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How does an intervention strategy around physical activity and movement influence parent/carers' perceptions of early childhood movement play?

Helen Battelley

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Abstract

Broad physical play experiences can make a unique contribution to children's physical and emotional well-being. Parents' attitudes and values around physical activity (PA) and movement play have a direct influence on a child's salutogenic profile (Froebel 1907; Vygotsky, 1979; Dewey, 1986; Roberts, 2007; Brooks, 2011; Brolin et al, 2018; WHO 2019). Parents and carers provide the most consistent educational influence in a child's life and through observations of daily family life, children will imitate those actions and responses creating a cyclical intergeneration of behaviours. Although it is never that simple, as multi-faceted human beings, living in a complex society we can be nudged into behaviours and through increased knowledge and self-efficacy we can reroute our perspectives and beliefs (Thaler and Sunstein, 2008). Prior to the pandemic, statistics for early childhood physical inactivity and obesity were high. In 2018, 91% of UK two to four years olds were not meeting the recommended levels of PA (British Heart Foundation Research Centre, 2018) and 14% of toddlers were recognised as obese (National Child Measurement Programme, 2019/2020). This study explores families' perceptions of early childhood physical activity and movement play and whether Covid-19 contributed to a further decline in healthy family behaviours. An intervention was created using quantitative and qualitative data gathered from an online family questionnaire and applied against a self-developed PRISM framework. The data demonstrated many factors influence active family behaviours. Positive early childhood physical play experiences will impact on future engagement and perceptions of physical activity. Despite the paucity of data, findings indicated children's levels of physical activity and movement play were impacted by Covid-19 and the subsequent environmental and societal restrictions. Implications of the pandemic on this research study are discussed throughout.

Keywords: movement, physical activity, play, parent perceptions, intervention

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ABSTRACT

Broad physical play experiences can make a unique contribution to children's physical and emotional well-being. Parents' attitudes and values around physical activity (PA) and movement play have a direct influence on a child's salutogenic profile (Froebel 1907; Vygotsky, 1979; Dewey, 1986; Roberts, 2007; Brooks, 2011; Brolin et al, 2018; WHO 2019). Parents and carers provide the most consistent educational influence in a child's life and through observations of daily family life, children will imitate those actions and responses creating a cyclical intergeneration of behaviours. Although it is never that simple, as multi-faceted human beings, living in a complex society we can be nudged into behaviours and through increased knowledge and self-efficacy we can reroute our perspectives and beliefs (Thaler and Sunstein, 2008).

Prior to the pandemic, statistics for early childhood physical inactivity and obesity were high. In 2018, 91% of UK two to four years olds were not meeting the recommended levels of PA (British Heart Foundation Research Centre, 2018) and 14% of toddlers were recognised as obese (National Child Measurement Programme, 2019/2020). This study explores families' perceptions of early childhood physical activity and movement play and whether Covid-19 contributed to a further decline in healthy family behaviours. An intervention was created using quantitative and qualitative data gathered from an online family questionnaire and applied against a self-developed PRISM framework. The data demonstrated many factors influence active family behaviours. Positive early childhood physical play experiences will impact on future engagement and perceptions of physical activity.

Despite the paucity of data, findings indicated children's levels of physical activity and movement play were impacted by Covid-19 and the subsequent environmental and societal restrictions. Implications of the pandemic on this research study are discussed throughout.

INTRODUCTION

Movement is our first language, our first form of communication with the outside world. Movement appears to lose value as we grow older when time is dedicated to educating the brain over the body. As educators and stakeholders in children's future, we must acknowledge the brain and body are inextricably linked and use somatic learning approaches to engage learners (Malaguzzi, 1996; Dewey, 1981; Merleau-Ponty, 1962). This communication with the outside world with our body as central to the process aligns with Reggio Emilia's 'One Hundred Languages of Children' (Malaguzzi, 1996), Merleau-Ponty's (1962) focus on the body playing a central role in all learning as the 'knowing system' and Bandura's (1977) social learning theory. Physical activity and movement play are positively associated with a healthy body and mind, and improved motor and cognitive development (Bloom, 1985; Sattelman and Ratey, 2009; Best,

2010; Whitebread, 2014). Movement is at the core of early childhood as children learn to navigate space and develop their sense of self. Bursts of energy, fidgeting behaviour, and darting around are synonymous with being a young child. Recent studies suggest an attrition of activity levels in children, the Generation Inactive Report (UK Active, 2019) claimed this generation of children to be the least active since records began. Since the report in 2019, 2020 arrived along with a global pandemic, Covid-19. All behaviour and experiences turned on their head, presenting a paradigm shift, from our normative sociable selves to lockdown in our homes for much of the year (The Sutton Trust, 2020, UNICEF, 2020). This study explored whether the pandemic increased inactivity levels or provided an opportunity to focus on healthy family behaviours.

Upon initiating this research, I reflected on my own childhood, beliefs, and passion. I have been active all my life, as have my three sons, it has been interesting to reframe my positionality and explore my beliefs around the area of physical activity and health behaviours (Musgrave, 2020). My mother was disabled yet extremely 'able' and would always embark on physical and personal challenges. Lulling around was never an option, life had to be 'grabbed by the horns' and every ounce of enjoyment and experience squeezed out. It is not surprising I would place such emphasis on physical activity having such a forthright, inspirational, and determined parent (Brookfield, 1995). There also lies acknowledgement in the impact of being physically able around those who are not physically equipped in the same way, in making one maximise the opportunities available.

Undertaking research during a global pandemic presented a series of challenges, as I will discuss in the next few chapters, it also enabled me to ponder on specific elements of my research relative to and characterised by Covid-19 restrictions. Social distancing rules prevented touch and contact with others, in movement play and physical activity, touch is an essential part of the process. Our bodies are enveloped by the organ of touch, the skin and sensory receptors are everywhere, enabling us to build a complex picture of the world around us. If we remove peers, enabling environments, the exploration of artefacts, and human physical interaction are we not losing our connection with the world? Adapting the research to incorporate families' responses to the pandemic was valuable as parent's attitudes and behaviours correlate with levels of well-being (Charlwood and Steele, 2004; Birth to 5 matters, 2021).

During my last two years of study, I explored two areas of action research in early childhood movement practice; **'Teachers' perceptions of physical activity (PA) and physical development (PD) practice'**, and **'What impact does integrating a motor-sensory programme with reception aged children have on teachers' practice and future provision?'**.

Both studies identified the need for further research into the role of the parent/carer as a promoter/educator for physical and movement play, highlighting the participation of families as an essential dimension to this educational perspective. Early childhood habits track into later life; therefore, early intervention is essential to providing a sustainable approach and lifelong physical activity (Powell, 2019; Children's Commissioner, 2020; Bailey et al, 2021). My previous research projects focused on reception children and presented questions around the time before schooling and what levels and types of physical play were being accessed within the home learning environment (HLE), therefore this social research study will specifically focus on families with children aged between three and four years.

This case study explores the perceptions of physical activity held by families and whether offering an intervention/workshop as a provocation to recall parents' reflections of their own playful memories and childhood experiences of movement play, can encourage more healthy active family behaviours. Our values and perspectives are formed during periods of our own history, using artefacts and tools as a provocation can deepen our understanding of people's perspectives and worldly values (Freire, 1996; Brown and Perkins, 2019). Parenting is framed by our attitudes, societal perceptions, and childhood experiences and these are central to our concept of identity and belonging (Rogoff, 2003; Pascal and Bertram, 2012; Fernandez-Llames and Lepofsky, 2019). It is for this reason drawing on parents' perceptions is a valuable construct to my overall research on young children's physical activity levels (Sylvia et al, 2014).

My research questions to frame this case study are:

- What perceptions of movement play and PA do parents/carers currently hold?
- What does the literature tell us about young children's physical activity levels within the HLE? How are people enticed, encouraged, nudged into particular practices of healthy living?
- Will parents' reflections on their childhood provide an insight into their child's physical activity?
- How has Covid-19 impacted physical activity and play accessible to families?

My keyword search for the BCU library database literature review consisted of early childhood physical activity, play in the home (learning environment), family's perceptions of play, physical activity perceptions, salutogenic, early childhood covid-19, family interventions, and motivation in early childhood. Certain criteria were applied to these searches: the location, year of publication, relevance, and accessibility.

Due to the pandemic, all university tutorials were conducted via an online portal, Zoom. These sessions were helpful and offered some level of support but were no comparison to the previous two years of study and community of practice available to students (Lave and Wenger, 1991).

Below is a table of literature that framed my research and research questions (Table 1).

Theoretical influences	Csikszentmihalyi (1990) Experiential (Kolb, 1984) Centrality of play (Froebel, 1906) The nature of education (Dewey, 1981) Zone of proximal development (Vygotsky, 1978) Social Learning Theory (Bandura, 1977) Companiable Learning (Roberts, 2007)
Conceptual influences	Salutogenesis (Antonovsky, 1979) Appreciative Inquiry (Webb-Day, Holladay, 2012) Affordance (Gibson, 1982) Adaptive Competence (Sternberg, 2014) Self-determination (Ryan and Deci, 2018)
Methodological influences	Autobiographical lens (Brookfield, 1995) Reflexivity (Sultana, 2007) Trustworthiness (Shenton, 2004)

Table 1.

Literature review

Physical activity levels, health promotion, and social contexts are at the core of this research topic and drawing on work from both Dewey (1981) and Antonovsky (1979) in identifying health behaviour as a sequence or chain of activities, embedded within social practices will help to frame this praxeological research.

The objective of this research is to construct an image of the activities and play within the home learning environment (HLE) experienced over the past year to develop a workshop focused on experiential learning (Kolb, 1984). Kolb believes “learning is the process whereby knowledge is created through the transformation of experience” (Kolb, 1984, p. 38). Covid-19 has provided a further element of exploration,

as a society we are experiencing a transformation within our socio-cultural contexts. Experiential learning is key to transformational change, practical 'hands-on' experiences underpinned with theory and increased knowledge can strongly influence previously held perceptions (Dewey, 1983; Kolb, 1984; Leigh, 2019; Bailey et al, 2021).

Drawing on the literature to frame my research questions

The scope of my literature review extended to parents and families perceptions of play and active behaviours, physical activity in early childhood, interventions in early childhood physical activity, family play experiences within the home, how to engage and motivate respondents, social practices, creative and innovative methods in early childhood research, early childhood physical development and family's experiences of Covid-19. I only included recently published, peer-reviewed, English-based literature as this was the perspective I was pursuing. Particularly within the field of Covid-19 experiences as there were significant geographical changes in restrictions. Some seminal journals from other countries were included concerning activity behaviours and methodologies.

What perceptions of movement play and PA do parents/carers currently hold?

The response to this question was formulated based on the results of the four stages of research methods within the case study. The details of the specific methods used can be found on page 24.

Parents and carers play a pivotal role in influencing early behaviours which is why working with them at the earliest opportunity is essential for future childhood development.

Reaching motor development milestones in infancy can often be associated with increased movement play in the home learning environment. Many families create dynamic environments and apparatus to afford children the capacity to crawl or walk. Encouragement and nudging can be beneficial in the later years of early childhood, but in infancy affording infants with an environment to have agency over their play and movement will be more favourable in self-determination and mastery (Pikler, 2006; Zhang, 2019; Adolph and Hoch, 2019; Duncombe and Preedy, 2020). Although, some studies have identified when infants reach gross motor milestones before their peers can positively affect their future cognitive skills and enhance motor proficiency (Ghassabian et al, 2017).

Little information is directly available to families with young children, intermittent health visitor checks that would normally provide guidance and support to families, have reduced over the past 11 years (Perkins and DeSousa, 2018; Reed and Parish, 2021). If families are not accessing childcare there is less support or checks available to the child. Yet if we delve into both the statutory and non-statutory material available to early childhood educators around childhood development there is a plethora of information to dissect;

Early years Foundation Stage Profile (DfE,2021), Development Matters (DfE, 2021), Birth to 5 Matters (Early Education, 2021) to mention a few. However, for parents, there is no such guidance or support. If your child does not attend an early childhood setting, they may remain 'off the grid' until school age. The NHS Healthy Child Programme (2009) is 12 years old and has not been updated since the change in government. It still lists SureStart centres as pathways to family support. At its peak in 2010, there were 3,631 Surestart centres dropping to only 1,878 in 2017 (Sammons et al, 2015). I predict these numbers have further decreased in the last four years. The Surestart programme was believed to have reduced health inequalities in young children by half. In a briefing by Powell (2019) the concept of salutogenesis was mentioned by Skidmore as a secure component for the Healthy Child Programme as he stated " ..the Government will continue to work with partners, child development experts and professional organisations representing health visitors to ensure that the healthy child programme remains an effective and evidence-based framework providing good health, wellbeing and resilience for every child." (Powell, 2019, P. 21). This is of course positive news for physical health and salutogenic factors for families with young children how and when this will be initialised remains to be seen.

What does the literature tell us about young children's physical activity levels within the HLE?

Young children spend much of their day either at home or in an early years setting, both environments were found to contribute to increased levels of sedentary behaviour (Määttä et al, 2015; Carson et al, 2016; ISPAH 2018; Bailey et al, 2021). Tonge et al (2017) identified many factors influence the levels of PA engagement in young children, parental views being a major influencer.

For over 10 years the daily recommendation for physical activity for children under 5 years of age, has been set at 180 minutes, yet it is likely many educators are still unaware of this recommendation. Findings in the literature suggest successful dissemination strategies are of extreme importance to all stakeholders and will impact salutogenic choices and behaviours in later life (CMO 2011; WHO 2019; Williamson, 2019; Battelley, 2020; Duncombe and Preedy, 2020; Bailey et al, 2021). In 2019 the World Health Organization increased the level of cardio, high impact (MVPA) minutes within the daily 180 minutes for under 5's, from 30 minutes to 60 minutes, highlighting their concern over the levels and quality of physical activity being undertaken in early childhood. It is worth remembering this data was gathered before COVID-19 and consideration must be given to the complexity of each child's lockdown experience (The Sutton Trust, 2020; Graber, 2020; UNICEF, 2020).

The literature review indicated some ambiguity around the topic of physical activity as some educators believed physical activity should be covered at home, whereas physical development, especially fine motor control should be taught within the setting/school (Wilke et al, 2013; Doherty and Brennen, 2013; Chalke,

2015; Battelley, 2020). This demonstrates a further need for messaging and training within this area for all stakeholders. In the revised Early Years Framework self-care moved from a component of physical development to the area of personal, social and emotional development (DfE, 2021). The change has been met with some hostility among educators, however, I feel it may be necessary to take a step further and include physical activity as a subset of physical development, rather than as separate entities, gross and fine motor skills. Sternberg's (2004) empirical work on adaptive competence extrapolates the ability to adjust learnt skills and behaviours flexibly, adapting to the environment. His preceding paper about adaptive competence draws on the need for cultural psychology within research and highlights the four main points as outlined below (Sternberg, 2014) (Table 2).

People in diverse cultures mean different things by intelligence.
Measurement of intelligence requires assessments that properly assess cultural adaptive demands.
Students can learn better when taught in ways that leverage their cultural strengths.
Measurements of intelligence should be accompanied by assessments of health.
Cultural approaches to understanding development are necessary, not just nice.

Table 2.

The third point is particularly interesting to this research, the relevance of assessments of health alongside measures of intelligence. Drawing on the other points we conclude that cultural adaptations will also impede or promote health factors. Educating educators is not enough, messaging to families and to communities must promote healthy relationships or as Roberts (2007) states a "diagogy" of wellbeing, where children learn with others for mutual well-being.

In the recently published Birth to 5 Matters non-statutory guidance (Early Education, 2021) the parents as partners section offers both practical and theoretical guidance for educators to support each child's learning journey through the acknowledged support of parents and carers. The section on promoting voice and inclusion highlights inclusion as a 'process of identifying, understanding and breaking down barriers to participation and belonging' but does not mention listening to the parents' voice, only that of the child. If we know children's sense of belonging and engagement is wholly connected to their interactions and early experiences with parents, parents' voices and values should be paramount.

Experts have suggested the role of the home learning environment has become ever more important within the past year of living in a global pandemic, COVID 19 (Powell, 2020; Pascal et al, 2020; Bingham et al, 2021). The Sutton Trust report (2020) highlighted concern particularly in children's physical activity/physical development provision during the lockdown in March 2020. The development of 'the social self' is founded in early experiences in one's environment – in the case of lockdown, primarily the family home (Bronfenbrenner 1979; Rogoff 2003). Bronfenbrenner (1979) acknowledged this by suggesting that human development is not linear but dyadic, when one person undergoes a transformational change, it will impact on the development of the other. In this case, we can apply this to parents and their relationship with their child(ren) living in lockdown. Significantly reduced access to peer groups and resources made the role of the adult in the home ever more significant and the **primary influence** and **educator** in these formative years (Graber et al, 2020). In November 2020, the Ofsted report, Covid-19 series cited children had limited access to parks and play spaces, however, a report by Leeds Trinity University claimed in general families were more active and their health, fitness, and well-being had improved (Clayton et al, 2020). The Leeds study involved 60 British families, from a diverse set of cultures, religions, and socioeconomic backgrounds. Currently, in the UK there are over 19.2 million families (Office for National Statistics, 2019), this 'snapshot' may not provide an accurate analysis of the overall picture in the UK. Consideration and further investigation into where and how these activities took place would be a valuable contribution to the research.

Duncombe and Preedy's (2020) study highlighted the importance of further exploration into why levels of early childhood obesity were increasing and raised concern over parents' understanding of physical activity within the home learning environment (HLE) and families' perspectives requiring further exploration. Parents and other household members are the instinctive and cultural educators to a child's learning journey. Parental support and the level of importance and attitudes parents hold towards a child's learning can instil motivation, curiosity, and gains in a child's learning (Clarke et al, 2017). Sylva (2020) further reiterated this point

"..the pre-school home learning environment is the most powerful of all", BECERA, February 2020.

With the rise of digital technology and restricted social environments, screens have become ubiquitous in family life, often being prioritised over physical activity choices (Määttä et al, 2015; Bailey et al, 2021). Digital encounters cannot offer the same human connectedness as face-to-face experiences with our peers and could lead to a further increase in mental health conditions (Powell, 2019). Prolonged periods of screen time of more than two hours, for children aged under 5 years, can be detrimental to many areas of development including health and education, yet research has identified by the time the average child is 8 years old they have spent 1 year (24 hours a day) on screens (WHO, 2019; Jones and Okley, 2020).

Contrastingly spending time immersed in the natural environment with those important to us will promote physical and emotional well-being and develop a sense of self and others. Having this time taken from us can have a negative influence on our positivity and culture of peace (Broadfoot and Pascal, 2020; NHS 2020).

The recent International Early Learning and Child Well-Being Study (DfE, 2020) produced some interesting data on the relationship between PD and socioeconomic status showing an 8–11-month disadvantage for those living in poverty or areas of deprivation (The Sutton Trust, 2020). Gender differences were also noted, girls were approximately 9 months ahead of boys in physical development. This is concerning for families with young boys in areas of deprivation with a potential gap of 18 months from their fellow peers. In the past year many families have faced financial due to lockdown, increasing the number of those living in poverty (The Sutton Trust, 2020; Ofsted, 2020; UNICEF, 2020). This also demonstrates an interesting dichotomy between physical activity and physical development, as seminal research into physical activity levels frequently presents boys as more active than girls (UK Active, 2018; Foulkes et al, 2018; Sport England, 2019; Bingham et al, 2021). This ambiguity was present in my last research study where many educators were unaware of the difference between PA and PD. This lack of knowledge base may impact on the planning and provision on offer to those children in their care. The above contrasting evidence establishes we know very little about children's physical activity levels and family lifestyle choices and it raises questions on the efficacy of current guidelines and interventions. The situation is complex due to such diversity of families, their lives, and social dynamics.

How are people enticed, encouraged, nudged into particular practices of healthy living?

Children learn by using their bodies and movement always occurs in a physical environment (Adolph and Hoch, 2019). This means that staying inactive or sedentary is not natural behaviour for young children and the space available within the learning environment directs the play that happens (Manners, 2020; Bailey et al, 2021). Furthermore, the embodiment of motor development is enculturated whereby social and cultural experiences shape motor behaviours, these cultural experiences in the HLE often cascade through generations (Merleau-Ponty, 1945; Bunker, 1991; Adolph and Hoch, 2019;). Covid-19 presented barriers to families and communities, stunting this avenue of experience (Pannekoek et al, 2013; Skeels, 2021). The true picture of childhood activity levels during the global pandemic may never be revealed with academically framed 'catch-up measures' being a primary government focus for young children (DfE, 2021).

In extreme circumstances, it is often the most vulnerable communities who fall victim to further poverty and hardship (The Sutton Trust, 2020; UNICEF, 2020). The global pandemic may harbour profound detriment to children's health, well-being and physical activity levels (Graber, 2020). A multi-agency,

interdisciplinary, approach and offering practical guidance to families around healthy behaviours could enhance family resilience and community cohesion as life experiences, obstacles and habits can mould health practices and people's daily health choices (salutogenesis) (Maivorsdotter and Andersson, 2020; Mantovani et al, 2021; Bailey et al, 2021). Dissemination of physical activity campaigns and practical workshops to provide a positive impact on physical activity and movement play from birth could open a sustainable approach to healthification (Tonge et al, 2017). Regardless of the strong justification for healthy behaviours, parental engagement and collaboration in learning potential have long been a challenge seen across both the education and sporting arenas (Education Endowment Foundation, 2020; ISPAH 2020). Recalibrating messaging and appropriate means to entice families to engage are fundamental to the process of a learning collaboration and should be positively framed to maximise buy-in potential (Williamson et al, 2019; Early Endowment Foundation, 2019; Duncombe and Preedy, 2020). Evaluating affordance potential within and around the home environment could provide a lens into impediments or opportunities for physical/movement play, making a particular action possible or impossible (Gibson, 1982; Bjørgen, 2016).

Will parents' reflections on their childhood provide an insight into their child's physical play?

It was insightful to explore the role children have within the home learning environment (HLE) comparatively to those of their parents. A study by Tremblay et al (2017) exposed children are no longer 'active participants of the house', involved in universal chores and household roles. The culture of 'helping around the home' may provide adequate opportunity for physical activity, however, a canopy movement experience, blending family chores with family physical play and movement, may provide a broader scope of learning outcomes pertaining to the eighteenth-century pedagogical movement whereby arts and sensory play activities were alongside chores and storytelling reflecting on Rousseau and Froebel' learning theories (Roberts, 2007). Participatory pedagogy with parental involvement concerns the participation of family's voices and life experiences alongside adult educators to scaffold the learning of play-based experiences happening within the home (Vygotsky, 1979). Within this context, families may feel more assertive and become a collaborator and sculptor within their child's learning pertaining to physical and movement play as freedom with guidance (Freire, 1996; Rogoff, 1990; Nolan and Raban, 2015; Formosinho and Passos, 2019).

COVID-19, a global pandemic has impacted on early childhood experiences with the closure of play parks, leisure centres, swimming pools, extracurricular activities, schools (except for keyworker and vulnerable children) museums, arts centres, and sports clubs. Early childhood settings remained open for most of the year, but due to social distancing measures families faced reduced hours of provision resulting in prolonged periods in the home. Many families relied on additional care from two or occasionally three settings (Pascal

and Bertram, 2021). Government safety and social distancing restrictions were still in force eighteen months after the first cases were noticed in the UK. Families faced significant challenges during lockdown particularly those from disadvantaged and low-income households (UNICEF, 2020). Job losses, limited childcare, working from home, home-schooling, conflated anxiety levels and possible trauma associated with loss, overall contributed to increased mental health issues (Graber et al, 2020; UNICEF, 2020). These anxieties may affect every family member, including young children (Howes et al, 2020; Pascal and Bertram, 2021). A report by UNICEF (2020) revealed children living in poverty are more prone to obesity and have low social skills. Poverty envelops the opportunities and experiences available to children and this report identifies this confirming the predisposition into adulthood. The need for further research into this area is paramount and underpins why this research project is valuable and pertinent.

Research Design and Methodology

The research questions below guided the methods chosen for my research design.

- 1) What perceptions of movement play and PA do parents/carers currently hold?
- 2) What does the literature tell us about young children's physical activity levels within the HLE?
- 3) How are people enticed, encouraged, nudged into particular practices of healthy living?
- 4) Will parents' reflections on their childhood provide an insight into their child's physical play?
- 5) How has Covid-19 impacted physical activity and play accessible to families?

Introduction

This chapter will outline the research design, methodology and methods used and reasoning behind these choices while applying ethical considerations throughout the process. The content was formulated around the research questions and an analytical review of the literature.

This interpretivist case study combined a flexible mixed-methods approach, drawing on both quantitative and qualitative methodology using ethnographic techniques (Stake, 1994). Most research around physical activity draws on quantitative assessment tools involving pedometers and accelerometers to assess steps and activity levels. Considering the research on developmentally appropriate practice, such an approach would not be the most effective or appropriate in early childhood and may breach ethical guidelines (Copple and Bredekamp, 2009). Child observations and pedagogical discussions with families provide a more appropriate lens to uncover the influencing behaviours and attitudes to further investigate the salutogenic responses and social influences of movement play and physical activity (Bandura, 1977; Vygotsky, 1978 Bronfenbrenner, 1979; Pascal and Bertram, 2012). This data can only be gathered using

qualitative methods and exploring perceptions of those stakeholders, predominantly family members, educators, and peers (Overton, 2015).

The interpretivist paradigm sits well within my methods of research due to the research design being based around gathering qualitative data with people, where together we interact and form an interpretation of the varied childhood experiences and realities, we all hold (Schwandt, 2007; McChesney and Aldridge, 2019). The quantitative method provides a lens into the participants' location, gender, race and age demographics, this information may not produce commonalities around the social-cultural contexts in which people live, but it offers another net gathering tool to analyse the data. This social constructionism paradigm accesses the diverse voices of those with young children living in multicultural, urban areas of London, using their voices and experiences to construct a view of different realities (Denzin and Lincoln, 2011; Robson, 2011; Robson and McCarter, 2016). I drew on a range of methods for different aspects of the research project, strengthening the robustness of my study by the opportunity to triangulate the data (Denzin, 1998). One research method alone would not be sufficient to provide answers to my research questions especially considering the changing societal impact of Covid-19.

I created a self-developed PRISM scale (Figure 1) to enable robustness and accountability within my research design.

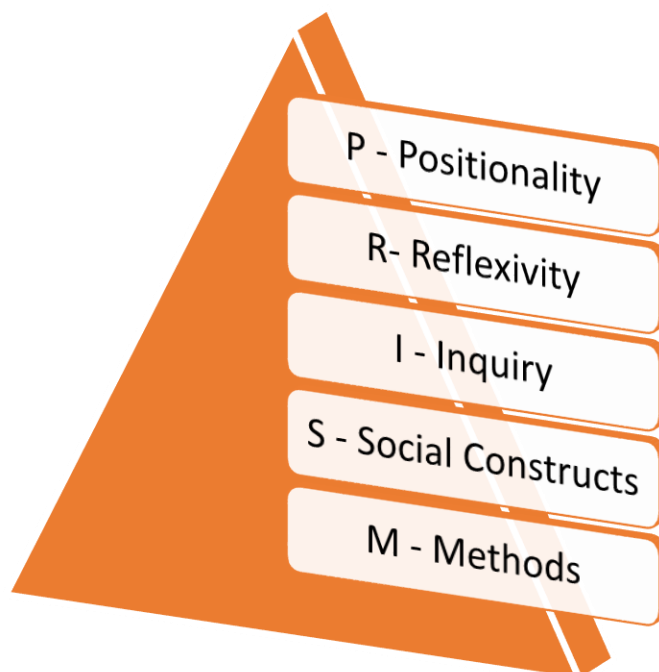


Figure 1.

P – Positionality – Be conscious of my positionality throughout the process

R – Reflexivity – Why does it matter to me? Use all 4 lenses

I – Inquiry – Appreciative Inquiry and Positive Psychology methodology

S – Social constructs – exploring demographics, social contexts, environments

M- Methods – Which methods are suitable and well-justified for data collection?

I created the PRISM scale not only as an anagram but also for the definition. A prism can be defined in two ways: a solid shape with parallel ends and equal sides, and a transparent object which allows light to pass through and transfer into rainbow colours. I see this as a metaphor around the parallels of learning environments: the interactions of families alongside educators and subsequently the light representing the illumination of learning and learning processes within early childhood. Both define the process of creating the intervention, ensuring all PRISM strands are applied equally and light, illuminating the truth, is applied to provide a wealth of colourful data.

Although this case study is of an interpretivist paradigm the research utilised an appreciative inquiry (AI) focus (Seligman and Csikszentmihalyi, 2000). AI is often used in action-research methodology rather than case-study research due to its nature of positive reflection informing future change. Adopting an appreciative inquiry and positive psychology methodology with the respondents assumes a positive approach can lead to positive outcomes. The acquisition of learning for both adults and children is most efficacious when the process illuminates feelings of positivity and self-concept (Roberts, 2007; Whitney and Trosten-Bloom, 2010; Loon and Bell, 2016). Research indicates a positive approach within an intervention can leave respondents feeling energised and positive for longer, this can impact on future potential and possibilities (Webb Day and Holladay, 2012). This aligns with the salutogenic profile of promoting positive health practices over a negative, deficit, pathogenic approach. Using positivity can promote transformational change, whereby using a positive inquiry generates new ways of seeing and experiencing, a potential paradigm shift in beliefs and practices. Appreciative inquiry appears to benefit respondents and potential 'buy in'. However, there is a paucity of longitudinal research available, could the response be short-lived, will families return to their previously held beliefs and behaviours?

As an early childhood physical activity educator, I have a keen interest in this area of research, I must reflect on my values and principles during every stage of the research process as Lyndon (2021) states "there is no such thing as position free research" (Lyndon, BECERA, 2021).

To delve deeper into my values I adopted a reflexive approach. Reflexivity allows us to be self-aware of our reasons and motivations for conducting such research. Reviewing the literature around this subject has enabled me to reflect on my personal stance and projections and to step back and reconsider my positionality (Kirby and McKenna, 1989). Musgrave (2020) mentions applying Brookfield's (1995) autobiographical lens when conducting research with children and believes it invaluable to challenge one's opinions and views as an ethical researcher (Brown and Perkins, 2019).

The four autobiographical lenses I adopted to construct my reflexive perspectives were teacher, parent, researcher and daughter. This approach acknowledged my personal and professional interests within my area of research to remove any personal biases and to explore the true foundations of my perceptions and values (Sultana, 2007). One must apply a balance when exploring personal and professional life events to expose points of curiosity relating to the research and not become too introspective (Bourdieu, 1998). As researchers, our interpretation and analysis of our findings can be influenced by our personal culture, beliefs, and situations, our axiology. As mentioned earlier, this bias is inevitable and only compromised through reflection and analytic exposure of a reflective journal. Throughout the research, my reflective journal was used as an aide memoir to reflect on my axiology (Tripp, 1993; Ortlipp, 2008). Applying the four lenses to my journaling assisted with uncovering critical incidents and associated personal feelings. This enabled me to remain empathetic to the research and the respondents.

Sample

Many researchers identified urban areas and ethnic minority families seeing the biggest impact during lockdown (The Sutton Trust, 2020; UNICEF, 2020). Conducting research based in a rural locality would not provide the core data, as outlined in the literature review. I contacted the director of a cohort of urban nurseries who directed me to three inner-city settings. Two of the three nurseries agreed to take part in the research. An initial online meeting with both nursery managers highlighted the various stages of the process and allowed us to discuss any potential challenges and concerns that may arise. The nursery managers agreed to disseminate the content to the families at each stage of the research design.

Why did I not choose to contact families myself or use social media? Primarily because nursery staff have already developed relationships with their families and are 'insiders'. The insider/outsider paradox reminds us of the power relationships within this structure and may affect 'buy-in' potential and trustworthiness (Shenton, 2004; Toy-Cronin, 2018). Freire reminds us of the importance of making teachers and students more equal to remove any power imbalance and to open a dialogic discourse. Secondly, I live in rural Norfolk and wanted the data to come from families facing the social and environmental challenges of an urban environment, especially during the global pandemic.

Methods

The research encompassed various methods: online questionnaire, music as a provocation within an intervention, reflexivity, reflective journaling and finally, interviews and focus groups with families with 3- and 4-year-olds from two urban nurseries (Figure 2). Participatory methods were to be delivered online due to the global pandemic.

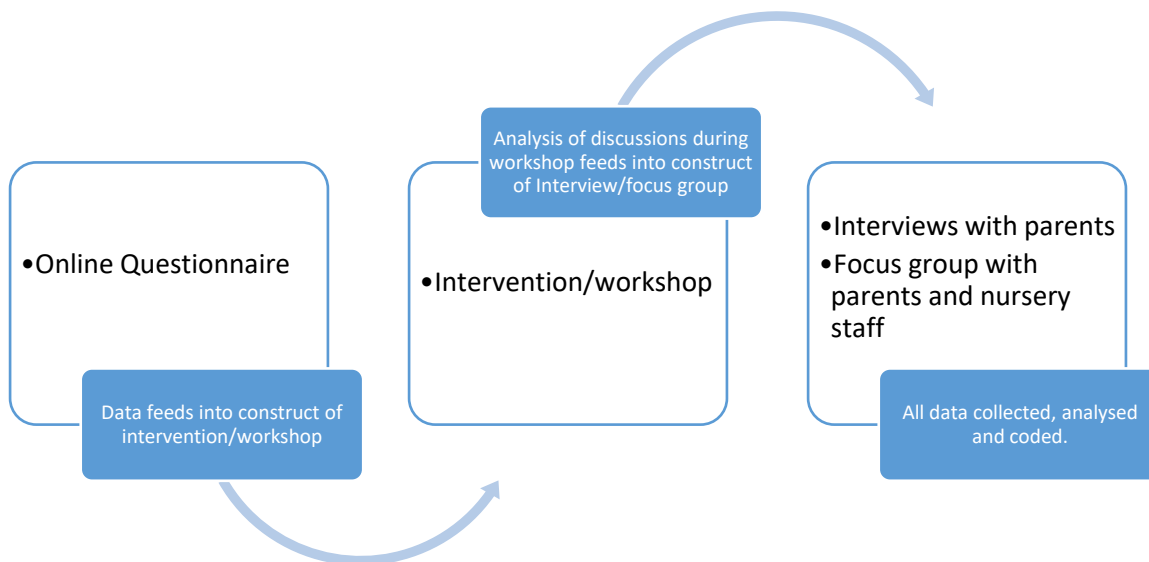


Figure 2.

The orientation of the study pertained certain methods as more or less useful, a triangulation of data from mixed methods was needed to answer different types and styles of questions (Lerner, 2018). A thorough literature review generated the concept for the PRISM framework to test the feasibility of the design.

Research activities should be fun, enjoyable, and varied. Young children's brains and the ways they process information are different from adults, (Vygotsky, 2004; Sattlemair and Ratey, 2009; Madan and Singhal, 2012) but even as adults many of us will opt for fun over the mundane (Drury and Fletcher-Watson, 2017). The application of fun is centrally relevant to this research. An initiative conducted by Volkswagen aimed to entice tube commuters to take the stairs rather than the escalator by transforming the stairs into an interactive electronic piano, as a result, 66% more people chose the stairs rather than the escalator. Volkswagen's concept was that fun is the easiest way to positively affect change and influence people's behaviours (Volkswagen, 2009).

Multi-modal and visual methods are increasingly being used to understand children's experiences (Darbyshire et al, 2005; Thomson, 2008). Specific methods such as 'draw, write and tell' (Angell et al, 2015) and the mosaic approach (Clark and Moss, 2001) have been developed to capture the voices and experiences of children. By reflecting on an experience, it is possible to affect change, by perceiving it differently and changing how we react to similar experiences. Adopting these learning methods to engage adults with families of young children could also provide some benefit in engagement levels and influencing potential.

There is a symbiotic element in that having the opportunity to plan and reflect also helps foster the development of symbolic thought and the ability to represent ideas (Copple, 2003).

The PRISM conceptual framework (Page 21) was applied alongside a deductive content analysis approach of the questionnaire content, this then framed the presentation for the intervention/workshop. The theoretical framework applied to the presentation combined self-determination theory, appreciative inquiry, and reflexivity to enhance parent's knowledge and skills around healthy parenting practices and develop confidence and self-efficacy in movement and physical activity (Bruner, 1966; Bandura, 1977; Vygotsky, 1978; Antonovsky, 1979; Brookfield, 1995; Dewey and Wilson, 2001; Wedd Day and Holliday, 2012; Fuller, 2019).

Findings by Bruijns et al (2019) highlighted the importance of priming all ECE candidates with training on childhood physical activity and sedentary lifestyles before entering a childcare setting, to positively influence young children's health behaviours. The home learning environment is the largest influencer in future childhood behaviours, offering a similar programme to families as part of a post-natal group would be beneficial. Brolin et al (2018) highlight there is some ambiguity around what constitutes a salutogenic strengths-based approach. This research aims to identify how best to support families to adopt salutogenic behaviours using health discourses and reflexivity.

Method – Online Questionnaire

The first method of the research design invited parents and carers of children aged between 3 and 4 years to participate in an anonymous online questionnaire distributed via the nursery staff. I ruled out a postal questionnaire due to contamination of contact, as the government guidance stated particles of the virus lived on paper. Assessing parents' beliefs was important as a baseline to guide the development of the intervention. Research suggests when people's implicit beliefs are aligned with the hypothesis of the intervention, attitudes will be easier to change or adapt (Roberts, 2007; Bailey et al, 2021). This suggests that it may be important to measure previous beliefs/attitudes before providing information about a given topic to gauge participant response and tailor educational opportunities to recipients. Roberts' study on companionable learning applied questions formulated around children's social and emotional wellbeing, she also explored mothers' past experiences particularly of their childhood and parental attachment (Bowlby, 1988; Roberts, 2007). My study aims to go further, incorporating fathers, and other peer influencers in attitudes and beliefs around movement play. A study by Sanderson and Preedy (2019) on engaging parents to become play partners in their child's learning indicated that training parents can influence parental self-efficacy and enhance childhood development and learning.

Method – Music and artefacts as a provocation

The use of artefacts and music can trigger memories, emotions connected to those memories, stories and periods of time that can provide an insight into our perceptions of life experiences, specifically play in early childhood (Duberg, 2013). Using triggers can temporarily transport us back in time to those exact episodes and connect with the emotions experienced (Bloom, 1985; Shanker, 2018). When we recall childhood memories, we become the storyteller, the protagonist in our own story, an expert in our field, identifying ownership and agency over the activity and opening a dialogical discourse as we invite others to become characters within our story (Freire, 1996). This has become evident in my most recent training provision, whereby I reintroduced students to ‘fortune tellers’ a folded piece of paper that purports your undeniable future! (Figure 3) I adapted the activity to reveal physical challenges behind each number. The students appeared to delight in the activity and fondly recalled their childhood experiences of the game, transporting them back in time to those early experiences. There is a strong correlation between effective learning and the emotions experienced during the learning process. Feelings of positivity and intrinsic motivation can lead to deep learning experiences for students (Shreeves, 2006; Whitney and Trosten-Bloom, 2010; Loon and Bell, 2016). A fascinating study by Beard, Clegg, and Smith (2007) further acknowledged the efficacy of emotions on learning and the deeply ruminative change in perspectives and shifts in beliefs and behaviours. Bunker (1991) espouses an increase in children’s self-confidence and self-esteem because of successful physical experiences. It is my belief that this is not only applicable to children but all individuals.



Figure 3.

Another fundamental principle of my current work with families is the generational singing of rhymes and childhood connections to music and musical movement. When reflecting on our childhood we may recall periods where music or song was intrinsic to the activity: singing nursery rhymes and actions songs with our primary carers or peers, singing during assemblies or in school plays, singing at religious festivals, popular/ country, maypole dancing, playground games, or dancing and moving to music with family and friends. Hearing a song or a rhyme can immediately evoke the episodic memory and transport us to the

event where it triggers our cultural memory and human inter-relations enshrined within our heritage. Recent neuroscience research identified when recollecting an old memory, an entire representation of the event is immediately reactivated in the brain, including smells, music, people, location. The hippocampus pulls together each element of the memory, and using these components creates an HD image of the event (Horner et al, 2015). Many adults can still recall childhood rhymes and songs from their earliest years. As Fernandez-Llamares and Lepofsky state,

“..the recognition of music both as a timeless prism for looking at human-nature interrelations, in all their complexities and magnificence, and as an essential form of biocultural heritage, worthy of documentation, conservation, and revitalization” (Fernandez-Llamazares and Lepofsky, 2019:2).

There is such majesty in the words ‘timeless prism’ when we think about music, specifically instrumental music and how it facilitates communication above and beyond words (Loui et al, 2017). Music is a powerful tool, it can be used to motivate, inspire and relax. Some may not notice the carefully selected songs pipping out tunes as we walk around the shops, or the way music sets the scene and suspense for many films. In this research using music as a provocation during the workshop may assist with recalling memories and moments in time and feelings of efficacy for the respondents.

Method – Reflexivity

When conducting research, one must be conscious of any bias and assumptions held throughout the process. Sloan (2021) reminded us to have an awareness of the differences between what people say they ‘do’ and what they ‘do’ in relation to the questionnaire answers. As an educator and researcher, it is not uncommon to confuse bias, axiology, and metatheory (Overton and Muller, 2012). Reflecting on temporal comparisons, with over 20 years of practice around early years physical activity and converting one’s current thinking around this subject area will need to be challenged and tested for validity and trustworthiness using the four autobiographical lenses as previously mentioned in the literature review.

Method – Intervention/workshop

The literature review provided further confirmation on the value of face-to-face workshops to engage parents. There was little evidence on virtual provision as this was relatively new. An article by Gray (2015) on interventions supporting differing parenting styles demonstrated the influence of teaching within an intervention and how it affected parenting behaviours. Parents who attended an initiative based around play and socialisation continued with those values as the children grew. Contrastingly parents who attended a more academic style teaching intervention adopted a more achievement and self-centred,

values-based parenting style. This demonstrates the influential factors early training and support can have on parenting styles and behaviours.

The intervention content incorporates interactive movement opportunities for respondents to increase endorphin reactions to enhance engagement levels and perceived self-efficacy (Bandura, 1994; Best, 2010; Ferreri et al, 2015). Using movement not only aids brain and body connectivity, but the respondent's ability to recall the event after the intervention (Madan and Singhal, 2012). Adopting a scaffolding approach using appreciative inquiry with respondents and using the body's natural neurological responses to movement may increase social learning and engagement throughout the intervention/workshop (Bruner, 1971; Bandura, 1977; Csikszentmihalyi, 1990). The presentation content for the workshop is semi-structured and offers some insightful facts about brain and body connectivity and opportunities to discuss and explore respondent's childhood experiences and positive experiences of physical play. It also explores respondents' subsequent values and principles formed relating to physical activity domains while promoting mutual curiosity, appreciation, and a suitable level of challenge during the intervention. Incorporating a variety of multimodal artefacts promotes experiential learning and engagement levels (Madan and Singhal, 2012; Loon and Bell, 2016). The presentation offers provocations to promote discussion among the participants in respect of their shared experiences as parents of young children and their experiences of lockdown. Becoming agents of their own story enables feelings of safety, trust and connectivity allowing for engagement in the present moment within the safe space of sharing our first-hand experiences. As researchers we must remember every culture is unique in its worldview, as are their ways of interacting with the world (Perkins and DeSousa, 2018).

Method – Semi-structured interview

The interview was open to parents or carers who showed an interest in participating. This allows further analysis of the research questions and provides a triangulation of data, compensating for any potential weakness in any of the other research methods. Providing a comprehensive focus on my topic of research examining the real-life, practical problems as they arose (Mukherji and Albon, 2011; Robson, 2016). The interview stage was semi-structured against the participants' recollections of play and applied against the conceptual framework on healthy behaviours by Maivorsdotter and Andersson's (2020). Using a semi-structured interview, rather than unstructured, ensured we remain on topic and uncover some of the answers to the research questions. Lerner (2018) confirms research advances best when good questions are applied to the research underpinned with theory. Semi-structured questioning allows for more flexibility and freedom to explore the qualitative data of respondents' perceptions. Maivorsdotter and Andersson's (2020) work draws on a framework collating theoretical principles from Antonovsky (1979)

and Dewey (1981). The analogy used to describe their framework is exploring not just the swimmer, but the river and the transactions between organisms. During the intervention and interview stage, my role as a pedagogic mediator offers to support and guide families within a praxeological context to explore movement opportunities in and around the home learning environment (Formosinho and Formosinho, 2016).

Method – Reflective journal

In my first few years of study, I found writing a reflective journal tedious and it often disrupted my writing flow. However, this year it has been instrumental to my research and professional well-being, particularly when conducting research during a global pandemic. Being able to reflect on my beliefs, and their implications on my research have been a valuable contribution. The reflective nature of this research provides rich data to explore respondents' perspectives (Brown and Perkins, 2019). Leigh (2019) also cites reflecting on our past experiences, can inform change and future behaviours, as our perceptions can be altered.

Recently I attended an art exhibition on The Human Touch at The Fitzwilliam Gallery, Cambridge (2021) and this provoked thought processes around movement play and interactions with extended families and peers. Enabling a deeper understanding of the physiological distancing imposed upon us as communities, and the power and significance of touch with others as a form of communication. Also, the language of touch and how it shapes our existence; to be touched by emotion, to lose touch with someone, when this is broken by social distancing our emotional connection to the world is severed. Journaling offers an opportunity to keep in touch: in touch with ourselves, our developments, our beliefs and perspectives. Mukherji and Albon, (2011) discuss how journaling acknowledges the legitimacy of the research, our position as a researcher, our personal history, the structure of the research and how we write it up.

Ethics

Minority ethnic groups in England were four times more likely to contract the Covid-19 virus than their white peers. The areas in which the research study took place were predominantly areas of high ethnic minority groups (UNICEF, 2020). Lockdown measures were intermittently in place from March 2020 to the current day and many families faced significant emotional, social and financial challenges (NHS, 2021). The pandemic raged through communities and highlighted the inequalities and divisions across our society, food sources were scarce, and unemployment rocketed (Boyd, 2021). Countries were segregated, with

people unable to cross national borders, division among towns and cities and divided families. This was more than a global pandemic, this was a cultural invasion (Freire, 1996).

Due to the global pandemic, my research project was desk-based, relying on the support of 2/3 day nurseries. Desk-based methods can alleviate a sense of intrusion and pressure on families during the pandemic. All individuals were treated fairly and free from prejudices by applying the EECERA ethical principles throughout (Schwandt, 2007; EECERA, 2015). Conducting desk-based research during a global pandemic indubitably presented some complications and deficits in engagement levels. Being mindful of the challenges each individual family faced throughout every stage of the process was imperative to conducting ethical research (Howes et al, 2020).

As a white, middle-aged female, living in a rural area, applying the EECERA (2015) ethical principles within this research design assured integrity, total transparency, and a constant re-evaluation of my positionality as a researcher (Toy-Cronin, 2018; Guba and Lincoln, 1994).

Each research process was completely anonymous, participation invitations were issued by the setting staff directly to the families. Consent forms were presented to respondents via the nursery staff before each stage of the research process to continue with total anonymity (Guba and Lincoln, 1994: Shenton, 2004). Ensuring the nursery staff adhered to the confidentiality process was paramount. Collaboration and support with the nursery managers and the staff were salient to the research design, and their support to conduct this research, invaluable.

Investigation

Somatic educational research 'is the educational field which examines the structure and function of the body as processes of lived experience, perception and consciousness' (Linden, 1994: 1–2). Perceptions can be fallible; can we be certain our recollections and perceptions are valid? (Figure 4)

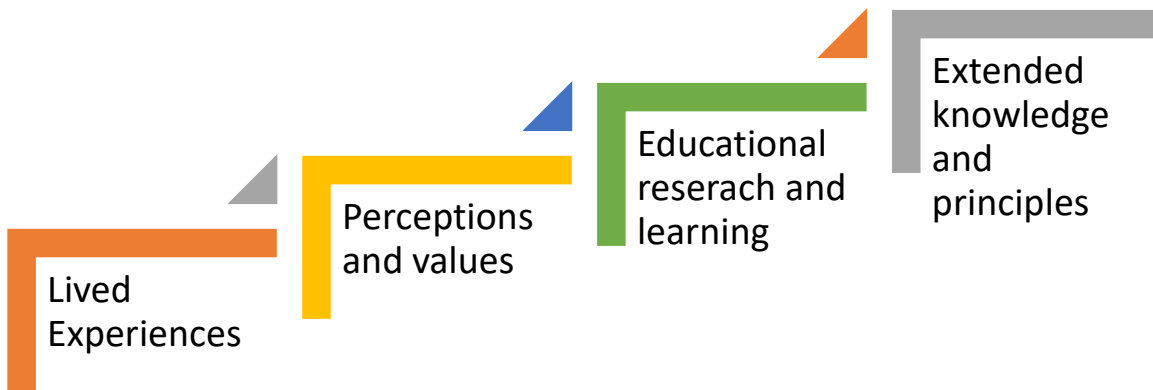


Figure 4.

To challenge our perceptions, we must incur other routes of authority, by authority I mean to make ourselves accountable to challenge our beliefs. The above figure demonstrates a process or validity to strengthen or adapt those perceptions we hold (Figure 4).

The quality of the home environment and relationships held within the home are the most influential and relatable to children's outcomes (WHO, 2019; Early Education, 2021). Understanding parents' theories and perceptions can help transform change and create a reciprocal, dialogic discourse to further progress children's developmental potential (Riazi et al, 2017; Leigh, 2019).

The graph below demonstrates the transparency of the research methods using a triangulation of data applying a mixed-methods approach (Johnson and Christensen, 2008; McChesney and Aldridge, 2019). Each question was explored at various points during the research process (Figure 5). Combining methods to explore multiple answers to one question presents a triangulation of data to further reinforce 'robustness' to assess the social understanding, to unpick and explore the how and why of each question (Shenton, 2004).

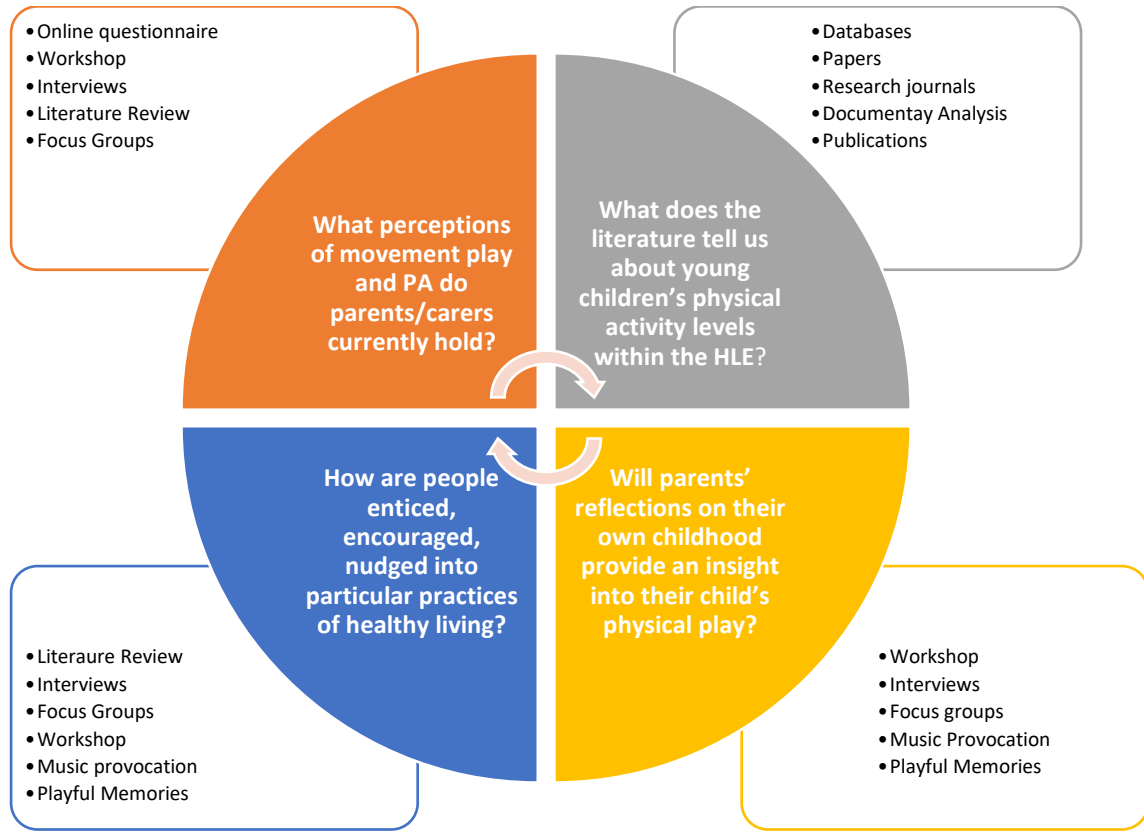


Figure 5.

Prior to initiating the research, emails were issued to the nursery managers outlining the process and timeline of the research along with consent forms to participate in the research. Further emails were dispatched containing forms of consent for families of children aged between three and four years of age, inviting their involvement in the research process. After five weeks, I received no returned consent forms from families, it was an extremely challenging time for all respondents, including both nursery staff and families. Adapting the research design allowed me to obtain consent as part of the online questionnaire. Respondents were given the right to withdraw at any time (Robson, 2011). Being flexible and removing impediments to the research design was instrumental throughout the process. Allowing for multiple layers of consent throughout the process reminded respondents of the requirements and ensured validity and transparency (EECERA, 2015).

The questions in the online questionnaire were both quantitative and qualitative providing a perspective on environmental factors influencing play opportunities and to uncover the relationships and processes around physical activity (Figure 6). The literature review also allowed me to explore the current issues around early childhood physical activity and weave them into the questions. I used a Likert (1932) 0–5-point scale for questions, 3 and 8. There was also an opportunity at the end of each question for respondents to add any further comments allowing for their voices to be heard. Interestingly a study by Roberts (2007) showed mothers with lower education levels placed a higher priority on physical play than mothers with higher education levels. In my research, I felt this was not the time to ask for education

status, should the matter arise freely during discussions in the interview stage that would be different, as the information was being offered rather than sought

1. How many children do you have in your household and what are their ages?
2. Do you think your families physical activity levels have decreased or increased during the last year?
3. I was very active as a child my children are less active
4. Do you have close access to a park or green space, if so, how often do you visit?
5. What is your housing situation?
6. What types of physical activity do your children access?
7. What is your favourite memory of childhood physical play?
8. How important is physical activity to you and your family?
9. Who is the most active in your family?
10. Please can you provide your age and ethnicity?

Figure 6.

A timeline for the research was created in January and was initiated upon receiving ethical approval from Birmingham City University (Figure 7). I soon encountered barriers within the research as nursery staff found it difficult to engage respondents due to changes in the nursery 'drop off' procedures. Only 4 families completed the questionnaire, it was, therefore, necessary to reevaluate the engagement options and be flexible and adaptable within my research design. Subsequently, a QR code was created for ease of use to access the questionnaire, this resulted in a further 8 respondents engaging out of a potential cohort of 50 families. I am aware this method may have isolated those without access to digital technology, but the nurseries assured me all families had access to email or text service as this was their usual method for contacting families. Finding suitable communication methods to engage families within their child's learning has long been a challenging area for settings (See and Gorard, 2014; Education Endowment Foundation, 2018). The Early Endowment Foundation tool kit recommends the use of exploring many different communication options, but as I will discuss later, Covid-19 impacted some of the options available during this time.

Lack of initial responses prolonged the process and meant a rescheduling of the research timescales (Table 3). Two online workshops were offered to families with children at the two nurseries aged between 3 and 4 years. Facilitating the workshops would provide families with some simple physical activities to play at home and outdoors to increase physical play opportunities and healthy active behaviours. The workshop

would also delve into families' perceptions of childhood play and their playful memories of their childhood. One workshop was offered during the day and another in the evening, each lasting for a total of 60 minutes. Offering the sessions at different times provided respondents with more suitable options and ample time for engagement. Invitations were sent to the nursery managers to forward to the families a month before the scheduled workshop. Reminders were also issued on two occasions before the start date.

Date:	Research:
w/c 15 th February 2021	Consent forms issued to settings for their approval to be part of the process
w/c 1 st March 2021	Questionnaire link containing consent form to be sent to families with children aged between 3 and 4 years of age.
w/c 22 nd March 2021	Deadline for questionnaire responses PROCESS REMOVED
w/c 19 th April 2021	Invitation and consent form issued to respondents to participate in an intervention PROCESS REMOVED
Wednesday 28 th April 2021 – 10 am	Intervention group A NO ATTENDEES RESCHEDULED FOR 19 TH MAY
Thursday 29 th April 2021 – 7 pm	Intervention group B NO ATTENDEES RESCHEDULED FOR 20 TH MAY
Friday 30 th April	Issue evaluation form RESCHEDULED FOR 28 TH MAY
w/c 10 th May 2021	Evaluation form deadline RESCHEDULED FOR 11 TH JUNE
w/c 17 th May 2021	Interviews and focus group sessions RESCHEDULED FOR JUNE
Wednesday 19 th May – 10 am	Intervention/workshop A NO ATTENDEES
Thursday 20 th May – 7.30 pm	Intervention/workshop B NO ATTENDEES
Thursday 10 th and Monday 14 th June	Interviews and focus group sessions

Table 3.

Extrapolating the data from the questionnaire, I started to construct the presentation associated with the intervention, combining both practical activities, discussions, and periods of reflection. The activities and theoretical sections were created using my enhanced knowledge and the collated evidence from my past

two research projects. The application of the self-developed PRISM framework as signposted on page 21 explains more about the process. Using a flexible mixed-method approach allowed for trustworthiness, I particularly resonated with Guba's term (1981 pp103 – 127) "truth value, applicability, consistency and neutrality". The application of the PRISM framework throughout enabled openness, replicability, durability and trustworthiness to my research. The method of using music as a provocation and relational playful memories as a tool for reflection formed some of the qualitative element, providing a discourse for changing play behaviours using music association. Pannekoek et al (2013) espouse socio-contextual and physiological factors can increase motivation and engagement levels and should be considered within the design of interventions, specifically in the context of physical activity and assessing salutogenic behaviours. Knowles' theory of andragogy aligns with this principle, whereby the instructional teaching of adults should focus more on the process and methods of instruction than the content being taught (Knowles, 1984). Adults often learn best when the focus is on them and they have autonomy over their learning.

The slides from the presentation can be seen in Appendix 2. Disappointingly, despite rescheduling on two occasions, I was unable to deliver the workshop/intervention due to no respondents attending. Families were afforded the opportunity to preregister on the online meeting ZOOM platform via a link that was issued by the nursery staff, both via text and as a hard copy. Being aware of the pressures families were facing, I envisaged some may not preregister but may attend on the day. I prepared the session and waited patiently on both occasions. Initially, I was despondent but having reflected on my time during Covid, and having been a working mother with young children, I once again sought to modify my research design to navigate a way to obtain data.

Faced with the prospect of limited data I adapted the design once again to create a simple pamphlet for families, formulated around the data gathered from the questionnaire. The pamphlet acted as a provocation offering families simple yet effective ways to engage young children in physical play opportunities (Appendix 4). There is some doubt over the efficacy of a pamphlet alone in influencing behaviours, it is suggested as a primary tool but followed up with group discussions relating to the content (Ward and Wilcox-Herzog, 2019). Although without participation in the intervention it is impossible to ascertain whether this would impact on future movement play opportunities.

Extrapolating the data from the questionnaire and the literature review, I created a brief physical play survey for families to complete prior to attending a nursery or daycare setting (Appendix 5). The survey would act as a window into the current physical and movement play practices families experience and their values associated with movement. The data would enable nursery staff to prepare and plan some of their provision based on activity levels and experiences at home. If a child was particularly inactive outside of

the setting and families did not value physical activity as an important facet to a child's development, the setting could adapt the provision to ensure the child was meeting physical activity recommendations and experiencing a canopy movement experience. It was valuable to seek the opinions of the nursery staff on the content. Armstrong et al (2014) cited a primary prevention model for families that supports nurturing environments in early childhood can improve success and prevent a host of problems unfolding. Using the data from the family questionnaire could work in conjunction with nursery staff offering a workshop open to all families perhaps to those who are yet to decide on which nursery to attend. Upskilling the nursery staff to deliver the workshop could also remove the insider/outsider paradox mentioned earlier (Toy-Cronin, 2018).

Timing is the most considerable factor for the lack of data, conducting case study research in the field, albeit desk-based, was challenging during a global pandemic. As no families participated in the intervention or focus groups, the nursery managers and deputies were invited to attend a focus group, but unfortunately, we were unable to coordinate any dates or times where all four could convene online. Therefore, the interviews took place independently of one another, each nursery individually. This provided an opportunity to explore relevant issues and knowledge gaps to sharpen the research focus, with limited data this method was imperative to the study.

A semi-structured interview was decided as the best format due to only having two nursery staff in each group. They were conducted over ZOOM and were recorded, with consent, to allow for further analysis of the data. The open questions were:

- Why do you believe families did not attend any of the workshops?
- Have you noticed any changes in family behaviours, before lockdown, during lockdown and with the easing of restrictions?
- Do you think the children in your care have been more or less active during lockdown?
- Do you think family's value physical activity?
- What have been your personal experiences of the past 15/16 months?

One participant's (respondent A) comments highlighted the pressures and stresses families were under following the easing of restrictions.

"...everybody keeps asking for extra sessions. I think, coming out of lockdown, parents caught themselves a little bit unaware that they would be asked to go and do their normal job again, and their normal hours and not from the comfort of their own home. So, they've found themselves without childcare, very stressed. Some of our parents are really stressed right now. And they try to find any solutions for somebody to look after the children. I think that's just something extra, that they can't commit to at the moment..."

The last question was particularly insightful, all nursery staff spoke of personal exhaustion and the past year being unlike any other they have experienced. They all spoke of personal periods of loss and grief and an insurmountable amount of pressure.

During the interviews nursery staff were shown the presentation, family play questionnaire and movement play leaflet. (Appendices 3, 4 and 5)

One respondent (respondent B) commented on the family physical play questionnaire:

"I personally think that it could extend the knowledge, for us, when parents join. When parents do join, 9 times out of 10, we'll ask them why they registered, why they want to be with us. And they do say, "Because we've heard good things about you in the community. Because you've got a great outdoor area." So maybe this would give a little bit more information about them, that maybe we didn't have".

All respondents felt the Movement Play pamphlet was excellent, succinct, and informative with practical tips and advice (Respondent A)

...because it is brief, but informative. Do you know what I mean? There's not so much text, that then you just say, "Oh, I'm going to skip that part and go to bullet points." because that is only bullet points.it draws your attention. "Oh yes, I can read bullet points. I'm not going to read a long thing."

"And if you think about what we said at the beginning, parents are going back to work, time is of the essence, time is precious. They need something that is to the point and concise, as like you said, just the leaflet, as it folds up. So yeah. It's better than getting 10 pages stapled together, that's a whole booklet or something."

The overwhelming consensus around the lack of family involvement in the research was due to the pandemic. The staff mentioned how from April 2021, parents lacked interest in the nurseries online sharing platforms and pedagogical conversations. Parents were no longer dropping off later and picking up early. They were using all their hours for childcare and requesting more hours, families were under pressure. Many families had planned to visit relatives overseas, but due to the change in travel restrictions were either unable to travel or stuck in another country until restrictions ease.

The transferability of this research may be compromised due to the global pandemic, as to gather transferable data, to reform and recalibrate beliefs, one must capture the ordinary, and the mundane in all its complexity. As previously discussed, living through a global pandemic is anything but ordinary. Without hearing the voices of communities to explore the responses within the questionnaire, hampered the deep exploration into the perspectives I had originally hoped to achieve. A veritable report by Public Health England declared being overweight or obese significantly increases the risk of severe illness and even death from Covid-19 (Blackshaw et al, 2020; Bingham et al, 2021). My research questions are valuable and will impact on future practice. Salutogenic behaviours are instilled in the earliest of years and habits are formed during this time (Adolph and Hoch, 2019; Duncombe and Preedy, 2020). Showing a prevalence for sporting behaviours and healthy choices in early childhood can impact on mortality rates in later life.

Discussion and Interpretation of Results

Covid-19 has impacted all areas of society for over eighteen months and for some it continues to do so (UNICEF, 2020). In this chapter, I explore the implications of conducting an interpretivist case study project during a global pandemic. I analysed the data against my four research questions to justify my responses. The fifth question was answered within my literature review.

A seminal report by UNICEF highlighted the influential factors around the catastrophic effects of Covid-19. “Loss of family members and friends, anxiety, stay-at-home restrictions, lack of support, school closures, the balancing of work and family life, poor access to healthcare, combined with the economic loss caused by the pandemic are catastrophic for children’s well-being, affecting their mental and physical health, and their development.”

(UNICEF, 2020, World's richest countries grappling with children’s reading and math skills, mental well-being, and obesity. Press Release. P1)

Due to social distancing requirements, drop-off times changed at early years settings, and parents were no longer able to enter the nursery building but told to drop off their children from a safe distance. Drop-off time is normally a crucial time for interactions with family members and would normally provide time for parents to liaise with educators and vice versa. This was discussed as a factor contributing to the lack of questionnaire responses. However, emails and texts were also sent to families, therefore other factors may be more influential which will be discussed later in this chapter.

When analysing the limited data, finding themes was challenging due to such a paucity of information. It was easier to take the words of the participants at “face value” to identify recurring themes that demonstrated parents’ priorities and responses rather than making assumptions and reading in-between the lines, which could lead to misinterpreting the data. This naturalistic way of analysing then assisted the development of the intervention that met the needs and requirements of the respondents.

Dodd et al (2020) cited a connection between parental perceptions of play and risky play, children who played outdoors the most had parents who formed a positive attitude around children’s’ risk-taking. Parental encouragement and motivation are other key indicators of activity levels, as were the environmental and geographical factors impacting the play being accessed. Children play more when there is less traffic, access to a garden or yard and when they live in a leafy neighbourhood (Lambert et al, 2019). During lockdown there was less traffic, but it was not considered safe to be outside, the government stated only one trip outside per day, per person. Each day families had to choose between work, shopping, healthcare, or exercise, it is not surprising to see families’ levels of PA decrease over the past year (Figure

7). An enabling environment is key to a child's developmental potential and access to such opportunities were restricted during the pandemic, compromising children's fragile salutogenic trajectory (Bronfenbrenner, 1977; Roberts, 2007; UNICEF, 2020). In the online questionnaire, all respondents cited outdoor play as accessible to their children and specified parks and outdoor play spaces as a preference to other play experiences.

Rogoff suggests an analytical approach to developmental research should combine the individuals, in this case the parents/carers and the environment (family home and outdoor environment) not as mutually exclusive to each other but as interdependent collocations (Rogoff et al, 1998). Vygotsky considers a step further within the analysis, to explore the sociocultural units, in this case, the communities and neighbourhoods (Vygotsky, 1978). Social research delves deeper into developmental research encompassing the factors applied within the PRISM framework to explore the ethnobiology of participants within the construct of perceptions and values. Furthermore, the ethnographic lens of the researcher allows for reflexivity within the research and reflects on personal influences and bias. Also applying the social context and relational phenomena, in this case, COVID-19, lockdown, and other environmental factors.

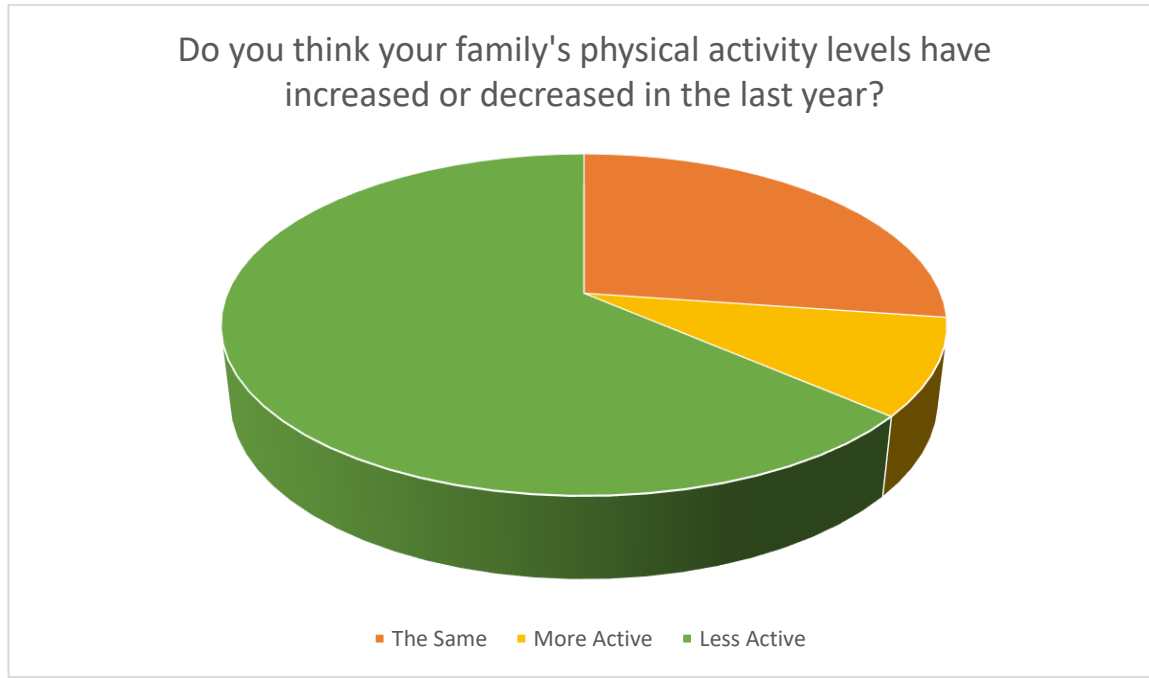


Figure 7.

Uncovering the answer to this research question was never going to be simple and during a global pandemic with nascent findings to analyse, would only further hinder the efficaciousness of my research. Perceptions can be fallible and interchangeable, and without further dialogue with families, it was

impossible to challenge some of the perceptions in the questionnaire. Figure 8 explores the responses to physical activity provision available to children.

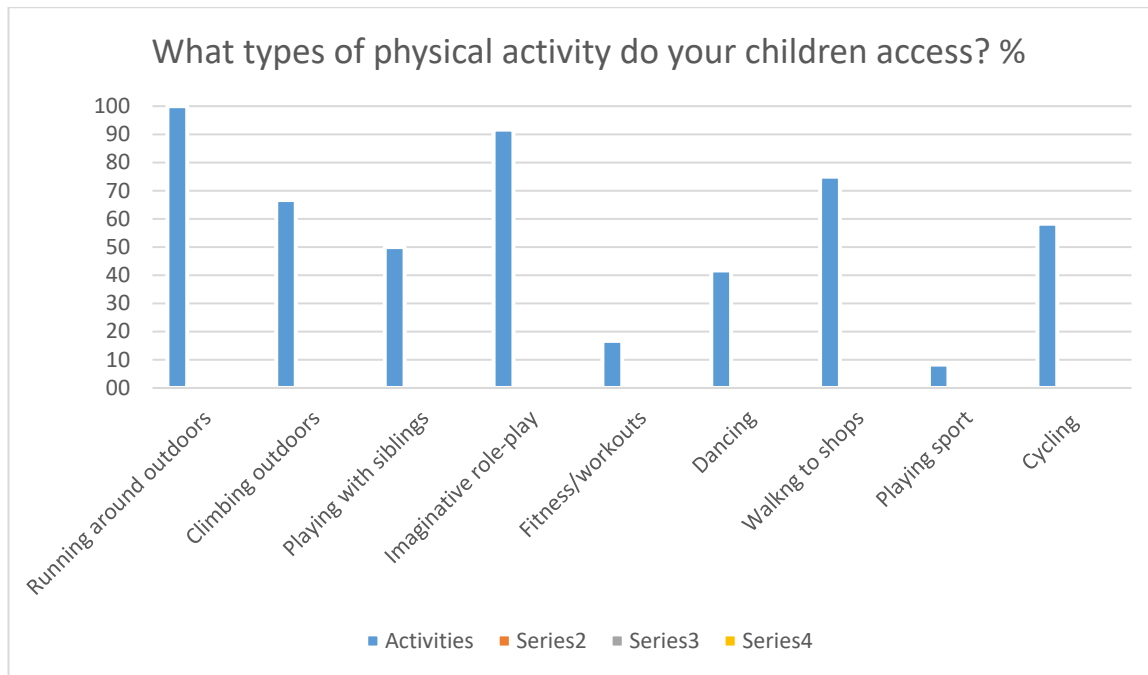


Figure 8.

In the online questionnaire, respondents were afforded the opportunity to select dancing and moving to music from a multiple-choice question on physical activity accessed. Interestingly nearly half the respondents selected dance as an answer. Music is a building block of our self-image and many people relate to music in constructing their identity (Frew, 2020; Henry et al, 2021; Saarikallio, 2021). Music is relatable, it unites us and enabling parents with the self-efficacy to practice movement to music, would relinquish more opportunities to move, share experiences and transfer ethnobiological mechanisms through generations (Fernández-Llamazares, 2019). With outdoor restrictions in place due to Covid-19 and many parks and play spaces closed, movement play opportunities within the home learning environment were a priority. Imaginative role-play scored highly in the response, further exploration as to whether this was sedentary, sole or participatory would have provided more data.

As discussed earlier self-efficacy, movement behaviours, and responses to adversity are strong predictors of childhood salutogenesis (Bruner, 1966; Breslin, 2012; Parekh et al, 2017; Fuller et al, 2019; Cohen et al, 2021). The lack of responses and engagement within my research aligns with the data from a research study on parents' perceptions of healthy behaviours by Fuller et al (2019) explicating parents' difficulty in engaging in autonomy supporting parenting practices during times of stress and anxiety.

Previously when working with parents the role of collaborative household activities has arisen. Rogoff (1990) defines this 'activity' as apprenticeship and part of a socio-cultural activity. Had the workshop/intervention taken place the level of participation in household activities would have been discussed and the learning that happens in such processes. These activities are not only part of socio – apprenticeships but a rich tapestry of learning processes and skills and provide a sense of belonging, agency, skills, language, gross and fine motor development (Isaacs, 1929; Roberts, 2007; White et al, 2019). Having reflected on this area of development, all three of my references around household activities are women, is this coincidental or a reflection of the societal pressures and stereotypes placed on women? Roberts (2007) goes on to highlight this when boys will spend time doing 'important' tasks with dad. Are we placing more value and importance in 'less domestic-related' activities? Household or apprenticeship tasks are often seen as chores and not a 'fun' activity, yet in Steiner/Waldorf schools, tasks are scheduled into part of the learning day. However, adopting the term 'apprenticeship learning' rather than 'household chores' would go a long way to raise engagement and learning potential (Klocek, 2002).

In one of the online questionnaire answers, half of the respondents claimed children were the most active person within their household (Figure 9). Like Riazi et al (2017) this research found that adults do not value their movement as much as their children's or perhaps are unaware of the implications of demonstrating a sedentary lifestyle around young children (Riazi et al, 2017). Boosting self-determination and mastery in early childhood is essential to improved learning and outcomes (Seligman, 1975; Bunker, 1991; Ryan and Deci, 2018). Interestingly, no mothers were cited as being the most active in the household, compared to a third of fathers. Could this be because generally mothers participate in more household chores and these are not valued as physical activity compared with perhaps 'cleaning the car with dad'? Parenting differences around gender roles remains a sensitive issue, for educationalists and parents, but nonetheless needs further exploration (Roberts, 2007; Maata, 2016).

Phenomenologically this research uses a somatic ontology, that combines both mind and body, applied against a salutogenic framework (Leigh, 2019). This 'wholistic' approach to research uncovers how values and perceptions are formed, how they influence our behaviours and thoughts, and how in turn they influence our body, our communities, and society. Using our bodies to respond to music, whether in singing or movement transcends into our breathing rhythm. Frew (2020) discusses how this stimulates the ventral vagus branch of the vagus nerve responsible for our safe and social mode, instrumental to this research.

The workshop presentation explained the definition of physical activity to enable families to reflect on real-life examples, PA being any movement over and above resting requiring whole-body energy expenditure (WHO, 2019). For young children this may include, running, jumping, climbing, swinging, carrying, walking,

scouting, rolling, hanging, taking clothes on and off, standing up, and sitting down. As previously discussed the daily recommended level of physical activity for a child aged 3 to 4 years is a minimum of 180 minutes (CMO, 2012; WHO, 2020). Many educators are still unaware of these guidelines and therefore can we infer this message is not being successfully disseminated to families (Riazi, et al, 2017; Battelley, 2019; Preedy et al, 2020). Upskilling nursery staff to deliver a live interactive presentation for families, and encourage a dialogic discourse around physical activity and movement play may eradicate some of the issues already raised in the previous chapters. It could also provide valuable professional development opportunities to upskill the staff to both implement within their practice along with supporting families.

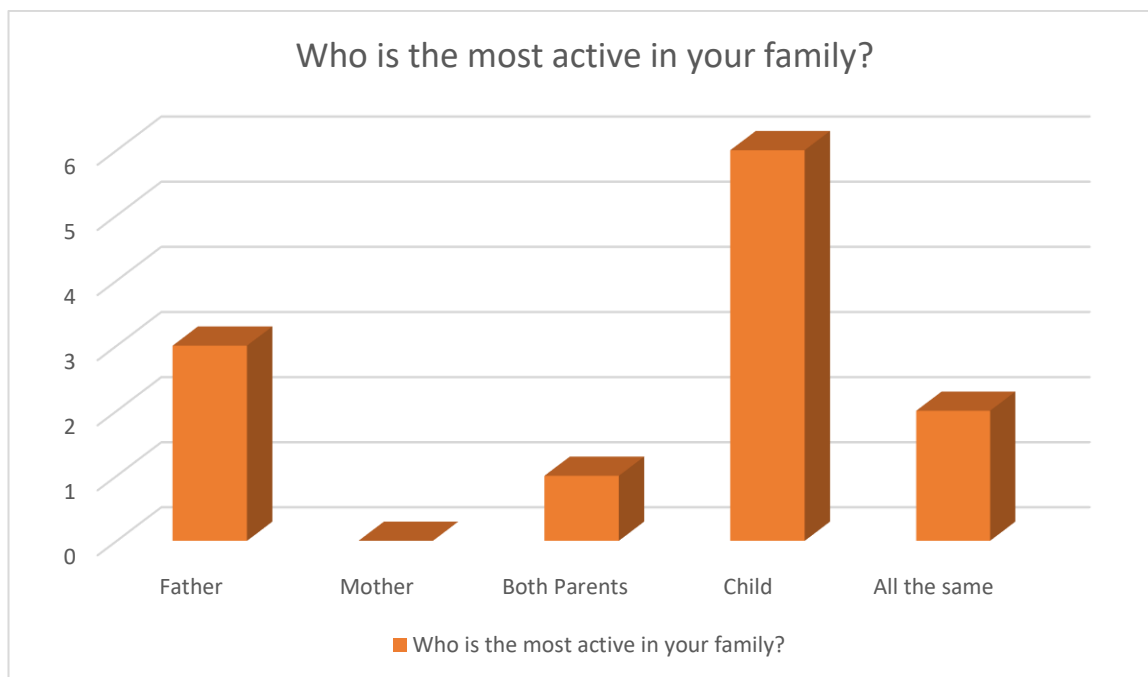


Figure 9.

Reading Freire, we can recognise there are two stages to emancipation for the oppressed; reflection on the nature of the oppressed and the action and ability to change it (Freire, 1996). We do not live in an equal society, opportunities within communities vary significantly and this gap widened during the pandemic (UNICEF, 2020). Education and research can be used for political activism and to support a more egalitarian society through celebrating diversity and sharing cultural playful memories and stories. Reflecting on our personal biases, heritage, and values that have shaped our opinions throughout the research process elicits openness and sensitivity (Henry-Allain and Lloyd-Rose, 2021). Ubiquitous studies posit ethnic minority groups as less likely to engage in physical activity and sport (UK active, 2018; Perkins, 2018; Bingham et al, 2021). Children living in areas of deprivation are also less likely to engage in physical activity and movement play behaviours (Hackman et al, 2019). Conducting research within a multi-cultural urban area, hoped to hear the voices of such participants to challenge the status quo, to offer a voice to redress the inequality. In the online questionnaire, half of the respondents were of ethnic minority and

half were white European. This did not concur with any of the data analysed in the literature review, no ethnic correlations were present from the limited data available.

The role of the community and neighbourhood influences were paramount, as these defined the opportunities available to families. All the respondents attended nurseries within a similar locality, with access to the same parks, green spaces, and nursery provision. The quality of community play spaces was a considerable factor in physical activity exposure and habits, only four of the respondents had access to a yard or garden. There is a distinct juxtaposition of the governing bodies pushing children to 'catch up' and be more active and yet removing and destroying green spaces open for play. In the last 5 years, in England alone, 213 parks and playgrounds have been permanently closed, with plans to close a further 234 in the future (Manners, 2019). This chronosystem, this enabling environment, is no longer enabled for children, if families in urban areas have no play spaces available, how can we support them to make healthy choices towards future salutogenic behaviours (Dodd, 2020)?

In 1929 Issacs wrote “

“If the child had ample time for free play and bodily exercise if his love of making and doing with his hands is met if his interest in the world around him is encouraged with sympathy and understanding, if he is left free to make-believe or think as his impulses take him, then his advances in skill and interest are but the welcome signs of skill and vigour” (Isaacs, 1929, The Nursery Years).

This quote presents an idealistic view of early childhood practice, however, ninety-plus years ago there was no childhood obesity epidemic, no digital technology and considerably less urban development. Within my training provision for educators and families, this comparison is often raised, starting with 'In my day' and 'back then'. Many adults appear to view children's current lives as deleterious to their health and well-being. A study on play in Britain confirmed this hypothesis, with only 10% of today's children playing in natural spaces, such as woodlands, beaches, countryside compared to their parents' generation spending approximately 40% of their playtime in natural spaces (Dodd, 2020; Skeels, 2021). As community members, educators, and researchers, we have a responsibility to provide a wealth of opportunity, exploration, and curiosity. Lambert et al (2019) examined childhood outdoor play and its proficiency and highlighted creating a greener neighbourhood and reducing traffic interferences can increase childhood play behaviours. During Covid-19 lockdown, there was barely any traffic, but access to parks and play spaces was limited, and other factors already mentioned in the previous chapters impacted opportunities to play safely outdoors (Skeels, 2021). This aligns with comments from the nursery staff on families valuing the physical play focus at nursery and requesting longer nursery hours, providing the child with more outdoor play opportunities rather than being cooped up indoors with other family members. This outlines the value

of socio-demographic and geographic influences on children's play experiences and their salutogenic behaviours.

Recent years has seen a penchant for the term 'well-being' used in education against various areas of development, emotional, social, physical, health, personal and works on a deficit model, preventing the decline of 'well-being'. Contrastingly Buchanan and Hudson (2000) argue against this and explain the well-being model can promote empathy, creativity, and a sense of achievement. Tonkin (2019) cites 'well-being' as a measure of "how are we doing?" but agrees there is such complexity within the term well-being, covering current economic, social and environmental welfare that to capture the 'levels' would be near impossible. Salutogenesis uses a preventative, positive model and explores the multitude of factors influencing positive health choices, healthification, incorporating a plethora of elements including wellbeing, resilience, relationships, communities and ethnobiological contexts. In early childhood, resilience is often a term described around the process of learning resilience, and the application of stamina and self-determination to the acquisition (Winston and Chicot, 2016; Anderson, 2018; Birth to 5 matters, 2021). Ball (2019) describes resilience to be one of the key teachers' tasks to develop in any young child. Johnson and Howard, (1999, P.8) use the term resilience as "the inherent and nurtured capacity of individuals to deal with life stressors in ways that enable them to lead healthy and fulfilling lives". Inter alia this does describe a component of salutogenesis, however, salutogenesis is deeper with ethnological rhythms, and a more positive, preventative term within a 'wholistic approach' (Yates, 2006). Shontoff et al (2012) cite the need for more family-based interventions to promote **resilience** tailored specifically for those with pre-school children to support cultural socialisation and sustained health promotion. In my first assignment at CREC, the importance of obtaining 'flow' moments was discussed to boost physical play experiences, cognitive ability, and self-determination (Csikszentmihalyi, 1992; Battelley, 2019). Csikszentmihalyi's (1992) interpretation of flow is that the feeling of happiness is to be immersed in an activity/process and thus produces feelings of positivity and progress.

Play and access to play are a UN human right of the child. UNICEF's (2012) mission statement concurs 'A good start in life, is a nurturing and safe environment that enables children to survive and be physically healthy.' (UNICEF 2012, P.6). This tallies with Rogoff's seminal work (1990) on the role of family and communities in relation to children's cognitive development, describing it as "an apprenticeship – it occurs through guided participation in social activity with companions who support and stretch children's understanding of and skills in using the tools of culture" (Rogoff, 1990. p 7). This divergence of experiences and exposure to opportunities is a social justice issue, requiring immediate interventions and public funding to prioritise outdoor play. 'Playing out' is an initiative that aims to eradicate the impediments to geographical and sociodemographic issues around outdoor play provision. Through the collocation of local

authorities and residents, they establish safe play bases and communities within urban housing areas to allow children to have the freedom to play. As a result, families engaged more within the community and value citizenship, children are more active and found new friendships, it also changed community attitudes to play (Ferguson, 2019). The initiative is currently only available in and around Bristol, with financial support from policymakers such initiatives could see a proliferation of childhood play communities.

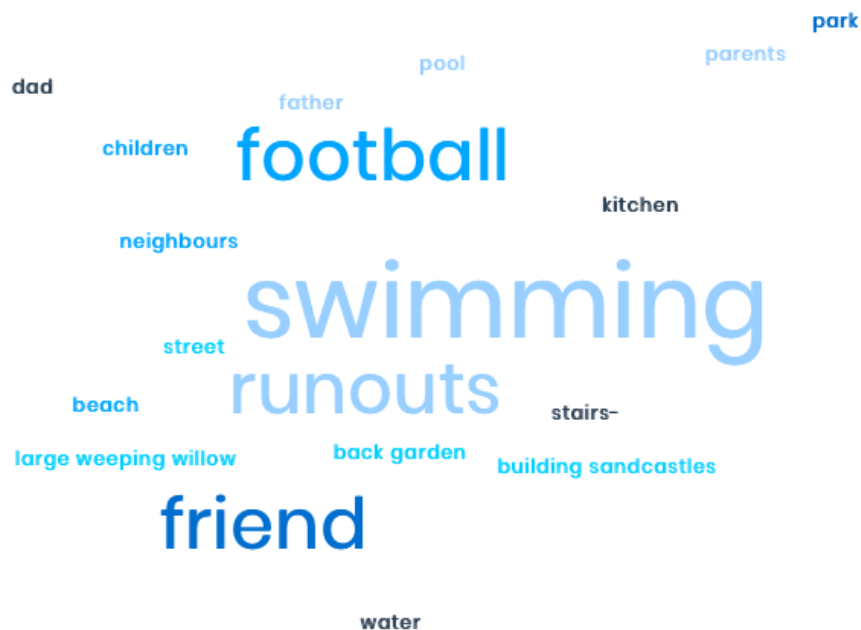


Figure 10.

The online questionnaire produced some interesting data around the question, ‘What is your favourite memory of childhood play?’ (Figure 10). Each respondent described their memory in exquisite detail and all memories involved others, friends, and family members making them part of a social construct. These memories were vivid within the respondents’ minds as they painted such a detailed picture of their past. Only one respondent mentioned indoor play, the other 11 responses were recollections of recreational outdoor play. A third of the respondents mentioned swimming and learning to swim, this is of particular interest as it involves mastery, the learning of a new skill, and the tutor’s level of efficacy and self-determination (Ryan and Deci, 2000; Pearson, 2011; Pannekoek et al, 2013). There may also be a correlation with whole-body sensory stimulation around swimming, concerning the development of the hippocampus, vestibular and proprioceptive systems (Sattleman and Ratey, 2009; Best, 2010). Memory formation and recall is a valuable component to this research study, how and why we remember things depends on many variables. Our emotions and senses are intertwined within our memory and influence how and where we store that memory (Robinson, 2014). Sensory stimulation may be drawn from sound,

smell, touch, taste, sense of self, intuition, and/or sight. The level of sensory information and the degree it is experienced will result in the strength of the memory. If we review the answers from respondents again, we can see the level of sensory stimulation associated with the activities is high, involving multiple senses. The olfactory sense and its connections with the hippocampus in forming and recalling memory has a powerful recall component. We often associate a scent with a person, a memory, perhaps your grandmother's favourite perfume, the smell of home baking, cut grass from playing on a school field or the smell of the seaside. Eaton (2016) purports using sensory stimulation preferences embedded within learning strategies to aid teaching and found respondents' engagement with learning was enhanced using sensory modalities, especially during periods of reflection, this aligns with the principles applied to the intervention. All the respondent's responses were sociable the participants were mutually engaged with the activity. This aligns with data from Roberts (2007) on companionable learning where physical play happened when there was a mutually giving and receiving of attention and support.

Half of the respondents mentioned running, the associated dialogue they used around the term presented a sense of freedom and joy. Running is one of the Fundamental Movement Skills (FMS) to reach these skills children should be afforded the opportunity to pass through each developmental stage and movement milestones (Bloom, 1971; Adolph and Hoch, 2019; Duncombe and Preedy, 2020). Developing FMS proficiency is an essential precursor to school readiness (Duncombe et al, 2020). We cannot rule out the body's ability to move with efficiency and the physiological effects this plays on engagement levels. There is a distinct comparison with that of my childhood and my mother's disability. Although having restricted movement, this served to push my mother forwards to find other avenues to reach the same goal. A study by Madan and Singhal (2012) suggests even the use of movement-related words and their properties can influence verbal processing and memory recall and further proselytizes how the brain and body are inextricably linked. Without experience, exposure, and developing mastery in the earliest of years, children's movement potential, muscle tone, stamina, and elasticity may disengage the body and mind's ability to engage in physical activity. Moreover, the feeling of inadequacy associated with not being able to complete a task could hinder engagement, the way we think affects the way we move and act (Bloom, 1971; Best, 2010; Manners, 2019).

The semi-structured interviews with the nursery staff were conducted online via the Zoom platform. The meetings were recorded and subsequently transcribed verbatim for coding and analysis. The data were analysed using a coding frame created through inductive coding (Barbour, 2008). Each question and respondent's answers were analysed for themes and contrasts and applied against the research questions and literature review (Table 4 and 5). Using such a systematic approach accounted for confirmability within

the research (Shenton, 2004). The responses to each question were compared against the below coding frame (Miles and Huberman, 1994).

Semi-Structured Questions	Respondent Coding
Why do you believe families did not attend any of the workshops?	1,5
Have you noticed any changes in family behaviours, before lockdown, during lockdown and with the easing of restrictions?	1,4,5
Do you think the children in your care have been more or less active during lockdown?	1,3
Do you think family's value physical activity?	1,2,4,5
What have been your personal experiences of the past 15/16 months?	1,2,4,5

Table 4.

Coding Frame	Number
Similarities	1
Negative response	2
Positive response	3
Emotional response	4
Demands on parents	5

Table 5.

Analysing the data confirmed the themes from the three papers in my literature review; staff and families felt extreme pressure during the past year and there was an overwhelming consensus of emotional exhaustion (The Sutton Trust, 2020; Reed and Parish, 2021; UNICEF 2020). On a more positive note, the nursery staff identified their role as a positive contributor to children's physical activity levels and felt valued and acknowledged by parents and carers.

During the interview stage of the research process, one of the nursery managers commented on her experiences of family's physical activity preferences.

Respondent C states,

"And quite a lot of our parents,...They're not "hippy" but they are a little bit ... They like nature, a lot. ...a lot of them would go to the English countryside and they play in the mud. Our children are no strangers to wellies. So you can just see, these are not your typical children, on the cell phone, in front of the TV. They get these experiences. So that's why it's such a shame, you actually didn't have the opportunity to speak to them."

In the above comment, we understand the value and impact the nursery staff place on parents in creating physical activity experiences. A capricious climate like a global pandemic can present salutogenic challenges to even the most influential athlete. Movement versatility and acquisition will not only depend on the affordances (Gibson, 1979) available to the child but the social and cultural capacity in which the child develops (Adolph and Hoch, 2019). Although children are generally exposed to play experiences as outlined in the above statement, we cannot rule out the impact of Covid-19 on social and cultural capital.

In the semi-structured interviews with the nursery staff, they all cited their nurseries ensured children spent a minimum of 3 hours outside, engaged in outdoor play. This is, without doubt, a fabulous environment for children, and exposure to 3 hours of outdoor play every day will provide the children with a wealth of benefits. But the literature explains regardless of the quality of settings, the most important predictor of children's future outcomes is the quality of the home learning environment, so involving parents in their children's learning is the most significant factor in setting children on a positive trajectory (McFarland and Laird, 2018; Sylva, 2020; Birth to 5 matters, 2021). As mentioned in the literature there are still low levels of efficacy in engaging parents towards health programmes (Perkins and DeSousa, 2018; Reed and Parish, 2021).

The nursery staff agreed the movement play pamphlet (Figure 10) was beneficial to families, providing the right amount of information, statistical data, practical tips, and knowledge to allow families to become the enablers to their child's movement play journey. One respondent clearly outlined the importance of not placing undue pressure on families:

Respondent D,

“We love the pamphlet; it is very concise and eye-catching with just the right amount of information not to overwhelm the parents but enough to ignite the interest”.

Reflecting on Shenton’s (2004) four strategies for qualitative research, I conclude my research was credible, despite the paucity of data, there was constant reflexivity applied throughout the process. The workshop and pamphlet are transferable and replicable, they can be delivered to educators to cascade the content to families. Dependability is hard to analyse with such limited data, the opportunity to interview parents would have provided further analysis of the data. Weaving my reflective journal and reflexivity throughout the research process allowed for honesty, integrity, and trustworthiness in my research.

Reflecting on this chapter and the research overall, I realigned my principles and values as an educator, which will be discussed in the next chapter.

Conclusion and reflections

Music influences have remained a strand throughout my work as an educator, trainer, and researcher. Upon reflecting on my research study, I correlate the work with that, not of a solo performer but an orchestra of musicians creating, playing, and performing the music. Or as Rovelli (2021) describes quantum theory “the world is like a giant cat’s cradle of relations, where objects exist *only* in terms of their interaction with each other” Helgoland (Rovelli, 2021, P.121). In the orchestra, we have not just the musicians, but the sounds; the timbre, the tempo, the rhythm, and the composition. All of which develop through stages of interactions, back and forth, interweaving layers of complexity to create a beautiful mesmeric phenomenon. The complexity of life changed during the global pandemic, as sociable beings we were living in an unsociable world. The interweaving of external influences and interactions came to an abrupt halt, and fear, desperation and isolation predicated (UNICEF, 2020). Many of us became the solo performers, drumming our own beats to deaf ears.

Parents have an instinct to best support their child in whichever way they can. As we have read in the previous chapters this is not an even playing field, unequal opportunities will impact the provision available to families with young children and as children grow this disadvantage gap can increase (Bingham, 2016; Department for Health and Social Care, 2020; Reed and Parish, 2021). The Early Inspection Framework thankfully adapted their requirements for physical development and included the term...‘from birth’ (Ofsted, 2020) to outline the importance of movement from the earliest of days. But without having

families on board with this information and appropriate messaging, we cannot hope to see a change in this growing childhood obesity epidemic and attrition of healthy behaviours. Declining childhood physical activity levels should be a pressing concern for every adult in our society.

How can we equip all parents and carers with information and support to boost early childhood physical activity and movement play given the rich cultural diversity of families in England? The International Society for Physical Activity and Health (ISPAH) implemented a call for action for all stakeholders to embed physical activity into national and subnational policies in view to reduce physical inactivity by 10% in 4 years and a further 5% in the next 9 years. The 8 investments are outlined in Figure 11. A multi-agency approach offering universal provision of education, health and welfare services provide the only answer to improve outcomes for children by reducing inequalities between the most disadvantaged and advantaged. It will be interesting to see if the revised Healthy Child Programme will incorporate aspects of the 8 investments and seek ways to support those families yet to access childcare. ISPAH's call to action is only as successful as the people and organisations within it. Unfortunately, there appears to be a lack of cohesion among branches and subgroups within the sporting arena, often competing rather than communicating with each other over policy matters and fundamental issues relating to the health and well-being of society. When we give such organisations power and authority without scrutiny and accountability, we are not working for the best of society to reach the disadvantaged.

The sporting and health arena could learn from non-statutory guidance like Birth to 5 Matters which combine the skills, values and principles of many early year professionals and institutions. Throughout the process of developing Birth to 5 Matters, the content was scrutinised by the sector and even adopted the tag line 'by the sector for the sector'. As an educator with a toe in both ponds, early childhood education and the sports arena, one may often observe a dichotomy within the two fields of academia and would welcome a more holistic approach to be developed to better support both fields.

If, as mentioned in the research, the full impact of Covid-19 on young children is yet to be seen, all stakeholders must endeavour to support families and educators to offer the best provision available. Rather than offering disjointed and disorganised endeavours from each arena; sport, health, medical, education and parenting. Reinstalling children centres to offer a range of services to families could provide a central hub to access each family's needs and requirements.



Figure 11.

All these components will touch a child's life in some way and provoke some level of influence.

Due to the global pandemic restrictions, this study has been far more reflective in its nature than previously imagined. Unable to spend hours collating data, due to lack of respondents allowed more time keep a reflective journal and ponder on my values and principles. This study may not have gathered the information I had initially proposed, but it has allowed a true reflective stance on my personal biases. Is it a mere coincidence to hold such a plight to urge families to explore movement potential considering my childhood was different to that of all my peers growing up with a mother with only 1 leg? My beliefs were socially cultivated during those early years, and it impacted where we could/could not access as a family, family holidays, overheard conversations, and our social status. Our response to adversity can only be discovered when adversity comes our way. Laying the foundations of a salutogenic approach in the earliest of years will equip children with resilience, determination, positivity and self-efficacy. This was evident in the data gathered during the questionnaire, being active as a family was a choice, and the choice appeared to be relevant to previous exposure, environmental capacity and the level of fun experienced. More research into the use of a positive, salutogenic approaches to promote movement play and physical activity in early childhood should be pursued.

The statements I make below have been formulated based on the evidence gathered during this research process. We must always remember our perspectives are fallible, only 10% of what our brain uses to see is from our eyes the other 90% is made up from our brain; our perspectives, our predictions and our memories (Hardoon and Holland, 2021). Exploring perceptions are valuable to future research, however,

critically reflecting on the findings of the research, I conclude drawing on practical, interactive methods combining physiological input using a somatic approach offers the opportunity for the most valuable data and transformative practice. Conducting this study caused me to reflect on my pedagogical principles and values around early childhood, social constructs, and healthy behaviours.

- Children's earliest experiences form the foundation for future development
- Family attitudes and engagement in physical activity influence future salutogenic behaviours
- Learning should be joyous, regardless of your age and the content
- Community cohesion can boost movement play opportunities
- Perspectives are fallible, replace with certainties
- Circumstances constantly evolve, be flexible
- Children are of equal worth, but they are not born equal

This research identifies that during times of crisis many of us are fragile and normal day to day opportunities can feel overwhelming. Many families' opportunities for play experiences were harshly diminished due to lockdown and as a result, families experienced hardship and isolation. For participants reflecting on past play experiences was a fond moment to recall and was often connected to multi-sensory exposure. Respondents valued movement play for their children but not too much for themselves. Families were desperate for more support and childcare hours during the pandemic to allow for both, time to work and the child to be suitably stimulated and nurtured. Appreciative Inquiry and using a positive multi-sensory approach to raise motivation levels and engagement in families' movement play and physical activity may produce significant results.

The PRISM framework is a replicable and useful tool for future researchers, it enabled my role as a researcher to be weaved throughout the process and offered useful stages of reflexivity and a broader concept of the ubiquitous social dynamics involved within research. There is a clear need for more integrated models of early childhood physical activity and movement campaigns along with a review of the Healthy Child Programme (Department of Health and Social Care, 2009). Rolling out the workshop to educators to disseminate directly to families may be one such model, the value of which lies in the delivery, the uptake, and finances available. The nursery staff are keen to facilitate the programme and cascade the information directly to families. Affording the staff time to reflect on their past experiences of movement play and how their perspectives were formed may present a shift in beliefs and values around physical activity and could impact on future physical development provision. The nursery respondents plan to

discuss families PA experiences when new children join the setting, using some of the questions from the questionnaire. This could be a very useful step for all settings and a concrete result from my research.

Saliently, this research has changed me as an educator and a researcher. The analogy of the orchestra has been powerful throughout the research process, and I feel my composition is complete in all its complexity, the pulse of the rhythm of life drumming through every page.

Confounding my research, it is clear we still know very little about the home learning environment even though it is the most influential component to a child's future trajectory.

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Appendices

Appendix I

Glossary

PA – Physical activity

IELS – International Early Learning and Child Well Being Study

PE – Physical education

PD – Physical development

HLE – Home Learning Environment

AI – Appreciative Inquiry

WHO – World Health Organisation

MVPA – Moderate to Vigorous Physical Activity

CREC – Centre for Research in Early Childhood

ECE – Early Childhood Education

COVID-19 – Coronavirus disease 2019 (COVID-19) is caused by a new coronavirus first identified in Wuhan, China, in December 2019

Social Distancing – maintaining a greater than usual physical distance (2 metres) from others and/or avoiding direct contact with people or objects to minimize exposure and reduce the transmission of infection

Lockdown - a temporary condition imposed by the government in which people are required to stay in their homes and limit activities outside the home and avoid public contact

Salutogenic - the capacity to select health promotion when faced with hardship (Antonovsky 1979)

Holistic – the whole person, including social and emotional

Healthification – the process of creating healthy places

Appendix 2



FAMILY WORKSHOP

'In the beginning...there was movement...'

movement is instrumental in the formation of the brain and subsequently **each repetitive movement** strengthens neural pathways, cementing communication between the body and the brain.

"WHAT WE ARE, TEACHES THE CHILD FAR MORE THAN WHAT WE SAY, SO WE MUST BE WHAT WE WANT OUR CHILDREN TO BECOME." JOSEPH CHILTON PEARCE



In the first years of life, more than 1 million new connections are formed every second in a baby's growing brain. By the age of 5, 90% of the architecture of the brain is in place.

Interestingly, we learn more physical skills in our 5 years than at any other time in our life!

What does this tell us?



What is the recommended amount of daily physical activity for your children?

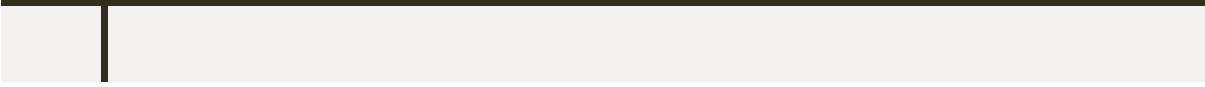
30 minutes

60 minutes

90 minutes

120 minutes

180 minutes



Lifestyle advice for kids Recommendations by the World Health Organization

Activity / Age	Less than 1 year	Between 1 and 2 years	Between 3 and 4 years
Interactive floor-based play	✓		
Tummy time (lying on stomach)	✓	<i>Physical activity is associated with better cognitive and motor development, psychosocial and cardiac health</i>	
Physical activity	✓ Several times a day	✓ 3 hours or more	✓ 3 hours or more
Including moderate-vigorous physical activity		✓	✓ 60 minutes or more
Sedentary time (in prams, highchair, strapped to one's back, etc)	✓ Not more than 1 hour at a time	✓ Not more than 1 hour at a time	✓ Not more than 1 hour at a time
<i>Engaging in reading and storytelling is encouraged</i>			
Screen time	✗	✗ (2 years: -1h/day)	✓ Not more than an hour
Sleep time	✓ 0-3 months Between 14-17 hours 4-11 months Between 12-16 hours	✓ Between 11-14 hours including naps, with regular sleep and wake-up times	✓ Between 10-13 hours including naps, with regular sleep and wake-up times

© AFP Source: WHO

3.3

Some of us may recall rich and vibrant play experiences from our childhood. Memories of climbing trees, chasing our dreams with our friends, endless days of freedom, exploring secret places and the unfolding of time. Physical play broadens our capacity to grow and is essential to a child's optimal development.

For the past year, living in a global pandemic has changed the play accessible to children 0 minutes

Research indicates many young children's physical activity levels and physical play experiences have diminished over lockdown particularly for those living in urban areas and minority ethnic groups (the sutton trust, 2020; ofsted, 2020).



BENEFITS OF MOVEMENT AND PHYSICAL ACTIVITY?

Endorphins are released which make us feel happy
 Freedom of self expression
 Self confidence in our actions
 Mastery – increase in stamina, strength, skills
 Our bodies are designed to move
 Increased blood flow around the body and to the brain
 Increased serotonin levels
 Stimulates brain connections and cements neural pathways
 Skills in problem solving decision making, creativity and reasoning – promoting self efficacy

Types of movement and physical play

Organised sports and activities
Helping around the home
Playing at the park
Playing in the garden
Games around the home; hide and seek,
dancing etc (chair dance, can you find?)
Cycling
Swimming

What did you enjoy as a child and why?

What else to consider?

Tactile experiences are vital for children's development promoting physical and emotional well being and nerve growth. Being touched increases serotonin levels thereby reducing levels of cortisol, slowing heart rate and enables deep sleep.

Infantile touch releases oxytocin, responsible for bonding and attachment.

Holding hands, swinging, cuddling, reading, action songs, tumble play

Tell me about your experiences?

Infants and young children who are nurtured in an intelligent, sensory, engaging, and stimulating environment grow up to have sociable personalities and a more advanced intelligence level. Recent studies also correlate the level of rhythmic co-ordination in young children related to displayed positivity (*zentner and eerola 2010*).

Children's development in the early years sets them on a positive trajectory. Children's development at just 22 months is linked to their qualifications at 26 years. *Birth cohort survey (BCS) feinstein, L. (2003)*

Research identifies early academic training can increase a child's scores on specific targeted tests, but the initial gains soon dissipate, normally within 1 to 3 years, and tragically in some, are eventually reversed.

Furthermore, early academic instruction can produce long-term harm, especially in the realms of social and emotional development. (Gray, 2015)

What does this tell us....Play, Play, Play...in early childhood learning happens through play.



"The path of development is a journey of discovery that is clear only in retrospect, and it's rarely a straight line." Eileen Kennedy-Moore

Thank you for your time today, I hope you've found the content informative and beneficial.

Family Play Questionnaire

Welcome to our nursery/school

We are committed to providing your children with the best learning opportunities appropriate to their stage of development and interests. In order to prepare and plan our environment and provision to best suit your child's needs, we would like to ask a few questions to offer an insight into all the family activities and experiences you share together. Thank you.

How many children do you have in the family home?

- 1 2 3 4 5+

Do you have a garden?

- Yes No Other

What type of physical play do you enjoy together?

- | | |
|-----------------------------|--|
| Going to the park? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Family Sports? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Tumble play? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Dance? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Walking? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Cycling? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Extracurricular activities? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Swimming? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Other | |
| | |

How many hours of physical activity* does your child access during an average week?

- 1-3 3-5 5-7 7-10 10+

How important is physical activity to your family?

- 1 2 3 4 5
- Not at all Extremely important

My child is the most active person in the family?

- 1 2 3 4 5
- False True

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| | |

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- 1 2 3 4 5
- Not at all Extremely important

My child is the most active person in the family?

- 1 2 3 4 5
- False True

Environmental changes have impacted on physical play and is outdoor play is subsequently under threat. Technology, urban living, traffic and overworked parents are all dramatically impacting on childrens' play opportunities.

What does learning through Movement Play look like?

Undoubtedly movement play prepares children for the demands of later life, it allows them to forge an understanding of the world.

Children learn through 'first hand' (practical) experiences, their interaction with their peers, items, artifacts and the environment. The more diverse experiences a child encounters the further the learning potential.

“Children need time and space to explore. Rich environments produce rich minds.”



10 ways to provide a rich learning environment:

- Explore your neighbourhood, notice nature
- Sort through your clothes and accessories together for dressing up
- Play chase and tumble play
- Dance together
- Introduce games and music from your childhood
- Allow children to assist around the home
- Take an observation walk, collect items along the way for your treasure box
- Play games like 'twister', 'Simon Says' etc
- Talk about your experiences of childhood play
- Cook together
- Listen and respond to music together



What is Movement play?



Physical Activity and Movement Play



Most of us can recall rich and vibrant play experiences from our childhood. Memories of climbing trees, chasing our dreams, endless days of freedom, exploring secret places and the unfolding of time.

Physical play is universal, it unites us and broadens our capacity to grow and is essential to a child's optimal development.

Skills are developed in physical play and lay the foundations for all other learning and social, intellectual, physical and emotional well being.

Movement play and physical activity in early childhood build the habits and behaviours for later life. Obese children are 70% more likely to become obese adults.

Exploratory play: Involving sensory experience's; playdough, waterplay (ie, bathtime), clay, painting, crafting, cooking etc (it often involves getting messy!)

Object play: Nature walks, hide and seek with objects.

Construction play: Building and constructing; Den building, junk modeling, building blocks, sandcastles, mud kitchens.

Physical play: tumble play with others, cycling, climbing, running, dancing, sports, playing chasing games, trampolining.

Dramatic play (individual): Pretend playing; superheroes, TV show, royalty, enacting a wedding, can include dolls, fantasy figures etc

Socio-dramatic play (also called pretend play, fantasy play, make-believe, or symbolic play): Building stories with others. Play dates with friends, dress up. etc

Games with rules (predetermined rules): Sports, tag, twister, etc,

Games with invented rules (rules which are modifiable by the players): Chase, hide and seek.

Encouraging all types of movement play will significantly support your child's learning.