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An international comparison study of the number and length of breaktimes in primary and secondary schools

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ABSTRACT

Many schools across the world allow time for students to have some form of break from formal adult-led learning activities. However, there is little understanding of the nature of these times at national and international levels. This survey study sought to examine the number and total amount of time available for school breaktimes, relative to different age groups of children, in different countries across the world. Staff in schools catering for children between the ages of 0 and 18 and participating in 'Outdoor Classroom Day' completed questionnaires about breaktimes in their school relative to a specific class experience. Nearly 1800 responses, from over 4,000, were selected for analysis after cleaning and selection. Findings show stark differences both within and between countries with some reporting little or no breaktime, and others reporting different breaktime regimens. Some countries employed short regular breaks in the school day, while others had 1-2 more extended periods. Durations are reviewed relative to the length of the school day. Variations across phases in education are considered with some countries offering the same amount of breaktime for adolescents as for children. Different practices are considered relative to implications for children's learning, social development, wellbeing and skills.

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Introduction

Many schools across the world allow time in the day for students to have some form of break from the curriculum and formal adult-led learning activities. These times are often referred to as 'breaktime', 'playtime', 'recess' or simply 'break'[1] depending on location and age of the children and young people involved (London, 2022). These times are often viewed as insignificant, but there is a growing body of evidence suggesting they can provide important opportunities for health and wellbeing of children and young people, their psychological, social and behavioural development, and for learning in school (Baines & Blatchford, 2011; Hodges et al., 2022; Ramstetter et al., 2022).

It is important to be clear about what we mean by breaktimes, since there is variability across nations and there are other types of 'breaks' from the formal curriculum, such as

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breaks for religious assembly, for eating, for sleep, or to allow children to move to the next location for learning. In this study,

> breaktime is a break within the formal school day which typically involves access to outdoor space when weather and space permit, and is often unstructured time for recreation, play and socialisation with peers in a setting where adults often supervise at a distance. (Baines & Blatchford, 2023)

These times allow pupils a degree of autonomy in chosen activities[2] and companions. This definition, and others like it, have been developed based on research in Western countries. But we have relatively little understanding of how far breaktimes are part of the school day in other countries. This contrasts with other aspects of education where, over the past 25 years at least, there have been increasing efforts to compare and evaluate education systems at an international level, for example through surveys such as PISA and TALIS.

Negative views of breaktime

Lack of information and research about breaktimes may be indicative of how they are often viewed by educational professionals and policymakers. Some research suggests that views towards breaktimes in some parts of the world are either ambivalent or negative in that they are perceived either in terms of time for a comfort break or as a time that presents challenges for school staff (Pellegrini, 2006). Teachers often express concerns about breaktimes as they have to resolve problems that have arisen due to peers falling out, poor behaviour, and sometimes bullying (Chancellor, 2013; London, 2022; Ramstetter & Fink, 2019). They can also present difficulties in relation to safety, behavioural control and the amount and quality of supervision (Baines & Blatchford, 2023). Teachers often view playground supervision as a chore (Chancellor, 2013). This can lead to restrictions on certain types of play and on the spaces to which children have access.

Policy makers may view breaks as time poorly spent, as they involve time away from formal efforts to enhance learning and are not perceived to contribute to these achievement goals (Baines & Blatchford, 2019; Pellegrini, 2006). There are reports in some countries of shortening or abolition of breaktimes to allow more time for learning and to control pupil behaviour (Baines & Blatchford, 2019; Pellegrini, 2006), particularly in schools catering for children from disadvantaged backgrounds (Baines & Blatchford, 2023; Barros et al., 2009; Ramstetter et al., 2010).

Wider societal views about breaktimes may also vary. In certain cultures and religions, play is regarded as offering little functional value and sometimes seen as of little relevance for education (Pellegrini, 2006). That said, all people need some form of break to regulate biological systems, to rest and refuel, and thus it is unlikely that schools would offer no pauses in the school day at all; however, breaks just for these purposes without time for self-chosen activity are not included in our definition of breaktimes.

Positive views of breaktime

More positive views of breaktimes highlight their intrinsic value for children's physical and mental wellbeing, for their social and emotional development and learning more generally (Hodges et al., 2022; Prisk & Cusworth, 2018). Aside from being highly

enjoyed by most children, breaktimes offer important opportunities for physical exercise, a rest and a break from the intensity of learning in the classroom, a time where they can relax, play or pursue an interest (Baines & Blatchford, 2011; Hyndman & Wyver, 2020). Of significance is that time to interact with chosen friends and peers offers opportunities for children to develop valuable social skills and to encounter and resolve real-world social challenges of the sort not usually experienced when adults are present and take charge of interaction (Ramstetter et al., 2022). These times are also important for fostering feelings of involvement, companionship and a sense of belonging to the peer group and to school (Baines & Blatchford, 2011; McNamara et al., 2018). This is all the more important in the context of reports of the decline in play outside school in the home and community (Gray et al., 2023; Singer et al., 2009), reduced in-person socialising with friends and peers outside school (Baines & Blatchford, 2019; Twenge et al., 2019), and reduced opportunities for independent activity outside of the home (Baines & Blatchford, 2012; Shaw et al., 2013).

As well as implications for social and psychological development, the social interactions and activities that take place during breaktimes have implications for children's learning and education (Baines & Blatchford, 2011). Studies suggest that children are more attentive and behaviourally engaged after a break than at the end of a lesson (Pellegrini et al., 1995; Rhea & Rivchun, 2018), are less fidgety (Jarrett et al., 1998), and those experiencing a break are better behaved than those who do not (Barros et al., 2009). In the longer term, the social and planning skills that children develop during interactions with peers have important implications for collaborative problem solving and shared decision making (Baines & Blatchford, 2011), often described as important 21st-century soft skills (Luckin et al., 2017).

Opportunities for unstructured play and recreation have long been considered a fundamental right for children and young people and are important for their development and wellbeing. In 1987, this became formally protected at a global level by Article 31 of the *United Nations Convention on the Rights of the Child* (UNCRC), emphasising for children and adolescents their right to play, rest, and leisure. Breaktime provision in school is one way in which countries can enable their young people to exercise their rights to unstructured play and leisure time (Ramstetter et al., 2010; 2022). Furthermore, breaktimes are important occasions for the promotion of, and engagement in, active play and recreation (Hyndman, 2021; Ridgers et al., 2018). These times can contribute substantially to the daily amounts of recommended exercise required by children to ensure healthy development and limit the onset of diseases (Chancellor & Hyndman, 2017). It is, therefore, surprising that there is a dearth of national and international data on these times in the school day that are potentially so important for children and young people.

Research on breaktimes within different countries

Few studies report on breaktimes at national levels, reflecting the ambivalent views of policymakers and school staff noted earlier. There are, however, exceptions. A unique programme of research involving three national surveys of children's breaktimes and social lives undertaken in England between 1995 and 2017 has documented the changing nature of breaktimes and children's social experiences in schools over this period (Baines

& Blatchford, 2019, 2023; Blatchford & Baines, 2006). These studies highlight that in 2017, all schools in England allowed children between two and three breaktimes per day, making up 16%–22% of the school day. Total time for break decreased as children got older, with the youngest experiencing, on average, 85 minutes and adolescents about 63 minutes of break per day. Schools with higher levels of disadvantage allowed less time for breaks and were more likely to withhold breaks because of poor behaviour (Baines & Blatchford, 2023). Between 1995 and 2017, the research reports that children and adolescents experienced approximately 45 and 65 minutes less break time per week, respectively, increased supervisory management and reduced in-person socialising outside of school.

A survey of 350 primary school leaders in Australia (Chancellor, 2013) indicates that most schools have a morning and lunch time break, while more than half (55%) also offered an afternoon break. In the U.S.A., Pellegrini (2006) reported that in the 1980s–1990s, many states abolished recess in exchange for more Physical Education, and a 2006–2007 U.S.A. survey by the Center on Education Policy indicated that almost one in five districts had cut breaktimes by approximately 50 minutes per week (see Ramstetter et al., 2010). Unlike the studies in England, studies in other countries rarely examine breaktime in relation to pupil age/educational phase or as a proportion of the total time allowed for the school day – meaning that cross-age and country comparisons are difficult to make. The survey by the U.S.A. Center on Education Policy found grade differences in recess provision. Nearly all children (97%) in first grade had a recess period; only three-quarters of other grades had breaktimes. While first graders enjoyed, on average, 28 minutes of recess per day, sixth graders received approximately 24 minutes. Shorter recess periods are associated with school level disadvantage (Barros et al., 2009). Similarly, research by Roth et al. (2003), based on time diaries collected from over 500 U.S.A. teachers, found that recess in elementary schools made up 6.8% (SD = 5.8) of the school day and averaged 26.5 minutes (SD = 20.1), with nearly 21% of the sample not experiencing any recess periods at all.

Recent analyses of 95 class timetables in French middle schools (Hunault & Poncelet, 2022) suggest that the majority of children (79% of schools) experience between 2 hours and 2 hours 40 minutes of recess per week (approximately 24 to 32 mins per day). The study reports that the difference between schools providing limited breaktime periods (60 minutes per week) and the longest periods (195 minutes) amounts to 81 hours less teaching over a normal school year and recommends, for the purposes of equity, limiting breaktime to 2 hours or less per week. Comparatively speaking, the findings from France, the U.S.A. and the UK show marked differences in access to school breaktimes.

International research on breaktimes

Information about the nature of breaktimes in other parts of the world is in short supply and there are no dedicated cross-national studies. International data reported by the OECD (2017) and UNESCO (as cited in Beresin, 2016) appear to be largely anecdotal. The most detailed information was drawn together by Beresin (2016), gathered through an email/letter writing campaign to educational professionals and representatives of international organisations in different countries. Beresin highlights the substantial variability in the timing and quality of breaktime activity reported, differences

between policy and practice, and also the vague nature in which these times are talked about by educators, for example, with breaks being decided at the teacher's discretion. A few countries are identified where schools reportedly have no recreational breaks or where alternative activities, such as daily group exercise or a mealtime, are themselves seen as a break (as anecdotally seems to be the case in China, Bulgaria, Slovenia, and Denmark, as seen in Beresin, 2016; OECD, 2017).

However, it is difficult to determine the representativeness of figures from different reports, as few details are provided on how estimates were identified, the number of respondents who report timings, or the age ranges of children to which timings relate. It is most likely that the estimates of breaktimes are for younger children in school, but it is difficult to be sure. There are also inconsistencies across the reports for the same country, with varied estimates for the number of breaks and/or total time available. These discrepancies may reflect natural variation within countries. However, it is also important to capture this level of variation and potentially what may account for it.

To summarise, although there is some information available about the frequency and length of breaktimes in different national contexts, much of this is anecdotal, collected at different points in time and with little reference to the age group or education phase to which it applies. Data are not collected directly from school representatives, and no comparisons between schools and within or between countries are reported. Different countries vary in terms of the length of the school day (OECD, 2021) and this also makes comparisons difficult. Some schools that offer few or little total breaktime do this because of a short school day. There is thus a need for a greater understanding of the nature, length, and organisation of school breaktimes across different country contexts to understand what they offer, but also to understand how far schools and countries are implementing Article 31 of the UNCRC and how far children are enabled to exercise their right to unstructured play.

This study

This research sought to examine the number and the total amount of time available for school breaktimes relative to different age groups of children, in different countries across the world. The main research questions were:

- How frequently do children of different ages and in different countries experience breaktimes (longer than 5 minutes) in the school day?
- How much total time do children of different ages and in different countries get for breaktimes on a given school day?
- How much of the formal school day is devoted to breaktimes and how does this vary across child age groups and countries?

Methods

The research involved an international online survey of school staff, undertaken in 2018. Surveys were completed by school staff who had taken part in "Outdoor Classroom Day" (OC Day). OC Day is a global campaign which aims to encourage schools to take children

outdoors for learning and play. The campaign is organised by a coalition of environmental and educational non-governmental organisations around the world to deliver campaigns locally. There are two OC days each year: one for schools in the northern hemisphere in May and the other for schools in the southern hemisphere in November. School representatives volunteer their class or school to participate in OC Day which involves making a commitment for one day to spend more time outdoors to play, and to engage in informal and formal learning. This might involve holding lessons outside, having extended breaktime periods and encouraging children to engage with nature.

Participants

Participating school staff were those who had signed up to take part in OC Day and had indicated that they were willing to be approached to participate in research. It is likely that school staff involved in OC Day are positively predisposed to play and time outside. As such, it was anticipated that the survey would not necessarily provide a representative description of time available for breaks in all schools but would reflect a best-case scenario.

School staff representatives who had signed up to participate in OC Day and associated research were sent an online questionnaire 2–3 days after the day had taken place. A reminder was sent a week later and then the survey closed a week after that. The online survey was set up on "Survey Monkey" with questions written in English. The same survey questions were translated by the different NGO representatives into similar surveys written in the local language and distributed to participating local school networks.

Data collection

The online questionnaire was completed by staff in educational organisations catering for children between the ages of 0 and 18. Respondents not based in schools were filtered out early in the survey completion process. As the questionnaire was sent out by several collaborating national and local agencies, data on the response rates or specific schools participating are not available. Questions in the survey predominantly focused on attitudes and reflections on the staff member's experiences of OC Day, as well as attitudes within the school about play, learning and being outside, and about the characteristics of the school. Analysis of these questions is not presented here.

The questions about breaktimes formed a distinct part of the survey. To get a clear picture of the amount of breaktime available for children at school and how this varied in relation to age group, we asked teachers to report on the experiences of one particular class on a typical Thursday. This avoided vague expressions about breaktime available for children generally, as in some countries, children only get breaktime on certain days of the week. We selected Thursday as a midweek day to avoid start or end of the week when schools may close early or open late. This paper focuses on responses to the main questions about the number of breaks that are longer than 5 minutes, the total time allocated to breaks (excluding mealtime), the time the formal school day starts and ends, as well as the demographic characteristics of the particular class and school. Responses allowed age-based comparisons of the frequency and total

time devoted to breaktime for different age groups, including as a proportion of time in the school day, which often varies across education phases and countries.

Data processing and analysis

After data collection, there was a process of data cleaning. First, responses with the same Internet Protocol (IP) address were removed to avoid duplicate responses from teachers in the same school. Where responses were substantially incomplete or missed crucially relevant data, or presented illogical, anomalous responses (e.g. on the age range of students in the school), they were excluded from the dataset.

The vast majority of responses came from staff in school settings (95%) with only 5% coming from day care settings. Responses relating to early years education were omitted from the analyses as the experience during this phase can be markedly different from primary and secondary school phases. Remaining responses were from schools pertaining to children aged between 5 and 18.

Overall, there were a total of 4288 questionnaire responses from schools in 76 different countries. After duplicates and missing data were removed, there were 2921 cases remaining. A further stage of filtering removed nearly 1000 cases that related to countries with fewer than 5 cases and cases that related to children below the age of 5. This left 1952 cases. Precise numbers vary from analysis to analysis based on the particular variables examined.

The demographic variables of country, age group/phase of education and the number of breaks in the school day were categorical and/or ordinal; time allocated for breaktime and the length of the school day (derived from the start and end of school day times) were continuous. Given the categorical nature of the survey data, analyses involved cross-tabulations and Chi-square analyses with judgements of statistical significance based on standardised residuals. Analysis of variance (ANOVA) was used to compare continuous data (such as the total length of breaktime) across explanatory variables (e.g. Age range or Country). Where needed, post-hoc Bonferroni tests were used to understand the differences between levels of explanatory variables.

Results

In relation to the question about number of outdoor breaks in the school day on a typical Thursday, there were variations in findings relative to age range/ school phase (see Table 1). One to two breaktimes in the school day were offered most frequently at all ages. However, younger children were more likely than expected to experience 3-4 breaks in the day and less likely to experience 5 or more breaks in the day. Students in the older age range (12–18+ years) were less likely to experience 3-4 breaks in the school day and more likely to experience no breaktimes at all. However, only 4% of respondents at secondary school level indicated that there were no breaktimes.

In terms of the total average amount of time for breaks (see Table 1), children in the youngest age bracket were most likely to experience more breaktime at around 52 minutes per day than older children at around 48 minutes and adolescents who experienced about 40 minutes per day. These differences were found to be statistically significant, $F(2,1819) = 9.94$, $p < .001$, $h_p^2 = .01$.

Table 1. Total number of outdoor breaks and the total time for breaks for different aged groups of children.

	Number of Thursday outdoor breaks				Total time for breaks	
	0	1–2	3–4	5+	Mean	SD
6 to 7.5 (*n* = 472)	1%	53%	35%*	11%±	51.8**a**	24.7
8 to 11.5 (*n* = 810)	1%	58%	26%	16%	48.3**b**	25.3
12 to 18+ (*n* = 290)	4%*	60%	21%±	16%	39.7**c**	25.1
Total (*n* = 1572)	2%	57%	28%	14%	47.8	25.4

Note. Differing subscripts (a,b,c etc) indicate significant differences ($p < .05$) on post-hoc Bonferroni tests. * indicates that frequency value is significantly greater than expected and ± indicates that frequency value is significantly less than expected after analysis using Chi-square.

In terms of country-based comparisons (see Table 2), few participants (n = 34) indicated that their school did not offer children a breaktime at all; however, the United States was the most likely place for this to be reported. Nevertheless, school staff in the United States were more likely to report other numbers of recess periods in the school day.

The majority of countries reported having 1–2 breaktime periods in the school day. There were, however, a few exceptions, with participants in schools in Finland, Portugal, Greece and New Zealand indicating that they tended to offer 3–4 breaktime periods a day, with Turkey offering 5+ periods. There were also countries with percentages of respondents fairly balanced in reporting both 1–2 and 3–4 breaks in the school day (e.g. Canada, France, Ireland, Romania).

When it comes to the average total time for breaks (see Table 3), there was again a range of timings and sometimes schools within a country varied markedly as indicated

Table 2. The number of breaks in the school day by country.

	Number of breaks								
	0		1–2		3–4		5+		Total
Country	%	*n*	%	*n*	%	*n*	%	*n*	*n*
Australia	0%	0	65%	114	33%	58	2%±	4	176
Brazil	3%	1	69%	22	13%	4	16%	5	32
Canada	0%	0	48%	59	46%*	56	6%±	7	122
Colombia	8%	1	75%	9	8%	1	8%	1	12
Finland	0%	0	23%±	14	57%*	35	20%	12	61
France	0%	0	58%	34	34%	20	9%	5	59
Greece	0%	0	20%	1	80%	4	0%	0	5
India	0%	0	73%	11	20%	3	7%	1	15
Indonesia	2%	5	93%*	211	4%±	10	0%±	0	226
Ireland	0%	0	58%	7	33%	4	8%	1	12
Macedonia	0%	0	67%	4	33%	2	0%	0	6
New Zealand	0%	0	38%	3	50%	4	13%	1	8
Poland	0%	0	80%	4	0%	0	20%	1	5
Portugal	0%	0	41%±	64	53%*	82	6%±	9	155
Romania	0%	0	50%	5	30%	3	20%	2	10
South Africa	4%*	3	71%	53	23%	17	3%±	2	75
Spain	9%*	2	76%	16	14%	3	0%	0	21
Thailand	0%	0	68%	13	21%	4	11%	2	19
Turkey	2%	7	22%±	66	19%±	55	57%*	167	295
United Kingdom	0%	0	71%*	138	27%	52	2%±	4	194
United States of America	8%*	14	74%*	125	17%±	29	1%±	1	169
Total	2%	34	58%	979	27%	450	14%	233	1696

Note. * indicates that frequency is significantly greater than expected and ± indicates that frequency value is significantly less than expected after analysis using Chi-square.

by standard deviations (e.g. Thailand, Poland, Macedonia). New Zealand, with an average of 78 minutes, reported the most amount of time devoted to school breaks; however, with only 8 respondents, this figure may be untrustworthy, and more data are needed for verification. The data for Australia are clearer, with over 170 respondents, and schools offer over an hour of breaktime each day. Other countries with total breaktime of over 50 minutes included the UK, Macedonia, Canada, Portugal and Finland. At the other end of the spectrum, countries such as Indonesia, Brazil, Colombia, Poland, Romania, Spain and the U.S.A. indicated total breaktime of around 30 minutes. Again, some of these countries consisted of less than 10 responses and so results must be treated with caution.

More frequent breaks did not result in more total time for breaks, and this implies two different approaches to breaktimes. Some countries offer short regular regimes of breaks (e.g. Finland, Greece, Portugal and Turkey), while others offer fewer but longer periods of breaktime (e.g. Australia, UK).

The total amount of time devoted to breaks provides useful insights into breaktime organisation, but it is also useful to consider the total amount of time relative to the formal length of the school day, as this often varies across countries (see OECD, 2021). This was examined based on respondent reports about school start and end times for the identified class of children (see Table 3). Findings show a different picture compared to the absolute total time for breaktime data. For example, in Indonesia, the total breaktime of 29 minutes approximates about 7% of the school day, whilst in Colombia it is 9% of the school day, and in the U.S.A., 36 minutes of recess on average relates to 8% of the school day. At the other end of the scale, the 53 minutes that children

Table 3. The mean total amount of breaktime in the school day and expressed as a percentage of the school day by country.

	Length of breaks			Breaktime as a % of the school day		
Country	Mean	SD	Total *N*	Mean	SD	Total *N*
Australia	62.3	20.0	178	12.0	4.0	178
Brazil	29.2	25.3	36	12.1	13.1	33
Canada	54.0	18.8	125	13.6	5.1	125
Colombia	29.2	12.8	11	9.2	10.6	11
Finland	52.7	17.4	65	19.1	6.1	64
France	43.4	23.4	64	9.5	5.1	64
Greece	40.0	14.6	5	12.8	5.3	5
India	45.3	33.9	16	11.0	9.0	16
Indonesia	28.6	20.6	230	6.7	4.9	227
Ireland	41.7	8.6	12	11.6	2.6	12
Macedonia	55.0	39.4	6	12.8	11.0	5
New Zealand	78.3	18.5	9	18.1	7.0	9
Poland	31.2	50.7	5	10.6	15.0	5
Portugal	52.9	28.2	160	11.7	5.9	158
Romania	33.2	16.8	11	9.4	4.1	8
South Africa	46.9	22.5	81	11.9	6.4	81
Spain	32.6	19.8	23	9.0	4.7	22
Thailand	37.6	31.7	19	9.0	7.3	17
Turkey	49.5	25.3	324	13.4	7.2	321
United Kingdom	58.9	22.2	202	13.7	6.0	202
United States of America	35.5	23.5	171	8.2	5.3	168
Total	47.3	25.6	1773	11.6	6.8	1750

Note. Differences in Total N responses columns are due to missing information on the length of the school day.

receive in Finland represents nearly a fifth of the school day, whereas in Australia, the average of 62 minutes relates to 12%.

The total amount of breaktime relative to country and age group

While an examination of the number of breaks relative to educational phase and country is difficult because of the sample size, it is possible to examine total average breaktime relative to country and education phase/ age range (see Table 4). Extreme caution is required when reviewing the figures as some countries have only a few responses (we removed cases where there were fewer than 4 cases in a cell and removed countries where more than one cell had fewer than 5 cases in each). Nevertheless, this represents the first analysis of breaktime relative to educational phase and country and thus it is important to include as many instances as possible. Analyses indicated a significant main effect of country ($F(9,1572) = 26.74$, $p < .001$; partial $\eta^2 = .14$), a main effect relating to educational phase ($F(2,1572) = 3.92$, $p = .020$; partial $\eta^2 = .005$), and an interaction between country and educational phase ($F(18,1572) = 2.45$, $p < .001$; partial $\eta^2 = .03$).

In a number of countries, younger children in school seem to receive more total time for breaks (see Table 4), for example, Portugal, South Africa, the UK and the U.S.A. Post-hoc analyses indicated differences in total breaktime within these countries, usually between primary and secondary school phases. In other cases, age groups seem to receive approximately similar total amounts of time for breaks; for example, Finland, Spain and Turkey; and the large standard deviations suggest high within-group variation. There are a few cases; for example, Australia, France and Indonesia, where the total amount of breaktime seems to increase as children get older. These patterns should be considered tentatively, not least because the cases were lower for the oldest age range.

Discussion

Although there is extensive international research on education and education settings (OECD, 2021), information at an international level in relation to the structural elements of school breaktimes is relatively scarce. This unique study sought to examine the nature of school breaktimes across different country contexts for pupils of different ages and relative to the length of the school day. A good survey response was received from school representatives from a range of countries, enough to provide multiple perspectives on the nature of breaktimes at different phases of education and across countries.

Previous research has tended to report broad country estimates of breaktime frequency and length based on one or two respondents. This study is unique in providing data from numbers of school staff in multiple schools within a range of countries across the world. It is also original in providing insights into the extent to which school breaks vary relative to the age of children. Previous research tends to consider breaks either very broadly or in relation to young children in school. However, older pupils and adolescents also have breaktimes, and it is important to get a sense of how the length of breaktimes varies for these different age groups.

Table 4. Mean total breaktime in the school day by country and educational phase.

Country		Age group 6 to 7.5	8 to 11.5	12 to 18+	Total
Australia	Mean	60.9	62.5	75.0	62.3
	SD	21.0	18.1	29.3	20.0
	N	81	90	7	178
Brazil	Mean	30.0	32.3	20.0	29.2
	SD	16.0	33.1	8.7	25.3
	N	11	18	7	36
Canada	Mean	55.8	54.5	46.4	54.0
	SD	20.0	19.2	10.8	18.8
	N	42	69	14	125
Colombia[+]	Mean	-	35.0	24.0	30.0
	SD	-	14.8	8.2	13.0
	N	-	6	5	11
Finland	Mean	55.8	51.7	53.1	52.7
	SD	22.2	15.2	22.2	17.4
	N	13	44	8	65
France[+]	Mean	48.0	38.3	60.3	43.4
	SD	25.1	18.3	42.9	23.4
	N	25	35	4	64
Indonesia	Mean	21.5	27.7	31.0	28.6
	SD	9.5	18.6	24.1	20.6
	N	17	121	92	230
Portugal	Mean	56.4 a	59.4 a	40.7 b	52.9
	SD	28.8	30.6	19.0	28.2
	N	36	74	50	160
South Africa	Mean	56.4 a	45.6 ab	34.7 b	46.9
	SD	23.0	22.4	15.1	22.5
	N	26	39	16	81
Spain[+]	Mean	33.0	35.0	27.5	32.6
	SD	19.9	21.1	19.4	19.8
	N	5	12	6	23
Thailand[+]	Mean	40.8	28.8	48.0	37.6
	SD	29.7	30.1	39.0	31.7
	N	6	8	5	19
Turkey	Mean	48.4	49.6	50.8	49.5
	SD	26.6	25.0	24.4	25.3
	N	86	182	56	324
United Kingdom	Mean	63.2 a	58.1 ab	47.7 b	58.9
	SD	23.2	21.6	17.7	22.2
	N	76	104	22	202
United States of America	Mean	39.3 a	33.8 ab	24.5 b	35.5
	SD	19.1	22.4	38.6	23.5
	N	84	69	18	171
Total	Mean	51.2	47.5	40.3	47.3
	SD	25.1	25.4	25.8	25.6
	N	530	915	329	1774

Note. [+]Not included in statistical analysis. To be included in the table, a Country needed at least $n = 4$ or more in 2 out of 3 of the cells relating to age group. To be included in the statistical analyses, cells needed to have 7 or more cases in each cell. Differing subscripts indicate significant differences between education phase within a country on post-hoc tests ($p < 0.05$).

Frequency of breaks in the day

Findings from this research show that in most schools and at most age ranges children get some form of breaktime period in the school day. Only for older children between the ages of 12 and 18 were there some schools that did not offer a break at all. Most schools at all age ranges offered between 1 and 2 breaks, and the youngest age group was the most likely to experience 3 or more breaks. Given that the research was undertaken in schools

signed up to the Outdoor Classroom Day campaign, we feel that these findings are likely to represent a best-case scenario. Nevertheless, these findings are relatively similar to the broad patterns outlined in Beresin's (2016) research whilst also providing insight into differences between age groups. It is unsurprising that older children are less likely to have breaks than younger children, and it was surprising that many schools offered adolescents some form of break. We are unsure how widespread this practice is amongst schools catering for young people across different countries, as the survey response for this age group was lower than for other age phases. It is possible that this may be particular to the schools involved in this research. Nevertheless, the reduced number of breaks offered for adolescents is potentially problematic in the light of concerns about declining physical activity levels, but particularly for this age phase (Contardo Ayala et al., 2024).

When examining the frequency of breaktimes relative to countries, it was notable that a few schools offered no breaks at all, with schools in the U.S.A. being most likely to do this, along with Indonesia and South Africa. Although schools within these countries were most likely to offer 1–2 breaktimes, they rarely offered more than that. However, it would be important to examine cases of schools that do not offer breaks and to explore possible reasons. Explanations might relate to the availability of staff, space, funding, concerns about connected problem behaviour or just staff attitudes. Understanding the reasons for an absence of breaks or relatively little break time is all the more important, given the evidence base suggesting that breaks bring benefits in supporting engagement and learning (Pellegrini et al., 1995; Rhea & Rivchun, 2018), but also because breaktimes support young people's social lives and physical and mental wellbeing (Hodges et al., 2022; Massey et al., 2021; McNamara et al., 2017; Ridgers et al., 2018).

Total time for breaks in the school day

In terms of the total time given for breaks relative to the age of children, it is unsurprising that younger children tended to be given more time than older children and adolescents. Nevertheless, the difference was not substantial, with younger children getting, on average, 50 mins per day and older children and teenagers getting, on average, 40 minutes per day. While variability was surprisingly consistent across age groups, it was marked within each age phase, and so there are some younger children who get less break time than some adolescents.

When it comes to the total duration of breaktimes across different countries, there were marked differences, with some countries, such as Australia, New Zealand, the UK and Canada, offering around an hour of breaktime per day, while others, such as Indonesia, Spain and the U.S.A., offered around half of that. Within-country variation is substantial and may reflect other differences between schools. Figures were broadly in line with previous national surveys. The figures for the UK were slightly lower than reported in recent national surveys by approximately 15 minutes (Baines & Blatchford, 2019, 2023). This difference is explained by the attempt in this survey to exclude meal time from the total amount of breaktime, whereas the national surveys did include meal time (largely because the exact time spent having a meal varies from child to child). In this study we were trying to compare breaktimes internationally and thus there was a need to try to remove time for eating a meal. We also know that in certain

countries, a communal mealtime experience is more culturally important than in others, and thus may skew figures.

Analysis of total breaktime relative to country and educational phase indicated a general trend for a decline in breaktime with increasing age, particularly in countries such as Portugal, South Africa, the UK and the U.S.A. However, there were notable exceptions. In Australia and Indonesia, there is a slight trend to increase total time for breaks as students get older. In Finland, Spain and Turkey, total breaktime appears to remain the same as children get older. While some educators and policy makers may argue that adolescents need a break less than younger children, this would be short sighted. Beyond a focus on learning and well-being, these times are equally important for the development of relationships with peers, and opportunities for practicing social and emotional skills (Baines & Blatchford, 2011, 2019; Ramstetter et al., 2010).

Total time for breaks as a proportion of the school day

It is notable that school day length varied markedly across countries, and so we analysed total breaktime whilst taking account of the average length of the school day. This provides a more standardised comparison across countries, with breaktime making up a greater proportion of the school day in Finland, New Zealand, the UK, Canada and Turkey. At the other end of the spectrum, breaktime makes up little of the school day in Indonesia, the U.S.A., Spain and France. The fact that there are calls in France, at least, to reduce breaktimes further on the grounds that it will create more teaching time (Hunault & Poncelet, 2022) is a particular concern. Policymakers do need to understand the widely reported benefits of good quality breaktimes in schools for young people. Breaktimes, in particular, offer opportunities for in-person socialising, often highlighted as being in decline (Baines & Blatchford, 2019; Twenge et al., 2019), which is important for the development of relationships and valuable social and emotional skills. There has been increased focus on the importance of social and emotional skills and problem-solving because these are regarded as important human skills that are essential in the 21st century workplace (Luckin et al., 2017). Activities during breaktimes offer opportunities for children to develop these important soft skills, and these may become of value in everyday classrooms for academic schoolwork (e.g. through collaborative problem-solving). This highlights the important but often undervalued contribution that breaktimes can offer to children growing up.

Breaktime regimens

A key pattern at an international level was the interesting differences in the regimens of breaktimes, with some countries allowing children multiple breaktimes, while the majority of others offered just 1–2 breaks. Greece, Portugal and New Zealand seemed to predominantly offer 3–4 breaks in the school day. Canada seemed to have an equal split between schools offering 1–2 breaks and 3–4 breaks. Of note were Finland and Turkey, which had a regimen of frequent breaks, with relatively high levels of schools offering 5 or more breaks.

An arrangement of short breaks does not necessarily result in more or less time overall, but this routine may offer advantages for physical activity levels, concentration

and learning in class (Pellegrini et al., 1995; Rhea & Rivchun, 2018) and connects with theories that suggest learning in short bursts, followed by time to do something different, can be an effective way of enhancing learning and retention of knowledge. Some research attributes these benefits to the physical activity that takes place during breaks rather than the focus on something different (Pellegrini, 2006). However, there is little research examining implications of this practice across a range of areas, for example, learning, engagement, classroom behaviour, but also innovation, creativity and imaginative thinking, socialisation or satisfaction with play.

There may be weather-based reasons for shorter and longer play periods; for example, the shorter and more frequent breaktime periods identified in Finland and Turkey may be a response to the very low or very high seasonal temperatures. However, variable inclement weather can also affect the occurrence of breaks, and not all schools or regions will respond in similar ways; for example, snow might be seen as a good reason to cancel breaktime in some countries but not in others. In hot countries, it is likely that recess periods are carefully scheduled to ensure that not so much time is spent in the sun.

Short playtime periods may have disadvantages; for example, play and games may be unfinished or cut short, and essential time is taken up with collecting and clearing up play materials. Short breaks offer fewer opportunities for extended socialisation with friends and may lead to more homogenous networks. By contrast, longer periods of break may enable children to engage in sustained and substantial play activity, possibly allowing a state of flow (Csikszentmihalyi, 1996) to develop, which is highly enjoyable in itself. On the other hand, children may find extended free time difficult and may become bored and misbehave. Younger children may benefit from more time to play and sustained periods, whereas adolescents may only need regular shorter periods to socialise with friends.

Convention on the rights of the child

The UNCRC and the right to play and recreation also apply to adolescents as well as younger children, and this study provides important insights into the ways breaktimes vary across the age ranges, and the extent to which young people can exercise their right to play in schools in different countries. While the picture is relatively positive as all countries offered children and young people time for a break, there was wide variation in time available, with schools in some countries offering more than double the break time of others. There were instances of significant concern where some schools offered no breaks at all, and further research should focus on children in these circumstances and whether their rights are being met outside of school. As institutions responsible for the development of children and shaping citizens and society of the future, schools have a moral responsibility to take a lead in attending to the rights and well-being of children and young people as articulated in Article 31 of the UNCRC convention.

Limitations of the study

This study is not without limitations. The participants were all involved in OC Day and thus were likely to be based in schools positively predisposed to children's outdoor play. Findings may represent a best-case scenario rather than reflecting the average state of

play across countries. A further shortcoming is that we have only limited information with regard to the nature of the schools that participated. Consistent with large-scale studies of this sort, data were cleaned as far as possible (e.g. to remove multiple responses from a school), but this might not have been enough to prevent errors from creeping in. While we have a general sense that most participating schools are publicly funded institutions, it was impossible to factor this into our analyses. It may be the case globally that private schools are more positively predisposed to longer break times as they seem to be at secondary school level in England (Baines & Blatchford, 2023). The high variability in total break time estimates in most countries suggests variations between schools, possibly due to local variations in policy or other activities being undertaken during these periods, e.g. communal activity. We also note that policies do not necessarily accurately reflect everyday practices. For instance, sometimes transitions between lessons and the playground can take up a lot of time. Future research at an international or national level should aim to provide a clear breakdown of the activities, opportunities, and resources children receive during these times, as well as the extent to which activities are freely chosen or are adult-structured.

Although this study provides broad insights into the frequency and length of breaktimes, it provides no data on their quality. We know that the quality of the provision for these times is important (Massey et al., 2020), possibly more important than the time available, and it is likely that long breaktimes of poor quality may be particularly problematic. However, there is little agreement about what makes for good quality breaktimes for children and young people at different ages and for children with different profiles and needs. For instance, a resource rich and busy playground may offer most pupils enjoyable opportunities for varied play but may be too loud for children with sensory needs or offer little to occupy adolescents. Playground environments necessarily need to be varied, well equipped and inclusive settings that meet the needs of all the young people that use them.

Conclusion

This research provides cross-country data on the number and length of breaktime periods in relation to the phase of education. The study also provides information on total breaktime as a proportion of the school day, which enables a more standard and comparative view of time for breaks across different national educational contexts. Findings show different regimens of breaks in the school day and marked differences both within and between countries. There is a need for much more international research on breaks within the school day, not only to examine their timing and quality, but also to examine how they connect with wellbeing and learning and offer insights into the social and cultural practices that exist within countries. Important recommendations regarding the nature, length, organisation and supervision of recess breaktimes have been provided by the Global Recess Alliance (see Ramstetter et al., 2022) and should provide the basis for considerations by governments and organisations considering changing policies on breaktimes in schools. As we have suggested before (Baines & Blatchford, 2011), life on school playgrounds provides a preparation ground for, and a flavour of, existence beyond school, and a chance to learn important social and moral lessons in the safety of an adult-supported environment.

Notes

1. Throughout this article the terms breaktime, playtime and recess are used interchangeably.
2. This definition does not include the notion of fitness or movement breaks. These are used by some schools to provide further opportunities for children to be active but offer children little autonomy or opportunity to play or connect with peers.

Disclosure statement

The first two authors have no conflict of interest. Cath Prisk is a play advocate, who previously was the director of Outdoor Classroom Day and is the CEO of an education social enterprise that delivers the Outdoor Play and Learning programmes, in London and Kent, supporting schools to improve the quality of play provision, alongside other consultancy, services and training.

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