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Cover Page Footnote

We would like to thank all the participants in each study, who gave their time and insights despite the fact that their lives had been affected by COVID-19. This project was funded through England's Department for Education (DfE) National College for Teaching and Learning (NCTL) ITEP award 2020-2022.

The Impact of the COVID-19 Pandemic and Associated Restrictions on Children's Play: A Systematic Literature Review

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Abstract

Play is recognised for its essential role in children's development and, as such, the right to play has been internationally ratified through the United Nations Convention on the Rights of the Child. However, during the COVID-19 pandemic, people's day-to-day lives were universally disrupted by restrictions and children's ability to play as usual was impacted. The aim of this review was to examine the ways in which the COVID-19 pandemic affected children's play around the world, and whether this differed as a function of their national context. Database searches were conducted between August 2022 and February 2023, whereby a total of 10 studies met inclusion and quality assessment criteria. Through a process of thematic synthesis, three analytical themes were identified: foundations of play; children's pursuits and losses; and factors interacting with play. Each analytical theme consisted of three subthemes. Findings are discussed, as well as implications for practitioners and possible directions for future research.

Keywords: COVID-19; Coronavirus; pandemic; children; play; right to play

Introduction

Research has demonstrated the critical importance of play for children's cognitive, social, and emotional development, such that it is compared to fundamental needs like sleep, water, and nutrition (Leibowitz, 2020). Indeed, play is internationally recognised by Article 31 of the United Nations Convention on the Rights of the Child (UNCRC), which states that children have a right to "play and recreational activities appropriate to the age of the child" (UN, 1989, p. 10). The importance of this right was later reaffirmed by the UN Committee on the Rights of the Child (2013) through the publication of General Comment No. 17, where play is defined as "any behaviour, activity or process initiated, controlled and structured by children themselves; it ... is non-compulsory, driven by intrinsic motivation and undertaken for its own sake" (p. 5-6).

Despite its academic and legislative recognition, play remains a somewhat under-prioritised right. Due to concerns about diminishing opportunities for (and the range of barriers to) play in children's lives, the Division of Educational and Child Psychologists (DECP) have published a position paper regarding children's right to play. The DECP are a division of the British Psychological Society who promote the professional interests of educational and child psychologists, and their position paper states that all children should have free access to high quality, local play opportunities (Hobbs et al., 2019). However, an additional unforeseen barrier to play in recent years has been the COVID-19 pandemic, which saw the majority of the world's children living in countries with full or partial lockdowns in 2020 (Graber et al., 2020). As per Laskiewicz (2020, p. 21), "this relies on all non-essential activities being stopped and people staying indoors". During these times of restriction, people's daily lives and routines were universally disrupted and this had implications for professionals interested in supporting

children's play, such as playwork practitioners. For example, according to the playwork principles (Play Wales, 2015) the play process takes precedence and playwork practitioners should advocate for play, supporting all children in the creation of play space. However, this was not possible during the COVID-19 pandemic and, thus, the work of playwork practitioners was inevitably affected.

Children's play became one of a number of pandemic-related foci for academics and researchers. As a result, a review of the literature examining children's play behaviours during the COVID-19 pandemic was conducted in 2021 (Kourti et al.). Considering 17 articles from Europe and North America, the review found that outdoor play had generally decreased as children spent more time on various indoor activities, including screen time. Children included their caregivers and siblings in their play when possible, and COVID-19 became a feature of children's play. Additionally, children who engaged in play presented with improved cognitive function, reduced anxiety, and fewer depressive symptoms. However, it was noted that further research was required, particularly that which included countries with different socioeconomic and cultural backgrounds.

Since the Kourti et al. (2021) review, research in this area has continued to accrue and several studies have been conducted in countries outside of Europe and North America. The aim of this literature review, therefore, was to examine the impact of the COVID-19 pandemic on children's play with the inclusion of research carried out worldwide. Similarities across countries, and differences specific to each, will be considered. The current paper sought to address the following research questions:

1. In what ways has the COVID-19 pandemic affected children's play?
2. Are there any similarities or differences according to country of residence?

Materials and methods

Search strategy

This systematic literature review was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework (Moher et al., 2009).

The stages of this process are outlined below (see Figure 1).

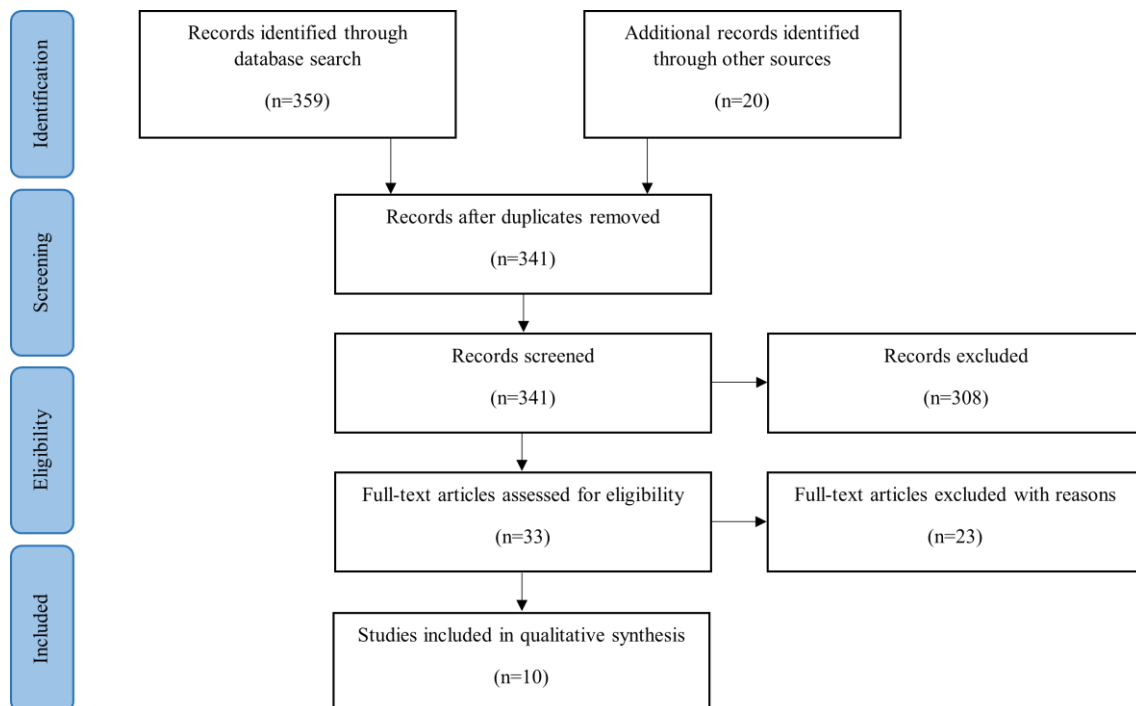


Figure 1. PRISMA flowchart

Database searches were carried out between August 2022 and February 2023. The databases included were PsychINFO (Ovid), Web of Science (Clarivate), ERIC (ProQuest), SAGE Full-Text Collections (Sage), and Wiley Online Library (Wiley). The first 10 pages of Google Scholar were also checked for relevant studies. Key search terms used on each database were: (COVID-19 or Coronavirus) and child* and play.

When screening papers for eligibility, several were excluded because of their focus on physical activity or sport as opposed to play. Additionally, as the aim of this review was to synthesise the ways in which children's play more generally had been affected by COVID-19, papers that were limited to a specific type of play (e.g., digital play) were not included.

With these parameters in mind, the authors developed a working definition of play for the purposes of this (and subsequent) research. Accordingly, play is conceptualised as voluntary child-led activity that is often spontaneous, undirected, and has no specific purpose other than the child's enjoyment. Therefore, inclusion criteria for this review were as follows: 1) the focus of the study was on play and not physical activity or sport, 2) the study considered play generally, as opposed to a specific type of play, 3) the study examined play in the context of the COVID-19 pandemic, 4) the study was peer reviewed, 5) the study was written in English, and 6) the study was not included in the Kourti et al. (2021) review.

Quality assessment

A total of 11 studies met the inclusion criteria for this review. These were then evaluated for quality and relevance according to the Weight of Evidence (WoE) Framework (Gough, 2007). Scores for methodological quality (WoE A) were calculated using the Woods (2020a, b) critical appraisal frameworks. Mixed methods studies were assessed according to both frameworks, with the higher of the two scores being awarded. One study was excluded due to a low WoE A score (<10). Studies with medium (10-14) or high (15-20) scores were included in the review. Inter-rater reliability of this process was completed with the second author, achieving 89% agreement. Methodological appropriateness (WoE B) was felt to be adequately

addressed by the critical appraisal frameworks. Relevance of focus (WoE C) was assessed to be low, medium or high according to criteria devised by the authors (see Table 1 for description of scoring). None of the remaining 10 studies were assessed to have a low WoE C score.

Table 1. Weight of Evidence C (WoE C) scoring criteria

Criteria	Score
Specifically examines children’s play in the context of the COVID-19 pandemic.	High
Examines children’s lives more generally in the context of COVID-19, with a specific focus on play.	Medium
Examines an aspect of children’s lives in the context of COVID-19 (such as physical activity), making reference to play.	Low

Two of the studies included in this review (Barron et al., 2021; Bulgarelli et al., 2022) are written about responses to individual questions from the same instance of questionnaire administration. As a result, they share three authors and their data were collected from the same participants. A further two studies share two authors, with one (Dewhirst & Casey, 2023) being a follow-up of the other (Dewhirst et al., 2021).

Therefore, some participants are shared, having been recruited from the original sample. All four papers are included due to their unique contributions to the literature and good WoE A/C scores.

All included papers are outline below (please see Table 2).

Table 2. Summary of studies included in this review

Study author, date & country	Focus of the study	Design/Methodology	Participants	Findings	WoE A/C
Barron et al. (2021) Ireland, Italy, U.S., England	The ways in which COVID-19 restrictions impacted children's play and friendship groups.	Online questionnaire with closed- and open-ended questions – 36 for adults, 30 for children.	1,670 adults taking care of children aged 4-14 years, and 265 children aged 10-18 years.	More time spent engaging in play activities. Very little difference in activities when caregivers were in the home. More creative and artistic play in girls, more time on computer and video games in boys.	Medium/ High
Bulgarelli et al. (2022) Ireland, Italy	Children's outdoor activities and play during the first COVID-19 lockdown, and the	36-item online questionnaire with closed- and open- ended questions.	1,667 adults taking care of children aged 4–13 years.	Caregivers reported that outdoor activities and play decreased. Contextual factors were crucial in supporting this, particularly adults taking an active role. The	Medium/ High

contextual factors
affecting them.

built environment, accessibility
of outdoor space and how the
space was structured also
supported. Few differences
between children with and
without disabilities.

Camas et al. (2022) Spain	The perceptions of adults, children and adolescents regarding play and leisure during the period of COVID- 19 lockdown.	Online questionnaire with closed-, semi- open- and open- ended questions – 7 for adults, 9 for children.	270 adult caregivers, and 126 children aged 3-17 years.	Younger children reported playing more during lockdown than before the pandemic. One-third of children and adolescents reported decreases in play time (this was more in the pre- adolescent and adolescent age groups). The most popular recreational spaces were the living room and bedroom.	Medium/ High
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				Children and adolescents missed their friends the most.	
Chaudhary et al. (2021) India	Children's play during the pandemic and the ways in which their activities had changed.	Telephone interviews and online questionnaires with adults, interviews with children.	260 telephone interviews, 380 questionnaires from participants aged 16-60 years, 26 children aged 6-12 years.	Socio-economic context shaped the way in which children's play was impacted. Middle-class, educated caregivers reported several changes and their own anxieties. Many semi-urban, rural, and urban poor caregivers felt their children's play had not changed.	Medium/ High
Cohen & Bamberger (2021) Israel	The ways in which children understand and process the changes and	Written task describing a game, play, or other activity, and online questionnaire.	118 adults taking care of children aged 3-9 years.	Significant changes in children's play that appear to be mostly positive. These include richness of play activities, prolonged play times and expansion of play	Medium/ Medium

challenges caused by the COVID-19 pandemic.

spaces. There were also positive effects on children’s development and family relationships.

<p>Dewhirst et al. (2021) U.S.</p>	<p>The overall effect of social distancing on the play of children aged 0-8 years.</p>	<p>48-item online questionnaire with closed- and open-ended questions.</p>	<p>546 adults with at least one child aged ≤8 years at home during social distancing.</p>	<p>The most popular form of play alone was object-oriented, with other children was physical, and with a caregiver was object-oriented. More than half described the use of technology to play, usually with others virtually. Play alone and with a caregiver increased by an hour each.</p>	<p>High/ High</p>
<p>Dewhirst & Casey (2023)</p>	<p>Caregiver experiences of the</p>	<p>Semi-structured interviews.</p>	<p>14 mothers with at least one child</p>	<p>Disruption or changes to play were a common experience. Children</p>	<p>High/ High</p>

U.S.	challenges to the play practices of themselves and their children during social distancing.	aged ≤ 8 years at home during social distancing.	showed (or described) that they were missing their friends. There were underlying themes of COVID-19 in children's play. Social skills regressed and what was viewed as 'challenging behaviour' increased.
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Holmes et al. (2022)	Children's engagement in play activities during the COVID-19 pandemic and the ways in which caregivers supported this.	Play journals and open-ended questionnaire.	6 adults looking after at least one child (aged 19-65 months) attending a private child learning centre.	Children played often at home and engaged in playful interactions. Family members frequently acted as playmates, with play helping children and families to cope. Caregivers were creative in their use of indoor spaces for play. Children had less social interaction with peers and fewer	Medium/ High
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<p>Lourenço et al. (2021) Portugal</p>	<p>Children’s experiences of play during the pandemic whilst in primary education.</p>	<p>Exploratory survey and Portuguese version 4.0 of the Pediatric Quality of Life Inventory.</p>	<p>370 children aged 7-10 years.</p>	<p>opportunities for play but enjoyed indoor and outdoor play with family members, friends and pets.</p> <p>Recess is still an important part of children’s day-to-day lives, for opportunities to play, have fun, and be with friends. Over half of the children were not engaging with activities they would like to, due to lack of materials and school guidelines. Children rationalised restrictions by saying “it is forbidden”.</p>	<p>Medium/ High</p>
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Pastore & Salvi (2023)	How children coped with the COVID-19 pandemic generally and the associated changes to their daily lives.	Semi-structured interviews.	41 children aged 3-10 years.	Children were not able to play with friends as they had before the pandemic. They experienced spatial constraints that significantly changed the possibilities for play. Outdoor play was severely affected, leading to changes in imagination, creation, and creativity. 12 participants (all from lower socioeconomic backgrounds) reported that they no longer played.	Medium/ Medium
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Synthesis and extraction

Analysis of included papers was guided by thematic synthesis as described by Thomas and Harden (2008), as it is a proven method that maintains a link between included texts and any conclusions drawn. The results sections of each paper were coded inductively, line-by-line. Codes were then organised according to descriptive themes, some of which were informed by the findings of an included paper (Camas et al., 2022). These were then grouped under wider analytical themes, with descriptive themes becoming subthemes. Inter-rater reliability of codes, subthemes, and analytical themes was completed with two trainee educational psychologist colleagues.

Results

Three analytical themes emerged, which were: 1) Foundations of play; 2) Children's pursuits and losses; and 3) Factors interacting with play. The theme 'Foundations of play' is presented first to provide the context within which the other themes can be understood. The following two themes, and all subthemes, are presented in order of greatest to fewest pieces of coded data.

Foundations of play

All ten papers made reference to the foundations of play, such as who children played with, where they played and the time that was given to play (see Figure 2).

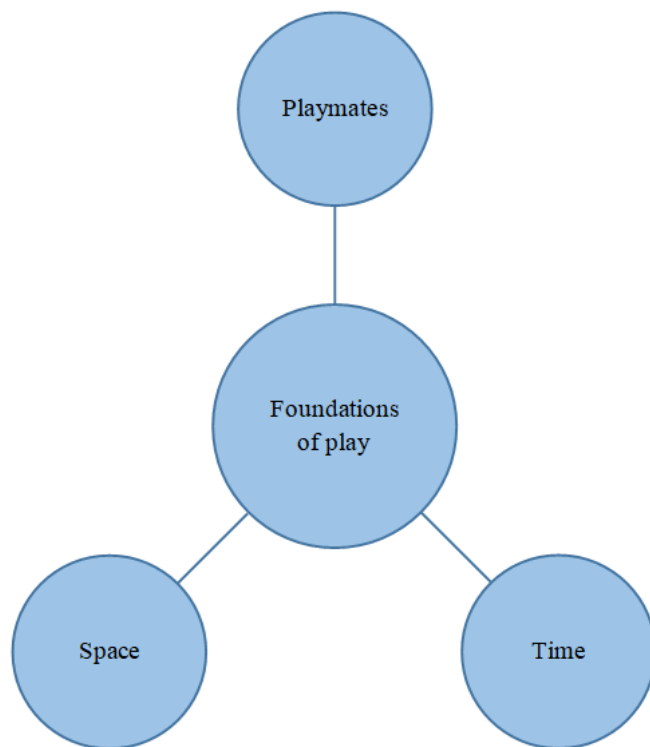


Figure 2. Foundations of play with subthemes

Playmates

Every paper made some reference to who children were playing with during the pandemic. Generally, it appears that caregivers became children's primary playmates (Bulgarelli et al., 2022; Dewhirst et al., 2021; Holmes et al., 2022), although one study found this to be age dependent (Camas et al., 2022). This may be linked to cross-country increases in caregiver presence in the home (Barron et al., 2021), with caregivers organising, supervising, and participating in play (Bulgarelli et al., 2022; Chaudhary et al., 2021). Siblings were also noted as playmates (Bulgarelli et al., 2022; Camas et al., 2022; Holmes et al., 2022) with some papers reporting increases in sibling play (Chaudhary et al., 2021; Cohen & Bamberger, 2021), which created challenges if they were not positive playmates (Dewhirst & Casey, 2023). Increases in family play were also discussed (Cohen & Bamberger, 2021), which caregivers were happy about

(Chaudhary et al., 2021) and felt helped children to cope with social isolation (Holmes et al., 2022). Other playmates included friends, neighbours, and pets (Camas et al., 2022; Holmes et al., 2022). Some papers reported children having limited opportunities to interact and play with peers (Dewhirst et al., 2021; Dewhirst & Casey, 2023; Holmes et al., 2022), whilst others found that they continued to play with other children in the home (Dewhirst et al., 2021), developing new play routines as a result (Pastore & Salvi, 2023). There were also increases in time spent alone (Camas et al., 2022; Dewhirst et al., 2021), with some children preferring this (Chaudhary et al., 2021) whilst others did not play well on their own (Dewhirst & Casey, 2023). Within the school environment, children generally did not play alone and enjoyed play time because they could interact with adults and friends (Lourenço, 2021).

Space

There were spatial constraints on children's play during the pandemic (Pastore & Salvi, 2023), which led to the discovery of unused play spaces (Chaudhary et al., 2021) and varied use of spaces in the home (Camas et al., 2022). Children's choice of play space was found to be age dependent, with older children choosing private places such as bedrooms while younger children used common areas such as living rooms (Camas et al., 2022). Additionally, young children's (4- to 6-years) play spaces were organised by adults (Bulgarelli et al., 2022). Whilst some children rarely left their homes, others (such as those living in smaller houses) met their peers in commonly accessible areas, like streets (Chaudhary et al., 2021). Most children engaged in indoor play, but gardens, local playgrounds, and the neighbourhood were also used as play spaces if available (Holmes et al., 2022). Indeed, some caregivers saw outdoor access as a necessity for play, although this was dependent on good weather (Dewhirst & Casey, 2023). In

schools, some of the most used play spaces were the playground or sports field, as well as covered spaces, roads, and ramp areas (Lourenço, 2021).

Time

Two studies reported that children generally had more time to play during the pandemic (Camas et al., 2022; Dewhirst et al., 2021), whilst a third could not conclude this but described more time spent engaging in play activities (Barron et al., 2021). However, some caregivers were split as to whether their children had more time to play (Chaudhary et al., 2021) and their own lack of time was seen as a barrier to their participation in play (Barron et al., 2021). Conversely, some caregivers made time to play with their children whilst balancing work responsibilities (Holmes et al., 2022), spending more time with their children and becoming playmates (Chaudhary et al., 2021) – for some fathers, this was the first time they had played with their children. In the school environment, most children wished to have more time for play, feeling there was not enough and that it went by too quickly (Lourenço, 2021).

Children's pursuits and losses

All ten of the included papers referred to children's play activities during the pandemic, both relating to what children were able to engage with and that which they no longer had access to (see Figure 3). In determining the types of play discussed in this section, the authors referred to an included paper (Dewhirst et al., 2021), which was based on the work of Bjorklund and Blasi (2010).

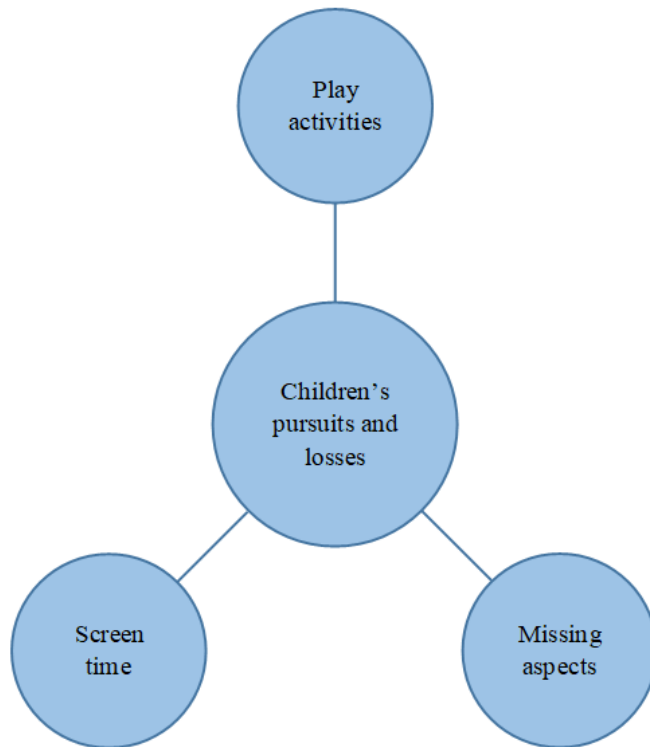


Figure 3. Children's pursuits and losses with subthemes

Play activities

Despite living in restricted circumstances, children played in a variety of ways during the pandemic (Holmes et al., 2022). The types of play that children engaged with included object-oriented play such as with construction materials, physical play such as on a trampoline, and sociodramatic play such as roleplay (Cohen & Bamberger, 2021; Dewhurst et al., 2021; Holmes et al., 2022). Specific activities that were mentioned included: arts and crafts, puzzles, and fort building (Holmes et al., 2022); Lego, wrestling, and playing house (Dewhurst et al., 2021); junk modelling, acrobatics, and dolls (Cohen & Bamberger, 2021). Games, including board games, were also noted as a commonly chosen play activity (Camas et al., 2022; Chaudhary et al., 2021; Dewhurst et al., 2021; Holmes et al., 2022). Children were creative with their play, inventing solutions to constraints (Chaudhary et al., 2021), adapting and expanding (Cohen &

Bamberger, 2021) or finding new ways to play (Holmes et al., 2022). Play activities took place both indoors and outdoors, and the type of activity differed in relation to age and gender (Barron et al., 2021; Bulgarelli et al., 2022). Some caregivers reported play generally without giving specific detail (Bulgarelli et al., 2022; Pastore & Salvi, 2023), perceiving their children to have spent most of their time playing during the pandemic (Chaudhary et al., 2021). However, some children felt they no longer played (Pastore & Salvi, 2023). In the school environment, children described enjoying play time because of certain activities, such as football and hide and seek (Lourenço, 2021).

Screen time

Many children used technology as a means of playing, most commonly to play games but other forms of play (e.g., physical, sociodramatic) were also facilitated by technology (Dewhirst et al., 2021). Increases in screen time and digital activities during the pandemic were reported by caregivers across studies (Barron et al., 2021; Camas et al., 2022; Chaudhary et al., 2021), with device use becoming a daily occurrence that children developed a reliance upon (Pastore & Salvi, 2023). As such, it became difficult to remove devices (Barron et al., 2021) and children became frustrated by this (Chaudhary et al., 2021). While older children (11- to 17-years) were found to have the highest usage of screens, the greatest increase was noted in younger children (3- to 10-years; Camas et al., 2022). Some caregivers were concerned about screen time (Holmes et al., 2022) but used it as a means of balancing work responsibilities and childcare, or alleviating children's boredom (Dewhirst & Casey, 2023). As well as for play, devices were used to facilitate learning activities and to socialise with others (Barron et al., 2021; Dewhirst & Casey, 2023; Holmes et al., 2022). Some adults and children reported

the same amount of time or less time spent on screens (Camas et al., 2022), which may have been due to some children being too young to use devices (Pastore & Salvi, 2023).

Missing aspects

Several studies reported aspects of play that children were missing, the most notable of which was social contact and play with friends (Camas et al., 2022; Chaudhary et al., 2021; Pastore & Salvi, 2023). Lack of access to peers during the pandemic was experienced as a common challenge (Dewhirst & Casey, 2023) and caregivers were concerned about the resulting loss of interaction (Holmes et al., 2022). Other aspects that were missed included going out and physical activity (Camas et al., 2022), outdoor games (Chaudhary et al., 2021), and play in general (Pastore & Salvi, 2023). Some caregivers were worried that the loss of activities would affect children's wellbeing (Dewhirst & Casey, 2023). Within the school environment, almost half of children described activities they would like to do at play time but couldn't (Lourenço, 2021). These included sports and movement, arts and music, social interaction, and playing with toys, games, and technology. However, just over half of children stated that there were no activities they would like to do but couldn't (Lourenço, 2021) and a child in one study described looking forward to returning to school and hugging her friend (Chaudhary et al., 2021).

Factors interacting with play

Nine out of the ten papers detailed additional factors that influenced the ways in which children played, including socioeconomic status and geographical location, the disposition of child or caregiver, and COVID-19's direct impact (see Figure 4).

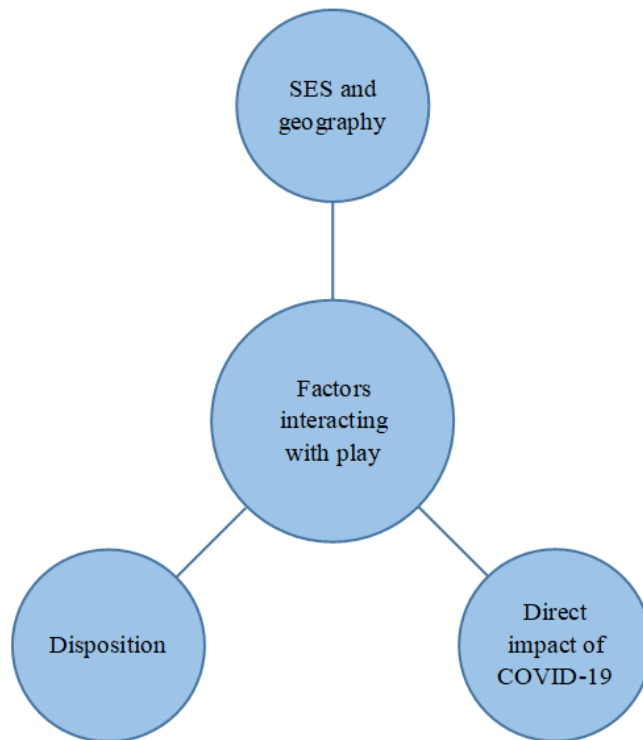


Figure 4. Factors interacting with play with subthemes

Socioeconomic status and geography

Two studies found significant effects of socioeconomic status on children's play during the pandemic. In Northern India (Chaudhary et al., 2021), children from lower income families continued to play in broadly the same way due to limited access to devices and an inability to reconfigure their homes for play. As a result, these children continued to play outside and were sometimes ignored by officials enforcing lockdown rules.

However, children from wealthier families were reportedly restricted to indoor play, which was more sedentary due to device usage, and were perceived to be playing all the time. This differed for Mozambique (Pastore & Salvi, 2023), where children from lower social classes were confined to their homes and not able to play as they had before the pandemic. These children missed their prior experiences of play and were more likely to report that they no longer played during this time. However, similarly, children from

upper class families had access to devices and the internet, using these to integrate virtual space into their play practices. These children reported having more time and being able to play whenever they liked, which was felt to be better than before. Where children lived also influenced how and where they played. For example, in Spain (Camas et al., 2022), children in urban areas were more likely to play with their caregivers and siblings, however, all children who indicated only playing alone were also in the urban population. Additionally, outdoor spaces were used more by children living in rural areas. In Northern India (Chaudhary et al., 2021) children living in peri-urban areas played as usual due to lower infection rates, with those in more remote areas having fewer constraints on their play and more likely to play with other children. Additionally, more Irish than Italian children lived in homes with outdoor spaces, and Italian caregivers perceived their children to have greater difficulty with playing outside (Bulgarelli et al., 2022). However, caregiver concern about the inability to meet friends outside was higher for Irish children.

Disposition

A number of papers described children's affect and behaviour during times of restriction. While some children were seen to become more considerate and understanding, others were fussier and more irritable due to confinement in the home (Chaudhary et al., 2021). Some children presented with elevated levels of anxiety, sadness, or loneliness, and would not engage with activities or leave the house (Barron et al., 2021). Others exhibited challenging new behaviours that caregivers linked to social isolation, such as ignoring instructions, having tantrums, and separation anxiety that affected their play (Dewhirst & Casey, 2023). Caregivers were concerned for their children's social skills, particularly those without siblings, perceiving them to avoid

others when there was the opportunity for engagement (Chaudhary et al., 2021). Some caregivers reported children being clingy and not wanting to play with extended family members, which was similarly felt to be the result of social isolation (Holmes et al., 2022). However, play and the presence of others was described as a means by which children could cope with the pandemic and maintain their resilience (Barron et al., 2021). Indeed, as well as a coping mechanism, play was seen as a distraction that helped children deal with stressors and provided a sense of normality (Holmes et al., 2022). In school, children enjoyed play time because it gave them the opportunity to relax and take a break (Lourenço, 2021).

Caregiver affect and behaviour was also discussed in relation to play. Many caregivers saw play as important and valuable for their children (Chaudhary et al., 2021; Holmes et al., 2022). However, whilst they believed they should prioritise and support play, some felt tired and unmotivated to do so, did not enjoy their child's choice of play, or found acting as a playmate to be a burden (Dewhurst & Casey, 2023). Interestingly, like their children, some caregivers used playful activities to relax and cope, with this being linked to self-care (Holmes et al., 2022).

Direct impact of COVID-19

The pandemic changed everyday life for the majority of families, impacting daily routines, social life, mental health, education and livelihood. Caregivers felt that children played the best they could within this context and some positive outcomes were noted, such as more family time and technology skill development (Chaudhary et al., 2021). Outdoor play was particularly affected by the pandemic, with children unable to play with their friends as before, and some reporting not playing at all (Pastore & Salvi, 2023). Children had feelings of uncertainty relating to COVID-19, which was projected

into their play through themes of death, safety precautions, and battling the virus (Dewhurst & Casey, 2023). Indeed, the virus became a feature of many children's play (Chaudhary et al., 2021; Pastore & Salvi, 2023), with other COVID-related play themes including sickness, restrictions, and shelter building (Cohen & Bamberger, 2021). This incorporation of the virus into play has been interpreted as a way of children creating something out of their new circumstances and exerting a sense of agency (Pastore & Salvi, 2023).

Discussion

The aim of this review was to examine the ways in which children's play was affected by the COVID-19 pandemic and whether observed changes varied by country. This will be discussed below, as well as the implications and limitations of the current review.

How the pandemic affected children's play

Some of the findings presented above mirror those of the Kourti et al. (2020) review, namely that children frequently played with their caregivers and siblings, and that outdoor play decreased while indoor play and time spent on devices increased. This suggests that these changes were experienced by children and families around the world throughout the pandemic. However, the current review offers additional insights into the impact of COVID-19 restrictions on children's play behaviours.

Children's play was affected at a foundational level, in terms of with whom, where, and how much they were able to play. Generally, children were reported to play with caregivers and siblings the most, although other playmates included neighbours, extended family, and pets. Access to peers was often limited and children played alone more. It appears that play became a largely indoor activity, whereby children used

spaces within the home in a variety of different ways, as outdoor play was determined by the availability of spaces such as gardens or local playgrounds. Many children had more time to play during the pandemic, with some caregivers making time to play with their children whilst others saw their own lack of time as a barrier to this.

The activities that children could and could not pursue were also affected by the pandemic. Various types of play were observed, including object-oriented, physical, sociodramatic, and games. Children were seen to be creative with their play, adapting to find solutions to constraints and inventing novel ways of playing. Digital activities were commonly reported, and caregivers described concerns about increased amounts of screen time, although devices were also used to access learning and socialise with peers. Social contact and play with friends were commonly missed activities that similarly caused caregivers concern. Children also missed outdoor play, physical activity, and play in general.

During times of COVID-19 restrictions, some of the barriers to play described by the DECP (Hobbs et al., 2019) appear to have been removed, such as a focus on academic learning and adult-directed extra-curricular clubs. This may explain the increased amount of time children spent on play activities that was reported across studies and could be interpreted as a positive effect of the pandemic on children's play. However, other barriers outlined by Hobbs et al. (2019) remained in place or even worsened during lockdown, such as the closure of play spaces, pressure on caregiver work patterns, and adults' anxieties about safety. Nonetheless, the findings of this review largely support the assertion of General Comment No. 17 (2013, p. 5) that play "takes place whenever and wherever opportunities arise".

Screen time is presented as its own discrete subtheme due to the volume of coded data that related to this, which spanned seven of the 10 studies. This suggests that the

COVID-19 pandemic had a noticeable impact on children's screen time across countries. Indeed, a recent systematic review and meta-analysis of 89 studies worldwide (Trott et al., 2022) found that primary aged children had the largest increase in total screen time (1.4 hours per day), much of which was leisure screen time (i.e., not related to schoolwork; 1.0 hours per day). This was followed by adults and then adolescents, with young children having the smallest increase. Furthermore, a longitudinal study from the United States found that children's total screen time increased by 1.75 hours per day in the early stages of the pandemic and remained 1.11 hours higher per day after precautions had been lifted (Hedderson et al., 2023). Again, much of this was due to recreational screen time and suggests that increases have persisted beyond the pandemic.

Variation by country

There were both commonalities and differences in children's play depending on their country of residence, as well as their living conditions. A key finding of this study pertains to the impact of socioeconomic status on children's play during times of COVID-19 restriction. This was specifically highlighted in two of the non-western countries (i.e., India and Mozambique). Across both, those from higher socioeconomic backgrounds were more likely to have access to devices, meaning they played frequently but this was inside and in a generally more sedentary way. This was similarly true for the UK, where children from higher income families were more likely to have access to devices, although this related to home learning rather than play (Andrew et al., 2020).

However, the play of children from lower socioeconomic backgrounds differed by country, with those in North India often continuing to play outside as they had before

the pandemic, while those in Mozambique were confined to their homes and felt they didn't play at all. This reinforces a point made by Hobbs et al. (2021, p. 3) that "children will struggle to play when ... the environments they live in are so constraining that they are unable to", with domestic circumstances and poverty cited as restricting factors. In the case of children from Mozambique, these factors may have been exacerbated by COVID-19.

Implications

The findings of this review have implications for professionals who are interested in supporting children's play following the COVID-19 pandemic, such as playwork practitioners. As caregivers reported concerns regarding the more indoor- and device-based nature of play during lockdown, this should be an area of focus when supporting children's play at home. Initiatives for encouraging more active and outdoor play, such as the idea of 'rewilding children' as a post-pandemic priority suggested by Reilly and Tremblay (2021) following their own play research, would go some way to achieving this. However, it is the view of the researchers that initiatives of this nature should also focus on social interaction, the loss of which was another commonly cited caregiver concern.

As play behaviours were affected differently based on children's country of residence, programmes of support aimed at achieving the above would need to be tailored depending on the national context. For example, in the UK, the Department for Education (DfE) has allocated additional funding to support children and young people from lower socioeconomic backgrounds to experience nature (DfE & Barran, 2023). Additionally, a framework for 'play after lockdown' provided by Play England (2020) suggests a focus on allowing children to play with their peers freely, improving play

spaces, listening to and learning from children, and supporting children's choice and agency.

The findings of both the current review and those of Kourti et al. (2021) also have implications for how children's play can be supported during possible future instances of local, national, or international restriction (whether due to infectious disease or other causes). For example, preserving children's access to outdoor play spaces (such as playgrounds) wherever possible would ensure that outdoor play remains an option for those children and families who do not have access to outdoor space at home.

Additionally, prioritising social contact within the boundaries of health and safety regulations would facilitate the maintenance of peer relationships and alleviate feelings of loss commonly described by children. Indeed, the above points are also relevant to children who experience ongoing barriers to accessing their Article 31 rights, such as the groups described in General Comment No. 17 (Committee on the Rights of the Child, 2013) and those who live in restricted environments for reasons unrelated to the COVID-19 pandemic (Graber et al., 2020).

Limitations

This paper aimed to include research that had been carried out worldwide. Although this was somewhat achieved, research conducted outside Europe and North America remains in the minority. Two studies represent research from Asia and one single study represents research from Africa. Therefore, it could be considered a limitation of this review that a more worldwide view could not be presented, although this relates to a wider lack of diversity in psychological research (de Oliveira & Baggs, 2023).

Similarly, the authors recognise that their own Euro-American view of play, which would be described as culturally cultivated play (Gaskins et al., 2007), will have

affected the screening of studies included in this review. This may, therefore, have limited the extent to which studies based on differing cultural perceptions of play were explored.

Additionally, all the studies included in this review were conducted during the COVID-19 pandemic and related to children's play whilst restrictions remained in place. In order to explore whether the pandemic has had a lasting impact on children's play, and therefore whether the above implications remain appropriate, further research is required that considers children's play since restrictions have fully eased. To this end, the authors of the current review intend to carry out research of this nature.

Declaration of interest statement

No potential conflict of interest was reported by the authors.

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