

The impact of COVID-19 on the physical development of reception age children.

Ellie Huggett and Kristy Howells

According to O'Connor and Daly (2016, p.6), physical development (PD) is crucial for a child's "learning, behaviour, and emotional health" and serves as a foundation for the optimum development of their abilities such as language, emotional development, and well-being as well as overall health. Kay (2021) reported that there is a shortage of research on the impact that COVID-19 has had on children in the early years, with studies tending to focus on children's mental health rather than the impact on PD. The aim of this paper is to share the lessons learnt about the impact the COVID-19 pandemic has had on the PD of young children.

Schools globally were closed for 14 weeks (UNESCO, 2021), on average, and in England early years' settings were closed for around 10 weeks, prior to their return on 1st June 2020 (based on Gov.uk (2021) lockdown data). Timmins (2021, pp.4) described this time as "the most disruptive period in children's education since at least the start of the Second World War". The age group of children involved in this research partake (pre-pandemic) in an average of 5 hours of physical activity (PA) as the class is free flowing, meaning most of the day consists of child-initiated learning when the children can be physical active during their learning. Therefore, this age phase may have missed up to a total of 250 hours of school based PA as a result of the closures and social isolation periods. SickKids (2020) explicitly link PA and PD, they elucidate that frequent PA is a crucial factor in the development of a child's core movement abilities. Throughout the pandemic, several paediatric agencies such as UNICEF (nd) and Healthy Children (nd) stressed the need for outdoor and indoor play to increase PA in the hope of preventing the inevitable. The lack of movement opportunities and PA due to pandemic could have serious effects for children's PD. Dunton *et al.* (2020) recommended that systematic policy interventions aimed at boosting PA should be implemented over the coming year in the hope of clawing back the significant decreases in PA which has already been described as 'hard to reverse' by Oxtoby (2021).

Ofsted (2020) also outlined in their interview findings that because of worries regarding cross contamination, that fine motor and gross motor skill opportunities had been limited, even when children were allowed to return to preschool and school settings. Playdough used for fine motor skill development through moulding had been eliminated or severely reduced in practice. Also dressing-up boxes and soft toys were substituted with toys that were washable/wipe-able. Ofsted (2022) also highlighted that children had restricted opportunities to participate in outdoor play during lockdown yet the focus of providers was for some to provide more opportunities for these children to develop their gross motor skills outside, whilst others were concentrating more on fine motor skills such as use of cutlery, believing that these skills had suffered the most. Ofsted (2022) also asked participants if they thought the children's learning and development had progressed, declined or remained the same in PD alongside other areas. 19% of participants said fallen behind, 58% said stayed the same, 16% believed they had improved and 7% were unsure. With such wide variation of answers, this posed the research question of *what is the impact of the pandemic on children's PD* linked to the specific ELG of the EYFS (DfE, 2021) of young children, within the case study school?

The case study research setting and data collection

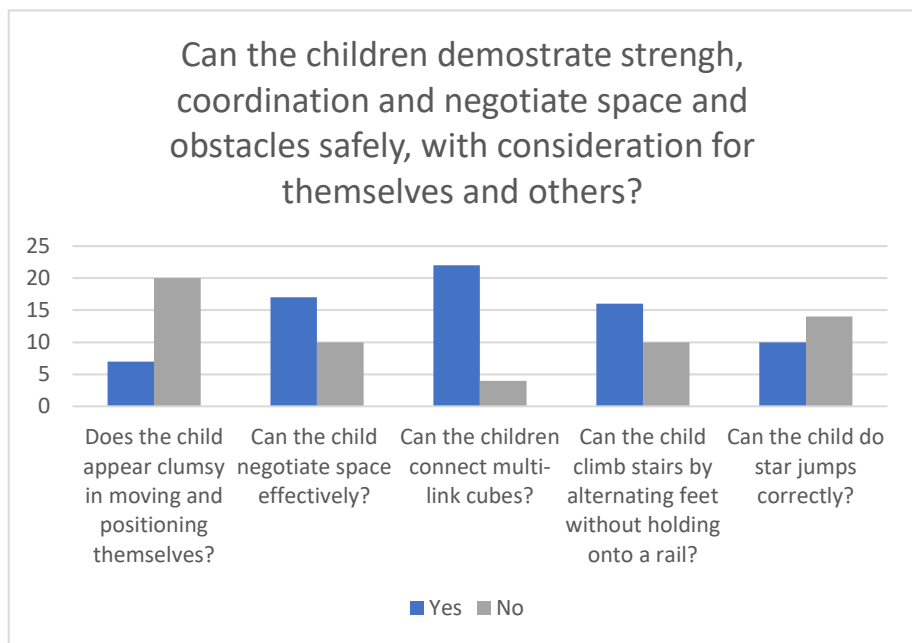
This research was carried out in a controlled Church of England rural village primary school located in the Southeast of England. In the schools' reception class, of 28 children, 13 were four years old and 15 were five years old at the time the research was undertaken. It was a small one form entry school with a total of 202 students from a diverse environment including social housing and gated communities. The school had higher than national (12.2%) average number of children on the SEN register with 18.32% of the children on the SEN register. Of the 28 students involved in the research, six (21.43%) of them are on the SEN register. However, none of them have PD as their primary need (PN) area, four out of the six (66.67%) have cognition and learning as their PN and two (33.33%) have communication and interaction as their PN. This research is based entirely on observations as is normal practice within reception age based, and all the class were involved, a total of 27 children (one child was away during the data collection time), and the observations were completed by the same reception class teacher. Observation is an integral and

common place aspect of the teacher’s work as it helps them comprehend young children as learners, learning more about them as individuals (Drake, 2006) and assessing their developmental levels (Forman and Hall, 2005). Structured observation sheets focusing on fine and gross motor skills early learning goals (DfE, 2021a) were developed and based on the age-related PD requirements of the Development Matters document (DfE, 2021b).

Results

Overall, the results indicate that many children in this sample are behind the expected age-related levels of development based on ELGs.

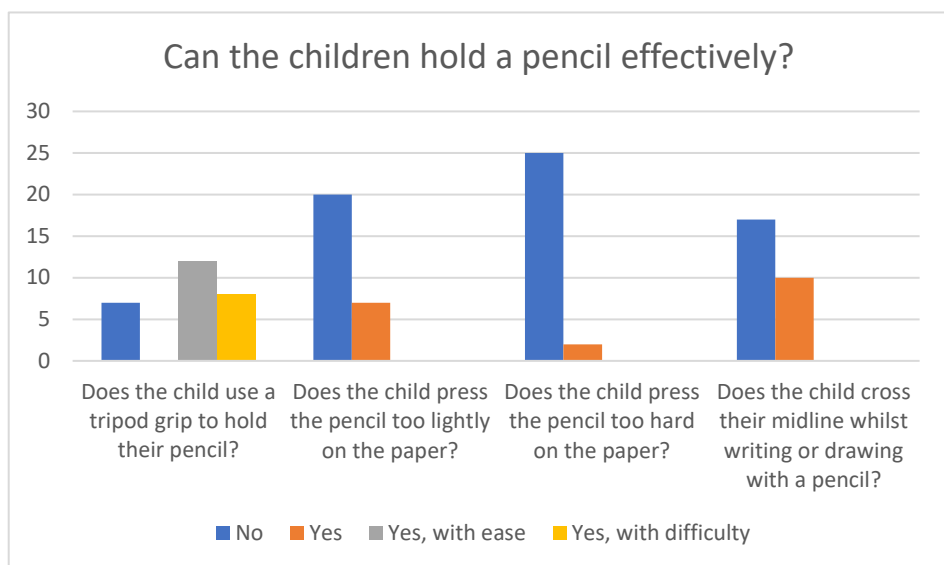
Gross motor skills



7 children appeared to be clumsy in moving and positioning and 10 children struggled to negotiate space effectively. 4 out of the 26 children struggled to demonstrate strength in their fine motor skills and 10 struggled to demonstrate strength in their gross motor skills. The children struggled in particular to co-ordinate both their arms and legs. When balance was considered, all the children could walk in a straight line with ease, yet one legged balance was when the children struggled with 19 of the children not able too, balance on one leg for 10 seconds, and

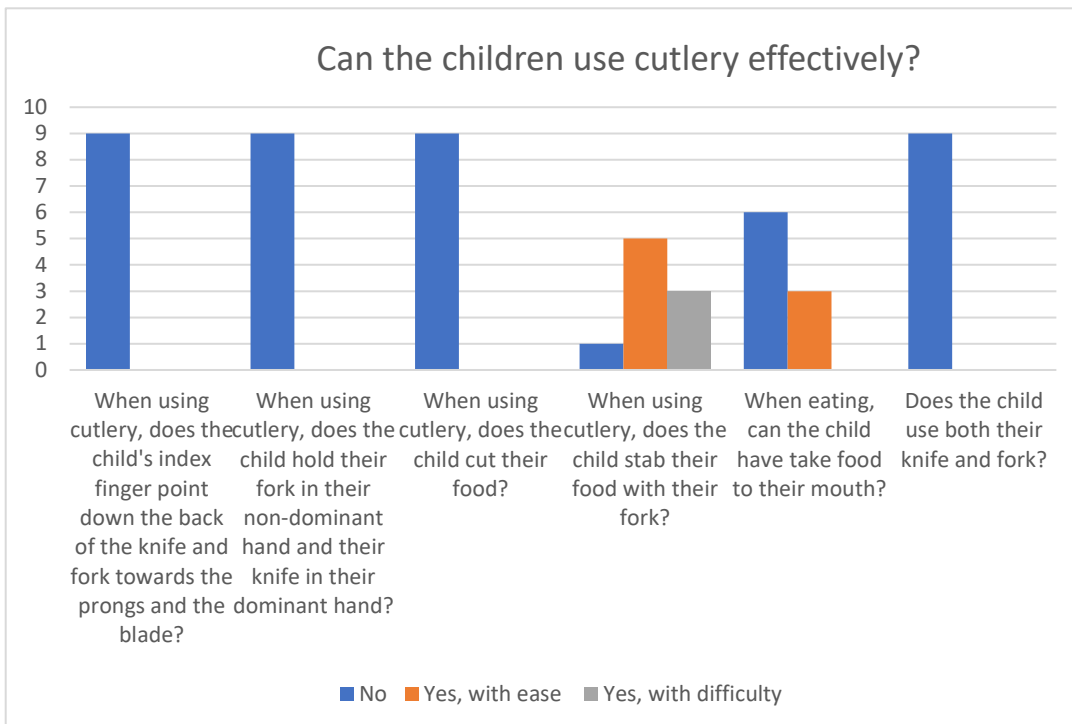
they struggled significantly to hop forwards four times or in a straight line.

Fine motor skills



Although 12 children hold their pencil using a tripod grip with ease, there are still 15 children who cannot use the tripod grip or struggle to do so. Most children, 18, use the correct pencil pressure whilst 7 press too lightly and 2 press a little too hard on the paper. When children do press too hard it was noted that children uses fist grips to hold pencil and consequently puts a lot more pressure onto the page than a child using the tripod grip. All children

struggled to use scissors. When focusing on drawing, 9 of the children, haven’t moved on from the scribbling stage.



Only 9 of the children have school dinners so only these were observed for how they used cutlery effectively. 8 out of the 9 children did consistently use their fork to 'stab' their food. Yet 3 struggled to take the food to their mouth having stabbed it, indicating poor levels of hand-eye coordination.

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Discussion

This study is novel as it is one of the first to identify the aspects of PD that the case study children are behind in, in relation to the ELGs due to the COVID-19 pandemic. The data showed that many children are not meeting the PD expectations. The results support the earlier findings of Dunton (2020) who explained that the pandemic significantly decreased children's opportunities for participation in PA. As stated previously, the school where this research was carried out were from low-income families, and Snyder *et al.* (2022) identified that these types of families may not have had movement opportunities during the lockdown due to lack of outdoor play and PA provision due to many of the children living in high-rise flats.

To rectify the children's difficulties with PD there is a need to form a targeted action plan to address the specific PD areas which the children in their class are lacking as they continue into year 1 and beyond, as well as checking the new reception class when they arrive in September to support them from the children's PD. This is planned to be undertaken by incorporating an increased number of activities which require the children to use both their fine and gross motor skills. For example, more activities that require the children to use small tools effectively (PD ELG 4, 5 and 6), children can participate in a strategically developed obstacle course which promotes energetic movement, strength, balance, coordination and spatial awareness (PD ELG 1, 2, 3) and to continue to focus on more self-sufficient skills, such as cutlery use.

However, to ensure change can be made within the case study school, it is important to reflect upon Ofsted's (2022) earlier findings regarding the large percentage (74%) of educators, parents and childcare providers who believed that children's PD had either improved or stayed the same throughout the pandemic. It will be incredibly hard to tackle this pressing issue of a decrease in PD levels nationally if the key adults in a child's life are not aware of the implications that the pandemic has had on the PD of these children. It is recommended to others that children's PD levels are assessed through detailed observations and then targeted support plans are implemented (as will be in the case study school) as the children transition into key stage 1 to ensure they continue to develop their fine and gross motor skills.

Author Bio

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