

Parents perceptions of play in school: findings from the British Children's Play Survey

Article

Published Version

Creative Commons: Attribution 4.0 (CC-BY)

Open Access

Nesbit, R. J. ORCID: <https://orcid.org/0000-0001-7540-3187>,
FitzGibbon, L. ORCID: <https://orcid.org/0000-0002-8563-391X>
and Dodd, H. F. ORCID: <https://orcid.org/0000-0003-1446-5338> (2025) Parents perceptions of play in school: findings from the British Children's Play Survey. *Psychology in the Schools*, 62 (9). pp. 2928-2941. ISSN 1520-6807 doi: 10.1002/pits.23512 Available at <https://centaur.reading.ac.uk/122973/>

It is advisable to refer to the publisher's version if you intend to cite from the work. See [Guidance on citing](#).

To link to this article DOI: <http://dx.doi.org/10.1002/pits.23512>

Publisher: Wiley

All outputs in CentAUR are protected by Intellectual Property Rights law, including copyright law. Copyright and IPR is retained by the creators or other copyright holders. Terms and conditions for use of this material are defined in the [End User Agreement](#).

www.reading.ac.uk/centaur

CentAUR

Central Archive at the University of Reading

Reading's research outputs online

RESEARCH ARTICLE OPEN ACCESS

Parents Perceptions of Play in School: Findings From the British Children's Play Survey

Rachel. J. Nesbit¹  | Lily FitzGibbon²  | Helen. F. Dodd^{1,3}

¹Faculty of Health and Life Sciences, University of Exeter, Exeter, UK | ²Division of Psychology, Faculty of Natural Sciences, University of Stirling, Stirling, UK | ³School of Psychology and Clinical Language Sciences, University of Reading, Reading, UK

Correspondence: Rachel. J. Nesbit (r.nesbit@exeter.ac.uk)

Received: 10 May 2023 | **Revised:** 19 March 2025 | **Accepted:** 23 March 2025

Funding: This research was funded by a UKRI Future Leaders Fellowship, grant number MR/S017909/1.

Keywords: breaktime | child | demographics | play | recess | risky play | school

ABSTRACT

Using data from the British Children's Play Survey, we aimed to characterise parents' perception of play in school and to examine to what extent perceptions were accounted for by socio-demographic factors, geographic factors, and parents' attitudes towards risk in play and protection from injury. Participants were 1919 parents (54% female) of children aged 5–11 years living in Britain. Overall, parents had positive perceptions about the need for outdoor play space in schools and viewed playtime as a vital part of the school day. There was more variability in parents' responses to questions around the level of independence and risk that parents believed was appropriate in children's play. This variability was accounted for, in part, by socio-demographic factors and parents' attitudes towards risk in play and protection from injury. We discuss findings in relation to policy around play in schools and public health messaging about the benefits of play for child development, specifically independent, risky play.

1 | Introduction

Play is fundamental to childhood. A growing body of evidence points to myriad benefits of play for healthy childhood development. Play supports cognitive development such as problem solving and decision-making (Ramstetter et al. 2010), and is associated with both learning behaviours and learning readiness (Barros et al. 2009). Outdoor play in particular offers a range of benefits for children's physical (Brussoni et al. 2015; Janssen 2014; Sallis et al. 2000), and mental health (Piccininni et al. 2018; Tillmann et al. 2018). Drawing on evidence regarding the importance of outdoor play for children's health, in 2015, a diverse, cross-sectorial group published a position statement on outdoor play which called for increased opportunities for self-directed play outdoors across all settings, including schools (Tremblay et al. 2015).

Play in schools typically happens during defined periods such as a morning break or before/after lunch. These breaks in the day might

be referred to as breaktime, playtime or recess. In this paper we use the term breaktime to refer to any time during the day when children are typically outside and are generally free to choose what they want to do, away from formal learning. In Britain, the amount of time children are given for breaktimes across the school day has decreased significantly over the past three decades (Baines and Blatchford 2019). Data from the Breaktime and Social Life in Schools (BaSiS) study showed that breaktimes have reduced on average by 45 min for the youngest children and 65 min for older children since 1995 (Baines and Blatchford 2019). This decrease in time given for play results from increased curriculum demands placed on schools (Baines and Blatchford 2019). Further, the withdrawal of breaktimes are often used as a sanction for poor behaviour or incomplete work, with 60% of primary and secondary schools in Britain having a policy that allows teachers to withhold breaktime. Compounding this decrease in time for play is risk aversion and tight control over children's activities during breaktimes. For example, recent research shows that staff involved with

This is an open access article under the terms of the [Creative Commons Attribution](#) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2025 The Author(s). *Psychology in the Schools* published by Wiley Periodicals LLC.

Summary

- The majority of parents in Britain perceive school playtimes as a vital part of the school day that should be prioritised for all children and that outdoor play space at school is essential.
- Most parents in Britain value opportunities for their child to have independence during their play and believe risk and challenge during play is acceptable in schools.
- Parent socio-demographic factors and attitudes towards risk and protection impact their perception towards children's play in school.

internal school policies related to play predominantly hold negative views around risk and were concerned about adverse outcomes, both for schools and children (Jerebina et al. 2024a). Parents, schools staff and intituitions responses to risk in play are influenced by concerns about physical safety, and fear of blame and liability (Jerebina et al. 2022).

This decline in opportunities for play inside of schools is mirrored by opportunities outside of school where there is growing and convincing evidence that children's opportunities for outdoor play and especially play where children are able to take risks and play adventurously, is declining. Risky play, synonymous with adventurous play, can be defined as exciting, thrilling play, where children are able to take age-appropriate risks (Dodd et al. 2021). Clements (2004) reported that 60% of mothers surveyed reported playing adventurously as a child, whereas only 22% of their children were reported to play in an adventurous way. This aligns with data on children's outdoor play and independent mobility. Children play less outside than in previous generations and are not allowed out alone until they are almost two years older than their parents were (Dodd et al. 2021). The decline in opportunities for risky play is important because this type of play has been proposed to provide a positive context where children can learn about risk judgement, coping, fear, and uncertainty, and where they can be physically active. As such, it has been theorised to reduce children's risk for anxiety symptoms (Dodd and Lester 2021). Indeed, recently, researchers have provided evidence of small but significant associations between children's time spent playing adventurously and internalising symptoms; children who spend more time playing adventurously had fewer internalising problems (Dodd et al. 2023). Furthermore, Jerebina et al. (2024b) found that when parents were less risk and injury tolerant in the context of their child's play, their children had lower levels of moderate-to-vigorous physical activity.

Although children's opportunities for play in school are declining on average, some schools actively promote and protect children's play, including risk-taking in play. One example is a New Zealand school that reduced adult influence and rules on the playground, gave permission for children to use previously off-limit areas of the playground and introduced loose parts such as pipes, and tyres. As a result, the school reported improvements in pupil engagement and learning readiness, as well as less bullying, conflict and accidents on the playground (McLachlan 2014).

Similarly, Outdoor Play and Learning (OPAL) in the UK provides a similar approach to playtimes through a mentor-supported school improvement approach. Evaluation of their programme shows that children are happier and quicker to settle following playtime (Lester et al. 2011). As well as impacts on children's learning readiness and engagement, Lavrysen et al. (2015) demonstrated that teachers reported improvements in self-esteem, conflict sensitivity, and concentration after young children were provided with an intensive package of risky-play activities, including play with height and speed.

Given the positive outcomes reported by schools, there is increasing interest in how to develop programmes to effectively support schools to improve their play offer (Dodd et al. 2024). Taking an Intervention Mapping (IM; Eldredge et al. 2016) approach, the first step in intervention development is to analyse the problem and need, identifying what needs to change and for whom. Qualitative research with schools provides some insights that are relevant to this stage of IM (Jerebina et al. 2024a). School staff, including school leaders, commonly cite parents as barriers to improving playtimes, particularly with reference to giving children more freedom to explore risk taking in their play, and the potential for injury (Nesbit et al. 2021). Before an effective intervention can be developed, this needs to be explored further to ascertain what needs to change and for whom. For example, should an intervention focus on changing the attitudes and beliefs of parents, to make it easier for schools to make changes to their approach to play? There is evidence that this can be done (Brussoni et al. 2021). Or, alternatively, are schools misrepresenting parent's views such that an intervention would need to focus on dispelling this belief that parents are a barrier? A clear understanding of what parents think and feel about play in schools is therefore a crucial. The Theory of Planned Behaviour (Ajzen 1991) is relevant to this issue because it argues that behaviour (in this case, a parent trying to prevent a school from providing more diverse play experiences) is driven by intention, with intention driven by attitude (knowledge and beliefs about the behaviour and expected outcome), subjective norms (perceptions of what other people think), as well as perceived behaviour control (how easy it is to engage in the behaviour). Thus, understanding the attitudes and beliefs of a large sample of parents will provide important information about whether parents are likely to act as barriers to schools changing playtimes. In turn, this will inform intervention development.

1.1 | Aims

In this exploratory study we aim to examine and describe parents' perceptions of the importance of play in schools as well as their views on independence and risk taking during school-based play. We also aim to evaluate whether parent's perceptions regarding play in schools are related to socio-demographic variables, geographic factors and parents' attitudes towards risk in play and protection from injury. The goal is to provide insights that will inform the development of play interventions for schools, not to test specific hypotheses. We address these aims we use data collected as part of the British Children's Play Survey, a nationally representative survey of parents living in the UK.

2 | Methods

2.1 | Participants

Participants were 1919 respondents who took part in the British Children's Play Survey (BCPS). The sample were recruited to be nationally representative. All participants were parents or caregivers of primary school aged children (5-11 years), living in Britain (see Table 1 for demographic details of the sample). Participants were recruited via YouGov, a UK public opinion research company and were given YouGov reward points for taking part. YouGov have an online panel of more than one million adults who live in the UK. To recruit panel members, YouGov intentionally use a diverse range of sources which ensures diversity across their panel. For this study YouGov used Active Sampling, which means that only panelists who have been invited to do so can complete the survey. This approach allows them to create a sample who are approximately representative of the UK population. Ethical approval was granted by the University of Reading School of Psychology and Clinical Language Sciences Ethics Committee (2020-003-HD).

2.2 | Measures

The full BCPS survey, data, and analysis scripts are available via the UK Data Service [<https://doi.org/10.5255/UKDA-SN-8793-1>]. In this paper we focus on the measures that ask about parents' perceptions towards play at school and parental attitudes towards risk in play and protection from injury. The wider survey also included questions about children's play, independent mobility, children's organised activities, screen time, and mental health. Research articles published to date using this data set are openly available (see Dodd et al. 2021, 2023; Oliver et al. 2022, 2023). During the survey participants completed a series of questions about socio-demographic and geographic characteristics (see Table 1). YouGov provided data on respondent ethnicity as well as disability or health problems in the past 12 months and whether participants lived in an urban, rural or town/fringe area.

2.2.1 | Play in Schools

Five questions asked parents about play in schools. The first asked about children's access to outdoor space at school (*Does your child's school have an outdoor play space?*). Parents were then asked to indicate the extent to which they agreed with two statements, one about outdoor play space (*It is essential that every child has an outdoor play space at school*), and one about the prioritisation of playtime in school (*Playtime is a vital part of the school day and should be prioritised for all children*). Next, parents were first asked to what extent they agreed with the statement *Children should be given as much independence as possible during playtime at school*. Finally, parents were asked how they felt about their child playing in an adventurous way, with some challenge and risk when they play at school, and to select one statement from the following three options: *'I feel children should be kept as safe as possible when they are at school'*, *'I feel children should be allowed to challenge themselves'*

TABLE 1 | Demographic characteristics of full sample.

Parent Characteristics	Number of participants	%
Sex	1919	
Male	881	46%
Female	1038	54%
Age	1919	
18-24	29	2%
25-34	370	19%
35-44	1026	53%
45-54	427	22%
54+	67	3%
Ethnicity	1556 ¹	
White British	1334	86
White (other background)	81	5%
Black	24	2%
Asian	63	4%
Multi-ethnic	41	3%
Other	13	1%
Employment status	1873 ¹	
Working full-time	1014	53%
Working part-time	418	24%
Student	29	2%
Retired	33	2%
Unemployed or not working	295	15%
Other	84	4%
Education level	1860 ¹	
Low	492	26%
Medium	723	39%
High	645	35%
Social class ²	1919	
Middle Class (ABC1)	1135	59%
Working Class (C2DE)	784	41%
Health problem/disability (within previous 12 months)	1592 ¹	
Yes, limits a lot	145	9%
Yes, limits a little	210	13%
No	1237	78%
Child Characteristics		
Sex	1919	
Male	982	51%
Female	937	49%
Birth-order	1917 ¹	
First-born	1227	64%
Second-born	441	23%

(Continues)

TABLE 1 | (Continued)

Parent Characteristics	Number of participants	%
Third or more	249	13%
Disability ³	1919	
Yes	243	13%
No	1597	83%
Prefer not to say	49	3%
Don't know	30	2%
Geographic Variables		
Location	1919	
Urban	1521	79%
Town or Fringe	206	11%
Rural	192	10%
GB Region	1919	
England	1659	85%
North	470	24%
Midlands	338	18%
East	203	11%
London	203	11%
South	445	23%
Wales	86	4%
Scotland	174	9%

¹Some data are missing on this variable as participants chose not to provide this information.

²The Market Research Society uses a demographic classification of social grade, which classifies families on the basis of the occupation of the head of the household and is closely associated with household income (National Readership Survey n.d.). Social grade is typically used as a binary variable that categorises families as being either middle class or working class. The categorisation should be considered with relevant caveats in mind (Smith 2019), for example, the classification does not always reflect people's own self-reported class identity.

³defined as a 'diagnosed learning disability, mental health disorder or physical disability'.

and to take some careful risks during their play but under adult supervision' and 'I feel children can benefit from being allowed to challenge themselves and take some risks when they play'. These three responses are coded as 'No risk', 'Supervised risk' and 'Risk' respectively throughout the manuscript.

2.2.2 | Attitudes Towards Risk in Play and Protection From Injury

2.2.2.1 | The Risk Engagement and Protection Survey (REPS). The REPS (Olsen et al. 2018) is a 14-item self-report measure to assess parent and caregiver attitudes toward protecting children from injury and allowing them to engage in risks. Respondents report the extent to which they agree with statements on a 7-point Likert scale. We computed scores for the two subscales (Protection from Injury (PfI) and Engagement with Risk (EwR)) using 12 of the 14 items as described by (Jolleyman et al. (2019)). Both subscales have a minimum score of six and a maximum score of 42. Higher scores indicate greater engagement with risk and great protection from injury

respectively. Both scales had good internal consistency in the BCPS sample (PfI alpha = 0.87; EwR = 0.75).

2.2.2.2 | The Tolerance of Risk in Play Scale (TRiPS). The TRiPS (Hill and Bundy 2014) is a 32-item self-report measure designed to assess adults' tolerance of risk during children's play. Respondents are required to answer yes or no to a series of 32 items that vary in the degree to which they are risky. Following Jolleyman et al. (2019), a no response was scored as 0, and a yes response received a score between 1 and 12, weighted according to the acceptability of the level of risk that item refers to. These weights were determined using a Rasch analysis conducted within the original validation study for the TRiPS (Hill and Bundy 2014). We computed a total risk score by summing scores on the 32 items. Possible scores ranged from 0 to 184, with higher scores indicated greater risk tolerance.

2.3 | Procedure

YouGov panellists were sent an email inviting them to take part in the survey. Participants were asked whether they had a child aged 5 to 11 years and respondents who did were presented with the survey questions. The data were collected between the 4th and 15th April 2020, shortly after the UK-wide COVID lockdown. Respondents were instructed to answer the questions thinking about normal life before COVID. Respondents were given YouGov points for completing the survey.

2.4 | Analysis Plan

We checked the distribution of all variables before conducting analyses and found that both scales of the REPS had some extreme values. We therefore Winsorized these variables such that any values lower than the 5th percentile or higher than the 95th percentile were given the value of the 5th and 95th percentile respectively, preventing outliers from substantially affecting the results. We conducted all analyses using the survey package in R (Lumley 2020), which is designed for the analysis of weighted survey data. The svyolr command was used for all ordinal regression models, with McFadden pseudo R^2 (R^2_{McF}) values calculated for each model. We ran four ordinal regression models to examine whether socio-demographic factors, geographic factors, and parents' scores on the REPS subscales and TRiPS measure were related to their perceptions towards play in schools, with each school play question as the outcome variable. To reduce the risk of familywise error, a corrected alpha level of 0.0125 is used in the reporting of significant predictors. Whether children had an outdoor space at school was not analysed further. We examined the following socio-demographic variables as predictors: child age, child sex, child birth-order, child disability, respondent health problem/disability in the previous 12 months, respondent sex, respondent ethnicity, respondent employment status, respondent social class, respondent age, respondent education level. With the exception of child age, all of these variables were categorical. Some had low numbers of respondents within certain sub-categories. Using the same process as other published work

with the BCPS data set (e.g. Dodd et al. 2021), we collapsed across subcategories for a number of these variables as follows: Ethnicity was collapsed into White/Minority; birth order was collapsed into first born/not first born, education level was collapsed into low/medium and high, using the categorisation system by YouGov; employment was collapsed into three categories full-time/employed part-time/unemployed, and other (this final category included students, retired, unemployed, not working, and other); parental age was categorised into younger/middle/older. We recognise the issues with collapsing across ethnic groups to create a minority group but there were not enough participants within sub-groups for the analysis to be feasible without collapsing the groups in this way. We have provided a breakdown of responses to the four statements about play in schools by each ethnic group in *Supplementary Information* for information; no clear patterns of responding emerge (see Tables S1–S4 in *Supplementary Information*).

2.5 | Missing Data

Some socio-demographic data were missing due to respondents choosing not to respond to these items (see Table 1). As a result, the total number of participants included in the models examining socio-demographic predictors of parent perceptions of play in schools is reduced from the full sample. To check whether using this reduced sample might affect the conclusions of our research, we also ran the socio-demographic analyses without ethnicity and without parent disability, which prevented participants from being removed due to missing data on these measures. The results were almost identical across all four analyses with the exception that child disability was a significant predictor of parent responses regarding independence when parent disability was not included in the model.

3 | Results

Table 2 shows summary statistics of parent responses to the questions about play in schools.

3.1 | Parent Perceptions Towards Play in School

The majority of parents (94%, $n = 1813$) responded to indicate that their child had an outdoor space to play at school. Forty-two parents (2%) responded that their child did not have an outdoor space to play at school. The remaining parents selected “Don’t know” (2%, $n = 29$) or “not applicable” (2%, $n = 34$). As seen in Figure 1, 96% of parents agreed or strongly agreed that it is essential that every child has an outdoor play space at school, similarly, 94% of respondents agreed or strongly agreed that playtime is a vital part of the school day and should be prioritised for all children. Of all respondents, 87% agreed or strongly agreed that children should be given as much independence as possible during playtime.

Parent responses regarding their feelings about their child playing in an adventurous way when they play at school, with

TABLE 2 | Summary Statistics, number of parents (%) responding to each of the schools questions.

Item	Number of responses	%
Outdoor space	1919	
Yes	1813	94%
No	42	2%
Not applicable	34	2%
Don’t know	29	2%
Essentiality of outdoor play space	1919	
Strongly agree	1622	85%
Tend to agree	216	11%
Neither agree nor disagree	63	3%
Tend to disagree	7	<1%
Strongly disagree	11	1%
Prioritisation of play	1919	
Strongly agree	1461	76%
Tend to agree	351	18%
Neither agree nor disagree	80	4%
Tend to disagree	14	1%
Strongly disagree	13	1%
Independence in play	1919	
Strongly agree	935	49%
Tend to agree	726	38%
Neither agree nor disagree	196	10%
Tend to disagree	51	3%
Strongly disagree	11	1%
Risk in play	1891 ¹	
No risk	305	16%
Supervised risk	1173	62%
Risk	413	22%

¹Some data are missing on this variable as participants chose not to respond to this item.

some challenge and risk, were more varied. The majority of parents reported that they felt that children should be allowed to challenge themselves and to take some careful risks during their play, but under adult supervision (62%; supervised risk). The remaining parents believed that children should be kept as safe as possible when they are at school (16%; no risk) or that children can benefit from being allowed to challenge themselves and take some risks when they play (risk; 22%; See Figure 2).

3.2 | Predictors of Parents Perceptions Towards Play in School

Tables 3, 4, and 5 show odds ratios associated with each outcome. In the first three models, each odds ratio represents the odds that respondents in the relevant category

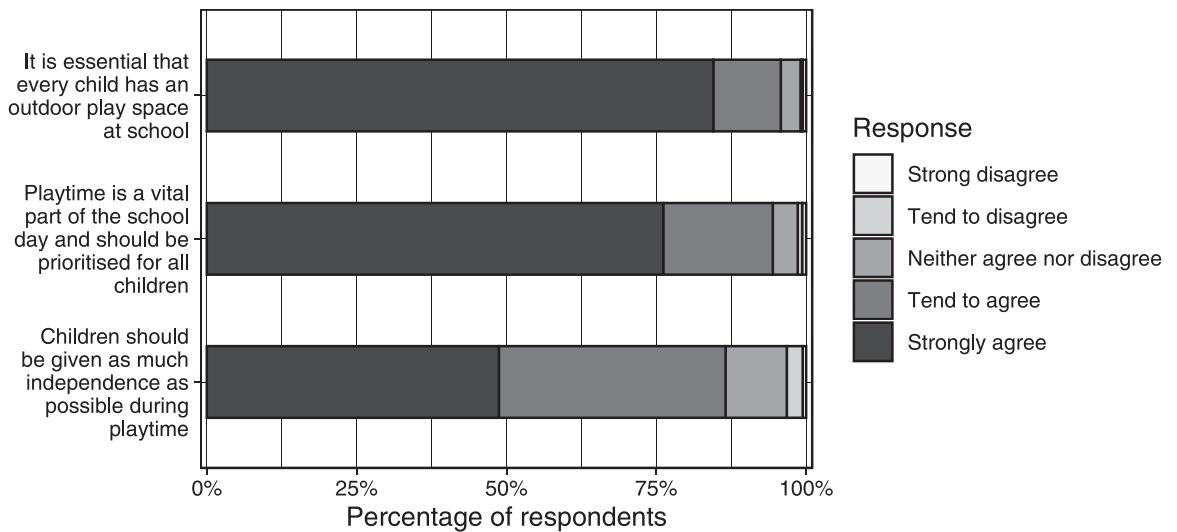


FIGURE 1 | Percentage of parents level of agreement with the three statements on the essentiality of outdoor space, prioritisation of playtime and independence during play.

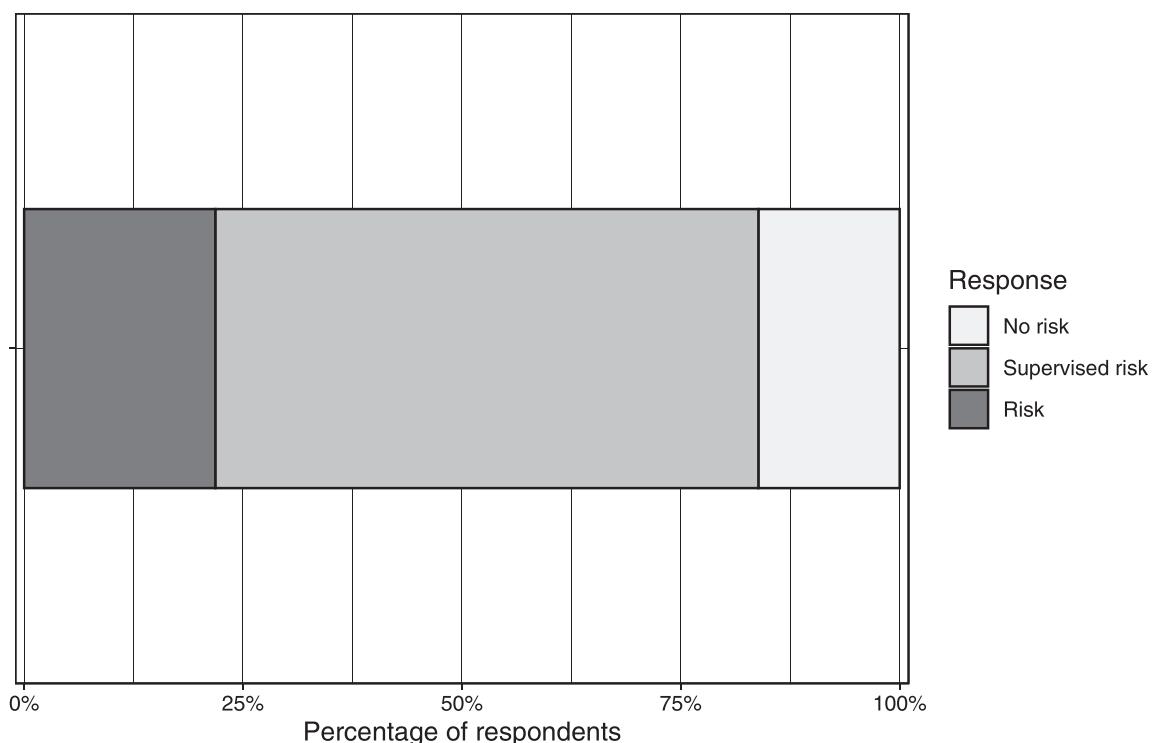


FIGURE 2 | Percentage of parents responding “No risk”, “Supervised risk” and “Risk” in relation to their child playing in an adventurous way, with some challenge and risk at school.

selected a response further towards strong agreement with the statement than a respondent with the reference characteristic, holding all other factors in the model constant. Odds ratios greater than 1 represent responses towards agreement, and odds ratios less than 1 represent responses towards disagreement. In the fourth model, each odds ratio represents the odds that respondents in the relevant category selected a response further towards a more permissive response to risk in play than a respondent with the reference characteristic, holding all other factors in the model constant. Analyses are organised by question.

3.2.1 | The Extent to Which Outdoor Play Space Is Considered Essential

3.2.1.1 | Socio-Demographic Factors. Parent disability, ethnicity, age group, level of education, and sex were all significant predictors of the extent to which parents agreed that it is essential that every child has an outdoor play space at school. White women who were older, had higher levels of education, and no disability were the most likely to agree with the statement. Specifically, parents who reported they had a disability that limited them a little or a lot had 53% and 59% lower odds,

TABLE 3 | Sociodemographic predictors of parent attitudes towards play in schools.

Predictors	Outdoor space is essential			Playtime should be prioritised			Independence in play			Risk in play		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
Parent sex												
Male	Reference			Reference			Reference			Reference		
Female	1.72	1.21-2.44	0.003	1.94	1.43-2.63	< 0.001	1.69	1.32-2.16	< 0.001	0.95	0.74-1.22	.682
Parent age												
Younger	Reference			Reference			Reference			Reference		
Middle	1.51	1.02-2.24	0.041	1.64	1.14-2.35	0.007	1.14	0.85-1.53	0.394	1.34	0.97-1.84	.070
Older	2.14	1.33 - 3.44	0.002	2.18	1.43-3.34	< 0.001	1.19	0.85-1.67	0.313	1.44	1.01-2.06	.040
Parent ethnicity												
White	Reference			Reference			Reference			Reference		
Minority	0.51	0.34-0.75	0.001	0.65	0.46-0.94	0.021	0.77	0.57-1.06	0.107	0.58	0.42-0.81	.001
Employment												
Full time	Reference			Reference			Reference			Reference		
Part time	1.52	0.97-2.40	0.070	1.30	0.89-1.92	0.179	1.01	0.75-1.36	0.927	1.16	0.87-1.54	.312
Unemp/d/other	1.68	1.04-2.70	0.033	1.40	0.94-2.08	0.100	0.84	0.61-1.16	0.296	1.33	0.95-1.86	.100
Parent education												
Low	Reference			Reference			Reference			Reference		
Med	1.52	1.05-2.19	0.027	1.66	1.20-2.28	0.002	1.01	0.77-1.33	0.929	1.73	1.28-2.32	< 0.001
High	2.2	1.46 - 3.31	< 0.001	2.27	1.60 - 3.22	< 0.001	1.34	1.01 - 1.79	.042	2.33	1.70-3.19	< 0.001
Parent social grade												
ABC1	Reference			Reference			Reference			Reference		
C2DE	0.96	0.69-1.35	0.835	0.94	0.71-1.26	0.700	1.04	0.82-1.32	0.743	0.96	0.74-1.23	.720
Parent health/disability												
No	Reference			Reference			Reference			Reference		
Yes, limited a lot	0.41	0.24-0.68	0.001	0.47	0.30-0.73	0.001	0.89	0.59-1.35	0.589	0.53	0.34-0.82	.004
Yes, limited a little	0.47	0.3-0.72	0.001	0.67	0.45-1.01	0.057	0.74	0.53-1.03	0.077	0.91	0.64-1.28	.575
Child sex												
Male	Reference			Reference			Reference			Reference		
Female	0.77	0.57-1.04	0.084	0.89	0.68-1.15	0.367	0.80	0.65-0.99	0.041	0.84	0.68-1.05	.126
Birth Order												

(Continues)

TABLE 3 | (Continued)

Predictors	Outdoor space is essential			Playtime should be prioritised			Independence in play			Risk in play		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
First born	Reference			Reference			Reference			Reference		
Not first born	0.92	0.66-1.27	0.607	1.03	0.77-1.37	0.856	1.15	0.91-1.45	0.254	1.18	0.91-1.52	.213
Child disability	Reference			Reference			Reference			Reference		
No	Reference			Reference			Reference			Reference		
Yes	1.21	0.75-1.96	0.432	1.3	0.87-1.97	0.204	0.79	0.57-1.08	0.135	0.99	0.70-1.38	.940
Observations		1346			1346			1346			1332	
R^2_{McF}		0.32			0.33			0.32			0.32	

respectively of agreeing more strongly to the statement than parents without a disability. Parents from a minority ethnic group had 49% lower odds of agreeing more strongly to the statement than white parents. Older parents had 114% greater odds of agreeing more strongly to the statement than younger parents; the comparison between the middle age category and younger category was not statistically significant after corrections. Parents with higher levels of education had 120% greater odds of agreeing more strongly to the statement than parents with a lower level of education, but again, this was only statistically significant after corrections for the comparison between higher and lower levels of education. Females had 72% greater odds of agreeing more strongly to this statement than males. The pseudo R^2_{McF} for the model was 0.32 (see Table 3).

3.2.1.2 | Geographic Factors. Geographic factors did not predict responses on this item. The pseudo R^2_{McF} for the model was 0.01 (see Table 4).

3.2.1.3 | Parent Attitudes Towards Risk in Play and Protection From Injury. Parents whose attitude towards their children's engagement with risk (EwR) was one standard deviation above the average had 147% greater odds of agreeing more strongly to the statement that outside space is essential than parents whose attitude was at the average level. Attitudes to protection from injury (Pfi) and tolerance of risk in play (TRiPS) did not predict responses on this item. The pseudo R^2_{McF} for the model was 0.09 (see Table 5).

3.2.2 | Prioritisation of Play

3.2.2.1 | Socio-Demographic Factors. Parent disability, age group, level of education, and sex were all significant predictors of the extent to which parents agreed that playtime is a vital part of the school day and should be prioritised for all children. Again, women who were older, had higher levels of education, and did not have a disability were the most likely to agree with this statement. Specifically, parents who reported they had a disability that limited them a lot had 53% lower odds respectively of agreeing more strongly to the statement than parents without a disability. Parents who were in the middle and older age groups had 64% and 118% greater odds of agreeing more strongly to the statement than parents who were younger. Parents with medium and higher levels of education had 66% and 127% greater odds, respectively of agreeing more strongly to the statement than parents with a lower level of education. Females had 94% greater odds of agreeing more strongly to this statement than males. The pseudo R^2_{McF} for the model was 0.33 (see Table 3).

3.2.2.2 | Geographic Factors. Geographic factors did not predict responses on this item. The pseudo R^2_{McF} for the model was less than 0.01 (see Table 4).

3.2.2.3 | Parent Attitudes Towards Risk in Play and Protection From Injury. Parents whose attitude towards their children's engagement with risk (EwR) was one standard deviation above the average had 90% greater odds of agreeing more strongly to the statement about prioritisation of play than

TABLE 4 | Geographical predictors of parent attitudes towards play in schools.

Predictors	Outdoor space is essential			Playtime should be prioritised			Independence in play			Risk in play		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
Region												
Scotland	Reference			Reference			Reference			Reference		
London	0.88	0.54-1.43	0.605	1.04	0.70-1.55	0.855	0.88	0.62-1.23	0.445	0.80	0.54-1.18	0.261
North	0.95	0.57-1.59	0.849	1.06	0.70-1.62	0.785	0.93	0.65-1.33	0.681	0.81	0.54-2.0	0.291
Midlands	1.28	0.70-2.36	0.421	1.21	0.76-1.93	0.428	1.12	0.75-1.66	0.580	0.88	0.58-1.35	0.573
East	0.61	0.35-1.05	0.077	1.10	0.68-1.79	0.694	0.71	0.47-1.07	0.103	0.57	0.36-0.88	0.012
South	1.07	0.65-1.76	0.791	1.28	0.85-1.93	0.242	0.99	0.7-1.39	0.936	1.06	0.71-1.56	0.786
Wales	0.84	0.42-1.69	0.624	0.98	0.54-1.78	0.958	0.82	0.49-1.38	0.458	0.84	0.49-0.43	0.513
Location												
Urban	Reference			Reference			Reference			Reference		
Town/Fringe	1.19	0.77-1.85	0.429	1.07	0.76-1.5	0.702	0.93	0.71-1.21	0.586	1.18	0.87-1.61	0.279
Rural	1.51	0.94-2.44	0.088	1.38	0.95-2.01	0.091	1.23	0.92-1.65	0.159	1.54	1.14-2.06	0.004
Observations				1919			1919			1891		
R^2_{McF}				0.01			<0.01			0.01		

TABLE 5 | Parent attitudes towards risk as predictors of parent attitudes towards play in schools.

Predictors	Outdoor space is essential			Playtime should be prioritised			Independence in play			Risk in play		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
Engagement with risk	2.47	2.05-2.98	<0.001	1.9	1.64-2.21	<0.001	1.74	1.57-1.94	<0.001	1.75	1.56-1.97	<0.001
Protection from injury	1.08	0.93-1.25	0.328	1.11	0.98-1.26	.100	0.83	0.75-0.92	<0.001	0.65	0.57-0.73	<0.001
TRiPs	1.22	1.02-1.47	0.033	1.09	0.94-1.26	.279	1.17	1.04-1.30	0.006	1.86	1.60-2.15	<0.001
Observations		1919			1919			1919			1891	
R^2_{McF}		0.09			0.05			0.05			0.15	

parents whose attitude was at the average level. Attitudes to protection from injury (PfI) and tolerance of risk in play (TRiPS) did not predict responses on this item. The pseudo R^2_{McF} for the model was 0.05 (see Table 5).

3.2.3 | Independence in Play

3.2.3.1 | Socio-Demographic Factors. Parent sex was a significant predictor of the extent to which parents agreed that children should be given as much independence as possible during playtime. Female parents were the most likely to agree with this statement and had 69% greater odds of agreeing more strongly to this statement than male parents. The pseudo R^2_{McF} for the model was 0.32 (see Table 3).

3.2.3.2 | Geographic Factors. Geographic factors did not predict responses on this item. The pseudo R^2_{McF} for the model was less than 0.01 (see Table 4).

3.2.3.3 | Parent Attitudes Towards Risk in Play and Protection From Injury. Parents whose attitude towards their children's engagement with risk (EwR) was one standard deviation above the average had 74% greater odds of agreeing more strongly to the statement about independence than parents whose attitude was at the average level. Parents whose attitude to protection from injury (PfI) was one standard deviation above the average had 17% lower odds of agreeing more strongly with this statement than parents whose attitude was at the average level. Parents whose tolerance of risk in play (TRiPS) was one standard deviation above the average had 17% greater odds of agreeing more strongly with this statement than parents whose tolerance was at the average level. The pseudo R^2_{McF} for the model was 0.05 (see Table 5).

3.2.4 | Risk and Challenge in Play

3.2.4.1 | Socio-Demographic Factors. Parent disability, ethnicity, and level of education were significant predictors of the level of risk that parents chose in response to the question "How do you feel about children playing in an adventurous way, with some challenge and risk when they play in school?". Parents were more positive about risk when they had higher levels of education, were white, and did not have a disability. Specifically, parents who reported they had a disability that limited them a lot had 47% lower odds of selecting a higher risk category than parents without a disability. Parents from a white ethnic group had 42% greater odds of selecting a higher risk category than minority ethnic parents. Parents with medium and higher levels of education had 73% and 133% greater odds, respectively of selecting a higher risk category than parents with a lower level of education. The pseudo R^2_{McF} for the model was 0.32 (see Table 3).

3.2.4.2 | Geographic Factors. Parents in the East of England had 43% lower odds of selecting a higher risk category than parents in Scotland. No other geographical locations differed significantly from Scotland. Parents living in rural areas had 54% greater odds of selecting a higher risk category than

parents in urban areas. The pseudo R^2_{McF} for the model was 0.01 (see Table 4).

3.2.4.3 | Parent Attitudes Towards Risk in Play and Protection From Injury. Parents whose attitude towards their children's engagement with risk (EwR) was one standard deviation above the average had 75% greater odds of selecting a higher risk category than parents whose attitude was at the average level. Parents whose attitude to protection from injury (Pfi) was one standard deviation above the average had 35% lower odds of selecting a higher risk category than parents whose attitude was at the average level. Parents whose tolerance of risk in play (TRiPS) was one standard deviation above the average had 86% greater odds of selecting a higher risk category than parents whose tolerance was at the average level. The pseudo R^2_{McF} for the model was 0.15 (see Table 5).

4 | Discussion

We had two primary aims: firstly, to examine using a nationally representative sample what parents think about play in schools; and secondly, to examine whether parents' perceptions differ across socio-demographic and geographic groups, and are associated with their attitudes towards engagement with risk, protection from injury and tolerance of risk in play. The purpose was to provide insights to inform the development of play interventions for schools, not to test specific hypotheses.

Our findings highlight that overall, in Britain, most parents perceive playtime in schools as a vital part of the school day that should be prioritised for all children and that it is essential that every child has an outdoor play space at school. These findings are somewhat at odds with current practice in many of Britain's schools, where 60% of schools withdraw playtime for undesirable behaviour or incomplete work (Baines and Blatchford 2019), where outdoor spaces are not always accessible and inclusive for all children (e.g., those with physical disabilities (Yantzi et al. 2010), and those with neurodevelopmental conditions (McAllister and Sloan 2016)) and it is becoming increasingly common for schools to dispose of their outdoor play space (Department for Education 2022).

Our findings suggest that parents value opportunities for their children to have independence when they play and to be able to take risks and challenge themselves during play at school. For the majority of parents, risk and challenge were acceptable only when the play was supervised. These findings are consistent with a recent qualitative study examining parents' perceptions of risky play in schools. For example, Nesbit et al. (2023) found that for some parents, risky play was only acceptable under supervision. Further, Jerebene et al. (2024a) found that adults, including school staff and parents, saw close supervision as justified because of beliefs that children lacked the abilities to manage their play and stay safe. Importantly, recent work has highlighted that, outside of school time, parents experience barriers in allowing their children to play adventurously outdoors, citing barriers including busy roads, traffic, time, cost, and accessibility (Oliver et al. 2022). Facilitating outdoor play in school, including adventurous play, may, therefore be

important in supporting all children to have opportunities for challenge, risk, and independence. In fact, parents have expressed that schools could bridge the gap and provide opportunities that children might not otherwise have (Nesbit et al. 2023).

Parents' responses about play in schools were predicted by socio-demographic factors, accounting for around a third of the variance in the models. In general, parents were more positive about the importance of play (that outdoor space is essential and that playtime should be prioritised), if they were female, older, white, had higher levels of education, and did not have a disability. The independence question was only predicted by parent sex, with female parents more likely to agree that children should be given as much independence as possible, relative to male parents. This is surprising given that mothers have been shown to be more risk averse when it comes to children's play than fathers (Smith et al. 2024; Ryan et al. 2024). The lack of effect for child gender was inconsistent with previous research that has shown that parents were more likely to allow their boys to engage in independent outdoor activities than girls (Soori 2002), and that parents typically give greater independence to boys than girls (Morrongiello and Dawber 1999). The difference in findings may be due to independence in this context being about independence at school, which is a relatively safe environment. Parents were more likely to have positive attitudes about risk and challenge in play if they were white, had higher levels of education and if they did not have a disability; overlapping somewhat with sociodemographic predictors of the importance of play.

In contrast to socio-demographic factors, geographic factors were not significantly associated with parents' attitudes towards the essentiality of outdoor space, prioritisation of play, or children's independence in play. Similarly, geographic factors predicted very little variance in parents' attitudes to risk and challenge in play in schools but there were some statistically significant effects. Specifically, parents in the East of England selected a relatively lower level of risk for their children and parents in rural areas selecting a higher category of risk. Given the small effect size, these findings need to be interpreted with caution but they may be due to parents and children living in rural areas having more exposure to outdoor risky play, given that natural spaces facilitate this type of play. This natural exposure may decrease anxiety about risky play. There is no clear explanation for why parents in the East of England might have different views on risk so this should not be over-interpreted without replication.

Parents' attitudes towards engagement with risk, protection from injury, and tolerance of risk in play, explained between 5% and 15% of the variance in parents' perceptions of play in school. In general, the pattern of findings aligned with expectations, with parents more positive across the questions when they had more positive attitudes about children's engagement with risk and were more tolerant of risk in play. Parents who scored higher on the protection from injury scale agreed less strongly to their children's independence in play and risk and challenge questions, indicating that concerns about protecting children from injury may, to some extent, underpin parents aversion to independence and risk.

4.1 | Implications

The findings of the present research should reassure schools that generally parents are in support of children's independent play and engagement in risky and challenging play, with supervision, during breaktimes at schools. Although there are health benefits to outdoor, adventurous play (Brussoni et al. 2015; Dodd et al. 2023; Jerebene et al. 2024b), qualitative research indicates that schools perceive parents as barriers to improving their play offer, particularly because of concerns about risk (Nesbit et al. 2021). In this study, we examined parent attitudes and beliefs about playtime in more detail to help inform intervention development. In line with the theory of planned behaviour (Ajzen 1991), knowledge and beliefs are considered to be an important driver of intention and action. The results showed that parents feel playtime is a vital part of the school day and should be prioritised for all children. They also highlight that there are individual differences between parents in how they feel about play in schools, especially around risk-taking during play. A significant minority of parents (16%) felt that no risk was acceptable during school playtimes. It seems likely that it is these parents who schools perceive as presenting a barrier to increasing risky play in schools, as outlined in qualitative work (Nesbit et al. 2023). Interestingly, though, 22% of parents were very supportive of children being allowed to take risks. Supporting schools to understand that some parents are likely to be very supportive may also be useful. For example, these parents could perhaps be engaged as 'parent champions' for play.

In terms of intervention development, the findings suggest that school-based play interventions, particularly those that support risky play, should include a component for parents. This should aim to promote positive views about the importance of outdoor play and change negative beliefs about risk during play. Risk-reframing interventions for parents have been shown to effectively increase tolerance of risk (Brussoni et al. 2021) and can be incorporated within school-based interventions (Bundy et al. 2017). The sociodemographic analyses allowed us to examine whether intervention components for parents might be particularly important for specific groups of parents or whether a different focus might be required for certain groups. Taken holistically, parents were less supportive if they had lower levels of education, were younger, were male, belonged to a minority ethnic group and had a disability, and were less supportive of risk in play specifically if they had lower levels of education, belonged to a minority ethnic group and had a disability. Therefore, interventions to improve opportunities for outdoor, risky play in schools may need to pro-actively engage these groups of parents, being aware that they may be more likely to hold negative views on the importance of play and exposure to risk in play. Some follow-up qualitative work, particularly with these groups, to better understand their views and concerns, may be useful for informing the development of relevant intervention components.

4.2 | Strengths and Limitations

The research has many strengths, including the use of a nationally representative sample weighted to the population of Britain, which allows us to draw rich insights into what parents

in Britain think about play in schools. We acknowledge, though, that there is always some need for caution when defining a sample as nationally representative because participants were necessarily people who were willing to complete online questionnaires and who had registered an interest in doing so with YouGov. There are other limitations of this study that should be considered. There was missing data for socio-demographic variables because parents/caregivers chose not to answer certain questions during data collection, primarily ethnicity and parent disability. We chose not to impute these data because the variables represent protected characteristics and the participants had chosen not to provide the information. This missing data resulted in a reduced sample when examining socio-demographic predictors of parent attitudes towards play in school. We conducted analyses with these variables removed to check whether this missing data affected conclusions and with one minor exception, the results were consistent. Given this and the large sample size, we are confident in the overall conclusions that we have made. Nevertheless, we recognise that the results related to ethnicity and parent disability should be treated as preliminary, given the missing data on these variables.

A further important consideration related to the ethnicity variable is that there were not enough participants from individual ethnic minority groups to evaluate differences between groups. We were also unable to examine differences across countries. We acknowledge that differences in play during school (and outside of school) are likely to exist across different countries and cultural contexts. For example, we may expect different views from parents in Asian countries, where research shows that parents place higher demands on their children, exert greater control, and where play for educational outcomes may be prioritised over play for fun (Huang and Gove 2015; Lin and Li 2018). Future studies extending this study to other populations, including older children, will provide more detailed and valuable insights into how parents attitudes to play differ across ethnic groups, contexts and age.

Finally, the focus of this study was on what parents think about play in schools rather than the outcomes of play in schools but child outcomes are central to this area of research; better play in schools has been linked to fewer behaviour problems, improved self-esteem, better concentration, and more enjoyment (Lester et al. 2011; Lavrysen et al. 2015). There is clear scope for more research in this area examining what the specific benefits are of improved playtimes at school.

5 | Conclusions

The results show that parents in Britain value playtime as an essential part of the school day, and they believe it should be prioritised for all children. Parents also believe that it is essential for schools to have outdoor play space, and parents value children's opportunities for independence in their play whilst at school. The majority of parents also agreed that children should have the opportunities to play with risk and challenge whilst at school, although most preferred that this be supervised. These findings are useful for informing the development of interventions to help schools improve their play offer. In particular, a

substantial minority of parents reported that they were not comfortable with children taking risks in their play. A school-based play intervention would, therefore need to include a component that focuses on parents to support schools to effectively develop their playtimes without causing undue concern to parents or friction between school and parents. The findings also highlight that socio-demographic factors and parent attitudes towards risk and protection influence how parents feel about play in schools.

Acknowledgments

This research was funded by a UKRI Future Leaders Fellowship, grant number MR/S017909/1. For the purpose of open access, the author has applied a 'Creative Commons Attribution (CC BY)' licence to any Author Accepted Manuscript version arising from this submission.

Ethics Statement

The study was conducted according to the guidelines of the Declaration of Helsinki and approved by the Ethics Committee of the University of Reading School of Psychology and Clinical Language Sciences (protocol code 2020-003-HD and 16/01/2020).

Consent

Informed consent was obtained from all subjects involved in the study.

Conflicts of Interest

The following organization are partners or collaborators on the project that funded this study: Play England, Play Wales, PlayBoardNI, Outdoor Play and Learning, Learning through Landscapes, Association of Play Industries and HAGS. None of these organisations or the funders (UKRI) had any role in the analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

Data Availability Statement

The full British Children's Play Survey, data, and analysis scripts are available via the UK Data Service [<https://doi.org/10.5255/UKDA-SN-8793-1>].

References

Ajzen, I. (1991). "The Theory of Planned Behavior." *Organizational Behavior and Human Decision Processes* 50, no. 2: 179–211.

Baines, E., and P. Blatchford (2019). School Break and Lunch Times and Young People's Social lives: A Follow-up National Study. *Final Report to the Nuffield Foundation* (Ref EDU/42402).

Barros, R. M., E. J. Silver, and R. E. K. Stein. (2009). "School Recess and Group Classroom Behavior." *Pediatrics* 123, no. 2: 431–436. <https://doi.org/10.1542/peds.2007-2825>.

Brussoni, M., R. Gibbons, C. Gray, et al. (Jun 2015). "What Is the Relationship between Risky Outdoor Play and Health In Children? A Systematic Review." *International Journal of Environmental Research and Public Health* 12, no. 6: 6423–6454. <https://doi.org/10.3390/ijerph120606423>.

Brussoni, M., C. S. Han, Y. Lin, et al. (2021). "A Web-Based and in-Person Risk Reframing Intervention to Influence Mothers' Tolerance For, and Parenting Practices Associated With, Children's Outdoor Risky Play: Randomized Controlled Trial." *Journal of Medical Internet Research* 23, no. 4: 24861. <https://doi.org/10.2196/24861>.

Bundy, A., L. Engelen, S. Wyver, et al. 2017. "Sydney Playground Project: A Cluster-Randomized Trial to Increase Physical Activity, Play, and Social Skills." *Journal of School Health* 87, no. 10: 751–759. <https://doi.org/10.1111/josh.12550>.

Clements, R. (2004). "An Investigation of the Status of Outdoor Play." *Contemporary Issues in Early Childhood* 5, no. 1: 68–80. <https://doi.org/10.2304/ciec.2004.5.1.10>.

Department for Education. (2022). School Land and Property: Protection, Transfer and Disposal. <https://www.gov.uk/guidance/school-land-and-property-protection-transfer-and-disposal>.

Dodd, H., R. Nesbit, and M. Robinson. (2024). "Risky Play in Primary Schools." In *Empowering Play in Primary Education*, 86–100. Routledge.

Dodd, H. F., L. FitzGibbon, B. E. Watson, and R. J. Nesbit. (2021). "Children's Play and Independent Mobility In 2020: Results From the British Children's Play Survey." *International Journal of Environmental Research and Public Health* 18, no. 8: 4334. <https://doi.org/10.3390/ijerph18084334>.

Dodd, H. F., and K. J. Lester. (2021). "Adventurous Play as a Mechanism for Reducing Risk for Childhood Anxiety: A Conceptual Model." *Clinical Child and Family Psychology Review* 24: 164–181. <https://doi.org/10.1007/s10567-020-00338-w>.

Dodd, H. F., R. J. Nesbit, and L. FitzGibbon. (2023). "Child's Play: Examining the Association Between Time Spent Playing and Child Mental Health." *Child Psychiatry and Human Development* 54, no. 6: 1678–1686.

Eldredge, L. K. B., C. M. Markham, R. A. Ruiter, M. E. Fernández, G. Kok, and G. S. Parcel. (2016). *Planning Health Promotion Programs: An Intervention Mapping Approach*. John Wiley & Sons.

Hill, A., and A. C. Bundy. (2014). "Reliability and Validity of a New Instrument to Measure Tolerance of Everyday Risk for Children." *Child: Care, Health and Development* 40, no. 1: 68–76. <https://doi.org/10.1111/j.1365-2214.2012.01414.x>.

Huang, G. H., and M. Gove. (2015). "Asian Parenting Styles and Academic Achievement: Views From Eastern and Western Perspectives." *Education* 135, no. 3: 389–397.

Janssen, I. (2014). "Active Play: An Important Physical Activity Strategy in the Fight Against Childhood Obesity." *Canadian Journal of Public Health = Revue canadienne de sante publique* 105, no. 1: 22–27. <https://doi.org/10.17269/cjph.105.4154>.

Jelleyman, C., J. McPhee, M. Brussoni, A. Bundy, and S. Duncan. (January 2019). "A Cross-Sectional Description of Parental Perceptions and Practices Related to Risky Play and Independent Mobility in Children: The New Zealand State of Play Survey." *International Journal of Environmental Research and Public Health* 16, no. 2: 262. <https://doi.org/10.3390/ijerph16020262>.

Jerebine, A., E. L. Eyre, N. Lander, M. J. Duncan, and L. M. Barnett. (2024a). "How Education Policy Actors Interpret, Portray and Contest Risk in Children's Physically Active Play in Schools: A Framing Analysis." *Sport, Education and Society*: 1–19. <https://doi.org/10.1080/13573322.2024.2357169>.

Jerebine, A., K. Fitton-Davies, N. Lander, E. L. J. Eyre, M. J. Duncan, and L. M. Barnett. (2022). "All the Fun Stuff, the Teachers Say, 'That's Dangerous!' Hearing From Children on Safety and Risk In Active Play in Schools: A Systematic Review." *International Journal of Behavioral Nutrition and Physical Activity* 19, no. 1: 72.

Jerebine, A., M. Mohebbi, N. Lander, E. L. Eyre, M. J. Duncan, and L. M. Barnett. (2024b). "Playing It Safe: The Relationship between Parent Attitudes to Risk and Injury, and Children's Adventurous Play and Physical Activity." *Psychology of sport and exercise* 70: 102536.

Lavrysen, A., E. Bertrands, L. Leyssen, L. Smets, A. Vanderspikken, and P. De Graef. 2015. "Risky-Play at School. Facilitating Risk Perception and Competence in Young Children." *European Early Childhood Education Research Journal* 25, no. 1: 89–105. <https://doi.org/10.1080/1350293x.2015.1102412>.

Lester, S., O. Jones, and W. Russell (2011). Supporting school improvement through play: An evaluation of South Gloucestershire's Outdoor Play and Learning Programme. http://www.playengland.net/wp-content/uploads/2015/09/supporting_school_improvement_through_play.pdf.

Lin, X., and H. Li. 2018. "Parents' Play Beliefs and Engagement in Young Children's Play at Home." *European Early Childhood Education Research Journal* 26, no. 2: 161–176. <https://doi.org/10.1080/1350293x.2018.1441979>.

Lumley, T. (2020). *Analysis of Complex Survey Samples*. In <https://cran.r-project.org/web/packages/survey/survey.pdf>.

McAllister, K., and S. Sloan. (2016). "Designed by the Pupils, for the Pupils: An Autism-Friendly School." *British Journal of Special Education* 43, no. 4: 330–357.

McLachlan, B. (2014). "Project Play At Swanson School." *Play and Folklore* 61, no. 1: 4–8.

Morrongiello, B. A., and T. Dawber. (1999). "Parental Influences on Toddlers' Injury-Risk Behaviors." *Journal of Applied Developmental Psychology* 20, no. 2: 227–251.

National Readership Survey. Social Grade (n.d). [Available from: <http://www.nrs.co.uk/nrs-print/lifestyle-and-classification-data/social-grade/>.

Nesbit, R. J., C. L. Bagnall, K. Harvey, and H. F. Dodd. (2021). "Perceived Barriers and Facilitators of Adventurous Play in Schools: A Qualitative Systematic Review." *Children* 8, no. 8: 681.

Nesbit, R. J., K. Harvey, S. Parveen, and H. F. Dodd. (2023). "Adventurous Play in Schools: The Parent Perspective." *Children & Society* 37, no. 6: 2102–2122.

Oliver, B. E., R. J. Nesbit, R. McCloy, K. Harvey, and H. F. Dodd. (2022). "Parent Perceived Barriers and Facilitators of Children's Adventurous Play in Britain: A Framework Analysis." *BMC Public Health* 22, no. 1: 636.

Oliver, B. E., R. J. Nesbit, R. McCloy, K. Harvey, and H. F. Dodd. (2023). "Adventurous Play for a Healthy Childhood: Facilitators and Barriers Identified by Parents In Britain." *Social Science & Medicine* (1982) 323: 115828.

Olsen, L. L., T. Ishikawa, L. C. Mâsse, G. Chan, and M. Brussoni. (2018). "Risk Engagement and Protection Survey (Reps): Developing and Validating a Survey Tool on Fathers' Attitudes Towards Child Injury Protection and Risk Engagement." *Injury prevention: journal of the International Society for Child and Adolescent Injury Prevention* 24, no. 2: 106–112. <https://doi.org/10.1136/injuryprev-2017-042413>.

Piccininni, C., V. Michaelson, I. Janssen, and W. Pickett. (2018). "Outdoor Play and Nature Connectedness as Potential Correlates of Internalized Mental Health Symptoms Among Canadian Adolescents." *Preventive Medicine* 112: 168–175. <https://doi.org/10.1016/j.ypmed.2018.04.020>.

Ramstetter, C. L., R. Murray, and A. S. Garner. (2010). "The Crucial Role of Recess In Schools." *Journal of School Health* 80, no. 11: 517–526. <https://doi.org/10.1111/j.1746-1561.2010.00537.x>.

Ryan, Z. J., H. Stockill, R. J. Nesbit, L. FitzGibbon, and H. F. Dodd. (2024). "Parents' Perception of Risk in Play: Associations With Parent and Child Gender." *Journal of Child and Family Studies* 33: 2359–2366. <https://doi.org/10.1007/s10826-024-02844-9>.

Sallis, J. F., J. J. Prochaska, and W. C. Taylor. (2000). "A Review of Correlates of Physical Activity of Children and Adolescents." *Medicine & Science in Sports & Exercise* 32, no. 5: 963–975. <https://doi.org/10.1097/00005768-200005000-00014>.

Smith, A. D., H. F. Dodd, L. Ricardo, and E. van Sluijs. (2024). "Gender Differences in Caregivers' Attitudes to Risky Child Play in Britain: A Cross-Sectional Study." *Journal of Physical Activity and Health* 21, no. 4: 365–374. <https://doi.org/10.1123/jpah.2023-0676>.

Smith, M. (2019). How well do ABC1 and C2DE correspond with our own class identity? <https://yougov.co.uk/topics/politics/articles-reports/2019/11/25/how-well-do-abc1-and-c2de-correspond-our-own-class>.

Soori, H. (2002). "Parental Permission for Children's Independent Outdoor Activities: Implications for Injury Prevention." *European Journal of Public Health* 12, no. 2: 104–109.

Tillmann, S., D. Tobin, W. Avison, and J. Gilliland. (2018). "Mental Health Benefits of Interactions With Nature In Children and Teenagers: A Systematic Review." *Journal of Epidemiology and Community Health* 72, no. 10: 958–966. <https://doi.org/10.1136/jech-2018-210436>.

Tremblay, M., C. Gray, S. Babcock, et al. (Jun 2015). "Position Statement on Active Outdoor Play." *International Journal of Environmental Research and Public Health* 12, no. 6: 6475–6505. <https://doi.org/10.3390/ijerph120606475>.

Yantzi, N. M., N. L. Young, and P. Mckeever. (2010). "The Suitability of School Playgrounds for Physically Disabled Children." *Children's Geographies* 8, no. 1: 65–78.

Supporting Information

Additional supporting information can be found online in the Supporting Information section.