country gender differences in child time use by child age are modest.

[Figure 4, about here]

Second, we examined the moderating role of family structure on gender differences in child time use across countries, following research on the gendered role of family structure in parent and child time use (Cano & Gracia, 2020; Fallesen & Gähler, 2019; Mencarini et al., 2019). Figure 5 shows the predicted values of a three-way interaction with family structure, gender and country. For exercising time, only in the UK, gender gaps were slightly larger for two-parent families (at 95% CI levels). For educational time, gender differences in the UK and Finland were larger for children in two-parent families than for children in single-mother families (around 95% CI levels), with no differences in Spain. Gender gaps in child screen-based time were largest within two-parent families in Finland and the UK. Finally, the higher involvement of girls in socializing time in the UK seems driven by two-parent families, but interestingly it was driven by single-mother families in Finland. In short, gender differences in child time use between single-mother and two-parent families are generally small and, if they appear, we see them in Finland, and especially in the UK, but not in Spain.

[Figure 5, about here]

Third, we examined the role of maternal employment status (employed or not employed). Our study compares three countries with important disparities in maternal work participation (Gracia & Esping-Andersen, 2015; Lewis, 2009). We wanted to examine if differences at the aggregate level are driven by mother's time availability. Figure 6 shows the predicted values of a three-way interaction with maternal work status, gender and country⁵. Spain only shows some gender differences in

⁵ Computationally, adding four categories of maternal work hours in a three-way interaction with gender and country yielded was not robust, considering our sample size. We descriptively examined differences by mother's work hours categories (results not shown) and did not find any relevant difference in comparison to the dummy variable strategy with maternal work status.

children's time use by maternal work in non-screen educational activities and exercising, with larger differences for the group of employed mothers (CI around 95%). In Finland, we found differences in screen-based activities only, specifically among children with employed mothers (CI around 95%). For the UK, we only found relevant differences in socializing time, with such gender differences being driven by children with non-employed mothers only (CI around 95%), and in domestic work, for which we see somehow stronger gender gaps among children with employed mothers. Overall, gender differences by mother's work status are modest, with no clear cross-country patterns.⁶

[Figure 6, about here]

Fourth, we checked if the social context of children's activities –whether activities were performed alone, with parents or with 'others'– differed by gender across countries. These results are presented in Figure A1 and Table A3 of the Appendix. While there are cross-country differences regarding with who children spend time, we did not observe within country differences between boys and girls in with who children share time. We found that gender gaps in children's leisure time occur across different activity contexts, not only alone and with others, but also with parents. However, consistent with our theoretical framework, gender gaps in time use are, in all three countries, stronger in child time alone and with others than in time with parents.

6. Discussion

This study has examined gender differences in children's daily activities in cross-national perspective. Scholars have argued that studying children's own activities is essential to understand their well-being, lives and attitudes (Ben-Arieh & Ofir, 2002). However, whether boys' and girls' daily activities differ across countries is poorly understood. Our study contributes to answer this important question by using high-quality time-diary survey data from Finland, Spain and the UK.

⁶ We further examined gender differences in child time use by socioeconomic groups, as research finds educational gradients in parent-child investments (Gracia & Ghysels, 2017; Thomsen, 2015) and children's daily activities (Gracia & Garcia-Roman, 2018; Wight et al., 2009). We found some educational differences in child time use, but these were quite stable across countries and genders.

Our findings can be summarised at two main levels. First, in all three countries of study, we find clear *gender differences* in child time use. Net of demographic and socioeconomic factors, boys were more active in screen-based activities and exercising, while girls allocated more time to domestic work, personal care, non-screen educational time, and in socializing. These results generally support H-1, resembling previous time-diary studies on single countries (Dotti-Sani, 2018; Farook et al., 2018; Gracia, 2018; Hilbrecht et al., 2008; Mencarini et al., 2019; Solaz & Wolff, 2015; Wight et al., 2009). Therefore, gender gaps in child time use apply to post-industrial societies with different policy and cultural contexts, namely Finland, Spain and the UK.

Second, although all three countries exhibit clear gender gaps in child and adolescent time use, the magnitude of these gender gaps differs –at least moderately– across *national contexts*. The UK presents the largest gender gaps in child time use, including domestic work (60% gender gap), exercising (57%), non-screen educational time (35%), screen-based activities (31%), personal care (27%) and socializing (21%). Finland has similar gender differences than the UK in domestic work (58% gender gap) and non-screen educational activities (34%), with smaller gender differences than the UK in the other four activities. Even if Finland generally falls in between Spain and the UK, gender interactions in minutes gaps between Finland and the other two countries are not statistically significant. Spain clearly exhibits the smallest gender gaps in children’s time use within all three countries. Gender differences between Spain and the UK are largest and strongest, with statistically significant gender interactions only in three activities for which Spain shows particularly small gender gaps in child time use: screen-based activities (16% gender gap), socializing (6%) and personal care (14%). While ‘egalitarian’ Finland partly shows a moderately smaller gender gap in child time use than ‘liberal’ UK, it is in ‘family-oriented’ Spain where gender gaps in child time use are smallest, with some remarkable differences with the UK. These results reject H-2a (*Gender Equality*), with results going moderately in the direction of H-2b (*Child Autonomy*).

Why are gender differences in children's and adolescents' time use generally largest in the UK, moderately followed by Finland, and smallest in Spain? Our study cannot fully answer this question. However, we can propose some explanations that could offer insights into why children's time use in different countries does not seem to mirror gender inequalities at the national level, contributing to previous literature not based on time-diary data (Rees, 2017).

We argue that gender gaps in time use are shaped differently by national contexts across the *life course*. That is, the 'glasses' that we use to study cross-national gender inequalities in adults' time use might work less well for examining gender gaps in time use during childhood and adolescence. We assume that, across different countries, boys and girls are socialized in contexts characterized by strong gender ideologies, embedded into daily interactions within families, schools, peer relations or the media (Kagesten et al., 2016). Yet, in countries where young people are particularly encouraged to engage independently in free-time activities outside families and schools (i.e., UK), children might have higher space and time to 'do gender' in their daily activities, compared to countries where children's time occurs more often within families and schools (i.e., Spain). While children incorporate gender-typed roles and norms in both families (Platt & Polavieja, 2016) and schools (DiPrete & Buchmann, 2013), it is through free-time activities –alone or with peers– when boys and girls are expected to have more encouragement, space and discretion to reproduce gender roles in boy-typed activities (i.e., sports, video-gaming) or in girl-typed activities (i.e., personal care, reading). Finland is an interesting case. Finland combines a gender egalitarian context with an organisation of children's routines promoting autonomy and time outside the family, with gender gaps in child time use falling moderately between our *more* gender symmetrical country (Spain) and our *less* gender symmetrical country in child time use (UK). Future studies should further address these mechanisms and other explanations of how children reproduce gendered activities and how societal contexts might moderate children's and adolescents' gendered time use.

Our study has relevant scientific and policy implications to understand life-course dynamics, and in particular to understand the importance of childhood and adolescence in gendered time-use patterns. We know that strong family-friendly contexts are key in helping adults in Finland to display more equitable gender time-use arrangements in (un)paid work and leisure, compared to their British counterparts, and especially to their Spanish counterparts (Anxo et al., 2011; Grunow & Evertsson, 2016; Kan et al., 2011). Yet, adults' gender inequalities in time use in these countries (with Finland being the most egalitarian; Spain the least; and UK falling in between the two) seem to follow different patterns among the younger generations. Some recent time use studies have paid attention to the importance of recent generational changes in the gender division of labour, with particular focus on the case of Spain (Ajenjo & Garcia-Roman, 2014). We hope future studies will gather high-quality data across periods and cohorts to disentangle if generational changes, besides other societal mechanisms, contribute to explain gender differences in children's time use across countries.

We must highlight two major limitations in our study. First, we only examine *objective* time-diary measures. Our data lack important *subjective* measures on attitudes, preferences and enjoyment levels. Second, we focus only on three countries. Future studies based on time-diary comparisons with a larger sample of countries representing different policy regimes, gender values and income levels would complement this study. Our study, we believe, is an important step to guide future time-diary studies with access to a larger and more diverse group of countries.

To conclude, our study shows important gender differences in child and adolescent time use in all three countries: Finland, Spain and the UK. Yet, we also find some interesting cross-national differences. The country of our study that is typically labelled as 'family-oriented' (Spain) shows more similar time-use arrangements between boys and girls than a country often labelled as 'liberal' (United Kingdom). Although differences in gender gaps in child time use between 'egalitarian' Finland and the other two countries are small, Finland is clearly *not* the country of our study showing the most

similar activity patterns between boys and girls, but rather Spain. These findings call for new research helping to elucidate this apparent “gender paradox”, if we compare it with adults’ time use. We hope our study will inspire new theoretical and empirical advancements on the crucial question of how boys and girls differ in their gendered activities, and on how policy, cultural and social contexts can shape gender differences in children’s and adolescents’ daily activities.

7. References

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TABLES AND FIGURES

Table 1. Summary Statistics. Means and Standard Deviations

	Finland				Spain				United Kingdom			
	Boys		Girls		Boys		Girls		Boys		Girls	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Daily Minutes in Screen-Based Activities	215.65	158.04	186.43	129.51	174.52	135.95	151.84	117.81	230.12	168.44	165.54	136.49
Daily Minutes in Non-screen Educational Activities	66.79	97.00	89.65	96.03	101.81	99.23	120.64	109.57	54.85	82.72	79.78	109.04
Daily Minutes in Socializing Activities	101.43	136.49	118.63	144.38	89.88	116.72	82.86	115.06	87.30	112.90	106.77	126.85
Daily Minutes of Sports and Physical Leisure	53.25	91.89	37.73	62.76	57.31	88.31	42.56	75.59	42.85	78.02	23.72	53.68
Daily Minutes of Domestic Work Activities	30.30	44.50	57.87	70.72	32.50	50.50	52.06	70.24	36.78	60.23	66.80	87.81
Daily Minutes on Personal Care	52.49	63.11	65.65	49.52	59.38	52.63	68.71	51.81	77.82	74.25	100.69	73.90
Single Mother Family	19%		23%		12%		20%		30%		32%	
Two-Parent Family	81%		77%		88%		80%		70%		68%	
Mother without College Education	44%		47%		75%		76%		61%		54%	
Mother's College Education	56%		53%		25%		24%		39%		46%	
Mother Not Employed	14%		22%		37%		38%		29%		32%	
Mother Working 1-30 Hours per Week	14%		10%		20%		16%		39%		40%	
Mother Working 31-37 Hours per Week	13%		13%		10%		13%		18%		15%	
Mother Working > 37 Hours per Week	59%		56%		34%		33%		14%		12%	
Children's Age	13.53	2.29	13.40	2.42	13.56	2.34	13.63	2.26	13.36	2.30	13.39	2.29
Weekday	72%		71%		71%		72%		71%		72%	
Weekend	28%		29%		29%		28%		29%		28%	
1 st Quarter Day (January - March)	32%		24%		26%		26%		27%		27%	
2 nd Quarter Day (April - June)	24%		21%		25%		23%		23%		28%	
3 rd Quarter Day (July-September)	19%		27%		22%		23%		28%		25%	
4 rd Quarter Day (October-March)	25%		28%		28%		28%		22%		20%	
Number of Adults at Home > 17 years old	2.04	0.55	2.04	0.61	2.34	0.81	2.32	0.83	2.15	0.68	2.09	0.78
Number of Children at Home < 18 years old	2.11	0.73	2.13	0.80	1.81	0.77	1.78	0.78	2.11	0.95	2.17	1.02
N	424		406		688		636		641		722	

Note: Analyses are weighted by day of the week: time-use averages can be read as the average minutes on a random day of a random week of the year.

Table 2. Predicted Values. Gender Differences in Child Daily Minutes in Selected Activities

	FINLAND			SPAIN			UNITED KINGDOM		
	Boys	Girls	% Gap	Boys	Girls	% Gap	Boys	Girls	% Gap
Screen-based Activities	222	190	16%**	171	146	16%**	230	169	31%***
Non-screen Educational Activities	64	90	-34%**	103	123	-18%*	55	78	-35%**
Socializing Time	105	119	-13%	90	85	6%	85	105	-21%*
Active Time	53	37	36%*	58	44	27%*	43	24	57%***
Domestic Work Activities	32	58	-58%***	32	52	-48%***	36	67	-60%***
Personal Care Activities	54	67	-21%**	59	68	-14%*	77	101	-27%***

Note: Predicted marginal effects of linear prediction models with interaction terms between country and gender. Results come from the same models presented in Figure 3, adding all study control models. All analyses represent an average day where weekdays are counted as 1/5 and weekends as 1/2 for an average full week of the year, providing a representative random day, week, and month of the year of observation. The gender gap calculates the net percentage of predicted differences for each activity between boys and girls in each country, using the following measurement: $100 * (b - g) / ((b + g) / 2)$, where b represents the net predicted daily minutes that boys spent in each activity and country and g represents girls' net predicted daily minutes for the same activity and country. That is, positive values in the gender gaps indicate that boys spend more time in the activity than girls; negative values indicate that girls spend more time in the activity than boys. That is, the higher the distance from 0, the larger the gender difference in child time at the country level. P-values (* $p < .05$, ** $p < .01$, *** $p < .001$) indicate the statistical significance of gender differences in separate models, adding all study control variables, for each subsample of countries, namely Finland (n = 804), Spain (n = 1324), and the UK (1363).

Table 3. OLS. Child Time Use. Country and Gender Interactions

	Screen Activities	Non-Screen Educational	Socializing Activities	Exercising Activities	Domestic Work Activities	Personal Care
United Kingdom ^a	59.73*** (11.63)	-45.74*** (6.98)	-5.16 (7.72)	-15.05* (6.20)	4.26 (3.77)	16.83** (5.41)
Finland ^a	56.39*** (13.39)	-38.24*** (8.31)	10.90 (9.39)	-4.49 (7.22)	-2.37 (3.30)	-5.50 (5.16)
Girl	-23.35** (8.85)	19.85** (7.14)	-6.56 (7.36)	-13.85* (5.35)	19.62*** (3.90)	8.07* (3.60)
Girl x United Kingdom ^a	-37.77** (13.61)	2.79 (9.91)	26.94* (10.85)	-5.09 (7.14)	11.16 (6.30)	15.07* (6.33)
Girl x Finland ^a	-15.57 (15.96)	4.29 (10.98)	24.99 (14.29)	-2.23 (8.49)	8.40 (6.42)	4.47 (6.04)
Intercept	77.01** (25.81)	22.10 (16.39)	127.10*** (19.35)	58.43*** (13.51)	3.94 (9.65)	30.15** (11.47)
Observations	3491	3491	3491	3491	3491	3491
Adjusted R^2	0.097	0.085	0.076	0.054	0.077	0.080

* $p < .05$, ** $p < .01$, *** $p < .001$

^a Gender interaction effects between Finland and UK (tested in additional models not shown) are not statistically significant at the 95% level for all the six activities of study.

Note: Clustered standard errors are included in parentheses. Analyses show the interaction effects between gender and country, presented in Figure 3. The omitted reference category is the interaction of Spain with boy in the first section, United Kingdom and boy in the second, and Finland and boy in third. All models control for maternal employment, family structure, age, number of adults at home, number of children at home, day of the week, and quarter of the year. Analyses represent an average day, using weights with all days of the week being equally represented.

Fig 1. Gender Ratios in Time Use in Finland, Spain and UK for Individuals Aged 25-65

Note: Authors' calculations based on the OECD data available from the HETUS statistics for Finland (2009/10), Spain (2009/10) and the UK (2014/15); retrieved from www.oecd.org. The ratio is based on the average time that men and women spend on a random day in each of the three activities. The ratio follows this formula for each activity: F / M . Where F is the female's time and M is the male's time in each activity. The outcome of the gender ratio shows the number of hours that females spend in each activity for each hour spent by males in the same activity, where 1 would imply that men and women spend exactly the same hours in the activity, values above 1 indicate that females spend more time in the activity, and values below 1 indicate that males spend more time in the activity.

Fig 2. Average Minutes in Daily Activities by Child Gender and Across Countries

Note: The average time in activities by boys and girls is computed by treating an average day of a random week over the year in all three countries (weekdays are counted as 1/5 and weekends as 1/2 for an average full week of the year) (N = 3,517).

Fig 3. Predicted Daily Minutes in Activities by Country and Gender

Note: Linear prediction models. The figure includes a total of six separated models with an interaction term between gender and country, with Confidence Intervals at 95% levels. All models include the following controls: Family structure; Mother's education; Mother's employment hours (Not employed; Mother's working 1-30 weekly hours; Mother's working 31-37 weekly hours; Mother's working more than 37 weekly hours); Children's age; Weekend diary; Season's quarter (January – March; April – June; July-September; October-March); Number of adults at home aged 18 or older; Number of children at home aged 0-17. All analyses represent an average day where weekdays are counted as 1/5 and weekends as 1/2 for an average full week of the year, providing a representative random day, week, and month of the year of observation; SP = Spain (N = 1324); UK = United Kingdom (N = 1363); FI = Finland (N = 830).

Fig 4. Predicted Daily Minutes in Activities by Country x Gender and Child Age Group

Note: Linear prediction models. The figure includes a total of six separated models with an interaction term between gender and country separately by children's age groups, the youngest (Age 10-13; about 50% of boys and girls) and the eldest (Age 14-17; about 50% of boys and girls), with Confidence Intervals at 95% levels. All models include the following controls: Family structure; Mother's education; Mother's employment hours (Not employed; Mother's working 1-30 weekly hours; Mother's working 31-37 weekly hours; Mother's working more than 37 weekly hours); Weekend diary; Season's quarter (January – March; April – June; July-September; October-March); Number of adults at home aged 18 or older; Number of children at home aged 0-17. All analyses represent an average day where weekdays are counted as 1/5 and weekends as 1/2 for an average full week of the year, providing a representative random day, week, and month of the year of observation; SP = Spain (N = 1324); UK = United Kingdom (N = 1363); FI = Finland (N = 830).

Fig 5. Predicted Daily Minutes in Activities by Country x Gender and Family Structure

Note: Linear prediction models. The figure includes a total of six separated models with an interaction term between gender and country separately by family structure, including two-parent families and single-mother families, with Confidence Intervals at 95% levels. All models include the following controls: Family structure; Mother's education; Mother's employment hours (Not employed; Mother's working 1-30 weekly hours; Mother's working 31-37 weekly hours; Mother's working more than 37 weekly hours); Children's age; Weekend diary; Season's quarter (January – March; April – June; July-September; October-March); Number of adults at home aged 18 or older; Number of children at home aged 0-17. All analyses represent an average day where weekdays are counted as 1/5 and weekends as 1/2 for an average full week of the year, providing a representative random day, week, and month of the year of observation

Fig 6. Predicted Daily Minutes in Activities by Country x Gender and Maternal Work Status

Note: Linear prediction models. The figure includes a total of six separated models with an interaction term between gender and country separately by maternal work status, including two-parent families and single-mother families, with Confidence Intervals at 95% levels. All models include the following controls: Family structure; Mother's education; Children's age; Weekend diary; Season's quarter (January – March; April – June; July-September; October-March); Number of adults at home aged 18 or older; Number of children at home aged 0-17. All analyses represent an average day where weekdays are counted as 1/5 and weekends as 1/2 for an average full week of the year, providing a representative random day, week, and month of the year of observation.

APPENDIX

Table A1. Child Time-Use Activity Coding

<i>Specific Activities</i>	<i>Activities Included</i>	<i>Location</i>
Screen-based Time	Computing programming, internet use, computer games, watching TV, video watching	Outside school
Non-screen Educational Time	Reading, study, going to the theatre, concerts or cinema, library time, playing music, dance, theatre, artistic activities	Outside school
Socializing Activities	Socializing with family, celebrations, sports events, cultural visits, religious activities, volunteering	Outside school
Exercising Activities	Physical activities and practicing sports	Outside school
Domestic Work Activities	Food preparation, washing and cleaning house, ironing, shopping, gardening, repairs of dwelling, shopping, caring for children and adults,	Outside school
Personal Care Time	Washing the hands, taking a shower, putting on making up, drying the hair	Outside school

Note: Details on activity coding followed in the three comparable time-diary surveys from Finland (2009/10), Spain (2009/10) and UK (2014/15).

Table A2. OLS. Children's and Adolescents' Time Use. All Study Sample.

	Screen-based Time	Non-screen Educational	Socializing Activities	Exercising Time	Domestic Work Time	Personal Care Time
Spain	(ref)	(ref)	(ref)	(ref)	(ref)	(ref)
United Kingdom	41.22*** (8.00)	-46.47*** (5.75)	6.70 (5.97)	-17.52*** (4.13)	8.97* (3.59)	24.98*** (3.95)
Finland	48.22*** (9.10)	-35.98*** (6.48)	23.83*** (7.21)	-6.03 (4.96)	2.60 (3.31)	-3.44 (3.57)
Single-Mother Household	3.82 (8.40)	-9.04 (6.25)	-2.36 (5.88)	-9.34* (3.63)	-3.05 (3.73)	14.30** (4.68)
Mother is College Educated	-25.23*** (7.14)	20.62*** (5.12)	0.92 (5.33)	6.01 (3.66)	-2.78 (2.98)	-4.69 (3.32)
Mother Works 1-30 Hours	-3.14 (8.84)	7.37 (6.58)	1.10 (6.97)	1.56 (4.41)	0.25 (3.74)	-7.69* (3.92)
Mother Works 31-37 Hours	17.31 (11.89)	2.56 (7.66)	-21.28** (7.70)	4.56 (5.37)	9.15+ (5.15)	1.51 (6.08)
Mother Works > 37 Hours	-1.35 (8.86)	-2.64 (6.34)	-6.46 (6.75)	2.07 (4.43)	-1.06 (3.81)	-2.47 (3.71)
Age	5.20*** (1.37)	4.61*** (0.98)	-4.28*** (1.11)	-0.91 (0.67)	1.47* (0.58)	1.14 (0.59)
Girl	-39.62*** (6.04)	22.37*** (4.26)	8.66 (5.08)	-16.34*** (3.12)	25.32*** (2.64)	14.52*** (2.71)
Weekend	61.75*** (5.24)	-9.08* (3.83)	57.22*** (5.16)	17.56*** (3.26)	19.21*** (2.68)	5.21* (2.33)
2 nd Quarter (April - June)	-5.49 (8.63)	15.34* (6.78)	19.17** (6.96)	11.77** (4.20)	8.22* (3.53)	3.13 (3.34)
3 rd Quarter (July – Sept)	21.93* (9.76)	-12.17 (6.34)	32.60*** (7.71)	21.19*** (5.09)	20.49*** (3.94)	8.45 (4.53)
4 th Quarter (October – December)	4.11 (8.80)	4.25 (6.01)	-5.83 (6.64)	-2.55 (3.81)	3.15 (3.47)	-1.57 (3.30)
Number of Adults (> 17 years)	5.25 (4.39)	4.97 (3.00)	-0.10 (3.51)	-0.17 (2.48)	-1.75 (1.93)	3.57 (2.34)
Number of Children (< 17 years)	-3.11 (3.87)	1.23 (2.76)	0.58 (2.95)	-1.16 (1.77)	-0.60 (1.66)	1.18 (1.64)
Intercept	87.47*** (25.23)	19.82 (16.29)	117.74*** (19.20)	59.48*** (13.09)	2.41 (9.44)	28.18* (10.99)
Observations	3517	3517	3517	3517	3517	3517
Adjusted R^2	0.089	0.081	0.073	0.049	0.072	0.074

Regression coefficients with standard errors in parentheses

* $p < .05$, ** $p < .01$, *** $p < .001$

Table A3. Daily Minutes in Children's Daily Activities with Parents, Alone or with 'Others'

	Screen-Based Time			Non-Screen Educational			Socializing Activities			Exercising Activities			Domestic Work			Personal Care		
	Boys	Girls	Gap	Boys	Girls	Gap	Boys	Girls	Gap	Boys	Girls	Gap	Boys	Girls	Gap	Boys	Girls	Gap
With Parent/s																		
Finland	30	29	3%	6	7	-15%	13	20	-42%*	5	8	-46%	10	17	-52%*	9	8	12%
Spain	78	74	5%	32	36	-12%	21	23	-9%	12	12	0%	17	26	-42%*	20	21	-5%
United Kingdom	84	60	33%	14	17	-19%	28	30	-7%	10	5	67%	18	28	-43%	26	24	8%
Alone																		
Finland	102	79	25%*	40	53	-28%*	9	7	25%	6	6	0%	10	20	-67%*	30	37	-21%*
Spain	61	50	20%*	47	57	-19%*	3	4	-29%	3	2	40%	11	15	-31%*	29	39	-29%*
United Kingdom	76	51	39%*	19	34	-57%*	5	8	-46%*	4	1	120%*	6	14	-80%*	30	47	-44%*
With Others																		
Finland	90	77	16%	22	30	-31%	76	93	-20%	42	25	51%*	9	22	-84%*	13	20	-42%*
Spain	36	29	22%	23	28	-20%	66	57	15%	43	29	39%*	5	11	-75%*	10	9	11%
United Kingdom	70	54	26%*	22	29	-27%*	55	69	-23%*	29	17	52%*	13	25	-63%*	22	30	-30%*

* Gender bivariate t-test significant at 95% level

Figure A1. Share of Time Alone, with Parents and Others by Activity, Gender and Country

Note: The figures present average differences, without control variables, for a random day of the year. The figure indicates the share of time allocated to each activity (from 0% to 100%) that took place (i) alone, (ii) with parental presence or (iii) with others and without presence of any parent.