

PLAYGROUND PLAY IN BRITAIN

Associations with child mental
health and wellbeing



INTRODUCTION TO THE BRITISH PRESCHOOL CHILDREN'S PLAY SURVEY

The [British Preschool Children's Play Survey](#) asked 1166 parents/caregivers of children aged 2-4 years (327 2 year olds, 418 3 year olds, 421 4 year olds) about their child's play and their wellbeing and mental health. Survey respondents were approximately representative of the population of Britain (see [Dodd & Hesketh, 2024](#) for full breakdown of sample characteristics).

The survey used the Children's Play Survey ([Dodd et al., 2021](#)), which asks about the frequency with which children play in 7 different play locations, and how long they typically play in each location for. Parents further completed a wide range of demographic questions and measures of their child's mental health and wellbeing: the Strengths and Difficulties Questionnaire (SDQ) and the Positive and Negative Affect Scale (PANAS).

This report uses the dataset generated by the survey to focus on playground play, and to explore associations between playground play and children's mental health and wellbeing.



Frequency of playground play – descriptive results

	Every day	4-6 times per week	2-3 times per week	Once a week	1 to 3 times a month	Less than once a month	Never
Spring/ Summer	3%	12%	42%	27%	12%	3%	2%
Autumn/ Winter	3%	6%	24%	34%	22%	8%	3%

Table 1. Frequency of playground play

Take homes:

- 67% (over two-thirds) of children use a playground once a week or more in the autumn/winter.
- 83% (over three-quarters) of children use a playground once a week or more in the spring/summer.
- Over 10% of children go to playground less than once a month in the autumn/winter.
- Over 5% of children go to playground less than once a month in the spring/summer.



Total playground play – descriptive results

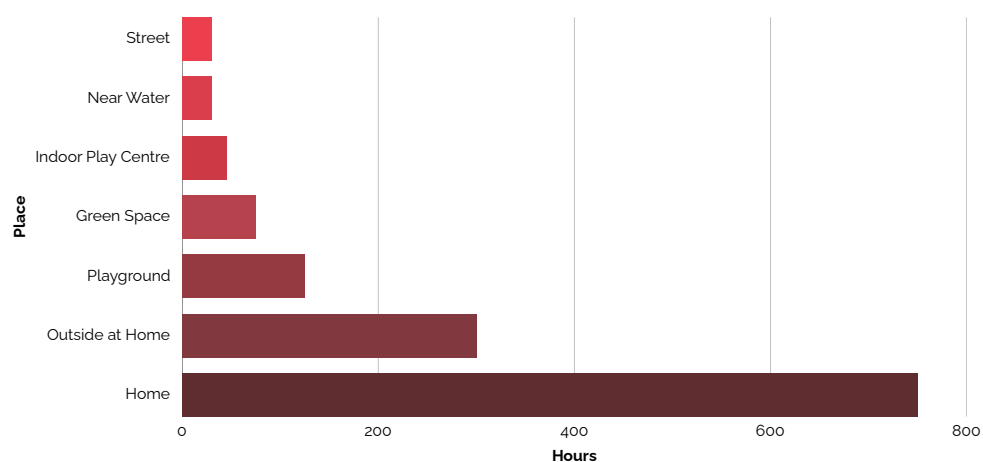


Figure 1. Total hours per year children spent on average playing in different play locations.

Take homes:

- On average children are reported to spend 139 hours a year playing on playgrounds.
- Playgrounds are the number 1 place for 2-4 year olds to play away from home.
- 5% of children spend less than 10 hours a year playing on playgrounds.
- It is clear that there are inequalities in the use of playgrounds.





SOCIO-DEMOGRAPHIC ASSOCIATIONS WITH PLAYGROUND PLAY

We had demographic information regarding: Child learning disability, Child physical disability, Social grade, Child sex, Region, Urban/rural, Child ethnicity, Child age, and Child birth order. We examined whether these factors were linked to the frequency of playground play. For frequency of playground play during autumn/winter frequency children in London and the North of England played at playgrounds less frequently than children in Scotland. Further, children who were not first born played less frequently at playgrounds. For spring/summer none of the demographic factors were associated significantly with frequency of playground play.

We repeated these analyses for total amount of time children played on playgrounds and found that only region was significant; no other significant associations were found after controlling for relevant confounding factors (e.g. for region we controlled for ethnicity, urban/rural and social grade). For region, children were reported to spend more time playing on playgrounds in Scotland than in the North of England but no other regional differences were found.

Take homes:

- There is little evidence of systematic population level inequalities in playground use for children aged 2-4, although children in some areas of England are using playgrounds less than those in Scotland.
- We recognise that there are likely to be local level inequalities in access and use of playgrounds; our data can only speak to population level inequalities.



PLAYGROUND PLAY, MENTAL HEALTH AND WELLBEING

The Strengths and Difficulties Questionnaire provides two scores: an internalising scale score, and an externalising scale score. Internalising problems relate to problems with emotions such as anxiety and depression. Externalising problems relate to difficulties with attention, hyperactivity and behaviour more broadly. The Positive and Negative Affect Scale asks caregivers to rate how often in the past two weeks their child has experienced a range of emotions. There are two subscales: Positive Affect (positive emotional feelings like 'happy' and 'joy') and Negative Affect (negative emotional feelings like 'sad' and 'angry').

We examined how playground play, as reported by caregivers on the Children's Play Scale was associated with children's mental health and wellbeing across these four scales, which capture different aspects of children's mental health and wellbeing. First, we examined frequency of playground play. Because frequency is reported for Autumn/Winter and Spring/Summer separately, we conducted separate analyses by season. The frequency variable was transformed to a 'days per season' variable to support interpretation. Analyses were conducted using the `svyglm` command in R, which incorporates the survey weights.

A p-value below $p = .01$ was used to indicate statistical significance given the large sample size and number of analyses. Exact p-values are reported for all significant results. All analyses controlled for the amount of time children spent in childcare, social grade, and ethnicity as these were identified via Directed Acyclic Graphs as being potential confounders.

Second, we conducted further regression analyses using the total time spent playing at playgrounds, which is estimated using the Children's Play Survey by multiplying frequency by time and combining across seasons. To be consistent with the frequency analyses, we also ran these analyses for time spent playing on playgrounds split by spring/summer and autumn/winter.



FREQUENCY OF PLAYGROUND PLAY AND CHILD MENTAL HEALTH – RESULTS

For Autumn/Winter, we found no significant associations between frequency of playground use and children's mental health and wellbeing.

More frequent use of playgrounds in the spring and summer was significantly associated with lower internalising ($\beta = -0.007$, $SE = 0.003$, $t = -2.70$, $p = .007$, 95% CI [-0.013, -0.002]) and higher positive affect ($\beta = 0.007$, $SE = 0.003$, $t = 2.84$, $p = .004$, 95% CI [0.002, 0.01]). Associations with negative affect and externalising problems were not statistically significant.

TIME SPENT ENGAGED IN PLAYGROUND PLAY AND CHILD MENTAL HEALTH – RESULTS

No significant associations were found for internalising, externalising and negative affect scales. A significant positive association was found for positive affect ($\beta = 0.002$, $SE = 0.0009$, $t = 2.63$, $p = .009$, 95% CI [0.0006, 0.004]), indicating that children who spend more time playing on playgrounds over the course of a year are generally reported to be happier.

Given that frequency is split by Autumn/Winter and Spring/Summer we also examined associations between the mental health and wellbeing measures and total time spent playing split by season.

Following the pattern seen in the frequency data, no statistically significant associations were found for time spent playing on playgrounds in Autumn/Winter but in Spring/Summer more time spent playing on playgrounds was associated with lower internalising problems ($\beta = -0.005$, $SE = 0.001$, $t = -3.71$, $p = .0002$, 95% CI [-0.007, -0.002]), lower externalising problems ($\beta = -0.004$, $SE = 0.001$, $t = -2.97$, $p = .003$, 95% CI [-0.006, -0.001]), and higher positive affect ($\beta = 0.003$, $SE = 0.001$, $t = 3.54$, $p = .004$, 95% CI [0.001, 0.006]). More playground play was also associated with lower negative affect but this did not reach significance.



Take homes:

- More frequent use of playground over the spring/summer is linked to better child wellbeing and mental health across multiple measures.
- More time spent playing on playgrounds over the spring/summer is associated with better child wellbeing and mental health across multiple measures.
- Children who spend more time playing on playgrounds across the course of a year are happier.
- Children who spend more time playing on playgrounds in the Spring and Summer are happier.



SUMMARY OF FINDINGS

This report examines data about playground play collected as part of the British Preschool Children's Play Survey. It examines how playground play in children aged 2-4 is related to their mental health and wellbeing. The results show that playgrounds are a key part of young children's play environments all year round but especially in the summer, with 83% of children using a playground once a week or more in the spring/summer.

There are striking inequalities though, with 5% of 2-4 year olds spending less than 10 hours a year playing on playgrounds. Local level factors likely influence young children's access to and use of playgrounds. The results also showed that more frequent use of playground over the spring/summer is linked to better child wellbeing and mental health across multiple measures.

Overall, the research shows that playgrounds are a key part of young children's outdoor play lives and that more outdoor play on playgrounds corresponds to happier, healthier preschoolers.

