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Movement play
Editorial
Anne O’Connor

What happens when we move and play together with our infants?
Jasmine Pasch

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It has been a great pleasure to edit this edition of the Early Education journal with its focus on movement play. At a time of such global uncertainty and anxiety about the future, it is good to be able to focus not just on the broader themes of physicality and movement, but also on relatively small-scale projects and practice that have the potential to make a huge difference to children and family wellbeing.

Movement play is more than just “letting off steam” so that children are better able to sit still and concentrate on their learning – it is the “learning” and as such is vital to children’s brain development as well as their bodily growth. (Jabadao, 2001). And what’s more, children instinctively know this. Their biological drive to move is what keeps them moving – wriggling and jiggling, spinning and sliding, running and jumping, climbing and hopping – building strong neural connections as well as healthy muscles and joints. They move first of all in the womb, using their first language of movement to communicate their wellbeing and response to sensation, as pregnant women and those around them know very well. Then come the early milestones of locomotion - rolling over and crawling - hopefully ticked off on the way to mastering the art of learning to walk. However, parents are rarely told just how crucial the pre-walking stage is to a baby’s all round development and that time spent playing on the floor, wriggling and rolling around as well as crawling about, is vital to good brain development.

The importance of vestibular and proprioceptive development is also something that parents (and practitioners too) receive little information about and yet is intrinsically linked to children’s early movement play. Remember hanging upside down over the back of the sofa or spinning joyfully round and round until you were dizzy? Both these activities were crucial to the development of your vestibular and proprioceptive systems and essential for your later ability to read and write, as well as your emotional and mental health. Despite this, far more effort is spent on physically containing babies and young children and getting them to “sit still” (in readiness for school and proper “learning”) than on enabling and encouraging their natural instinct for movement. Until, that is, we suddenly notice that they have all become overweight couch potatoes, addicted to their screens, and needing exercise programmes to tackle obesity and get them to become more physically active!

The work of all of our contributors shows the range of ways in which this crucial information about the importance of early developmental movement play is being shared with parents and practitioners, and is making a significant difference to children’s outcomes. Jasmine Pasch describes a long-standing project that provides a friendly, interactive and sensitive way of raising family awareness of the importance of the early stages of movement play. Karen Adcock Doyle reflects on aspects of her role in school that enable her to work with both parents and practitioners in playfully supporting children’s early movement development, in ways that will benefit their later learning. Carol Archer and Iram Siraj provide useful reflections on their research with practitioners, highlighting the importance of the environment in promoting children’s movement play and providing suggestions for assessment tools to ensure quality practice. Jan White highlights the guidelines for physical activity and provides practical ideas for ensuring a movement-rich environment. Finally, information about a recent partnership project between Early Education and the London Borough of Newham highlights how local authorities can support raised awareness and improved practice through action research, leading to better outcomes for children and families.

My own work in this area has also reinforced for me another significant factor – movement play is good for the body, brain and soul at any age! The older we get, the more we need to keep moving, not just for the benefit of our joints and waistlines, but also our vestibular and proprioceptive systems. We are lucky that our profession affords us ample opportunity for joining in with children’s physical activity, and to role model the sheer joy of being physically active – of jumping and running and dancing about. “Learning at a critical period in development that play and movement relieves stress and enhances mood may help children sustain physical activity patterns over their lifetime.” (Burdette & Whitaker, 2005). This is an important message for parents too. Promoting the “feel-good factor” in movement play may turn out to be a better way of engaging parents in the serious issues surrounding obesity and sedentary lifestyles than finger wagging and blame (ibid). Children who grow up feeling positive about physical activity are more likely to continue to be physically active in later life and to act as good role models for future generations. Let’s keep moving!

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References
Jabadao (2001). Movement Play DVD
What happens when we move and play together with our infants?

Jasmine Pasch

Baby whispering
I was invited to work with babies, toddlers and their families at Rich Mix Cultural Foundation in Shoreditch in 2009, and this gave me the opportunity to think differently about how to do this, to devise my own approach. I noticed how in many groups the babies were passive or moved around whilst being held by adults, and the more active children were restrained by parents who were uncomfortable or embarrassed by their need to escape and move freely.

In early years we talk about the importance of physical development in young children, but for some reason adults feel a need to put a stop to children moving in ways of their choosing. So I set about providing a session where there are no adult-led activities, the movement work is entirely child-initiated and supported by the watchful adults; the environment is uncluttered and safe; and the time unhurried. Into this mix I create “irresistible invitations” (Gina Davies, personal communication, 2009) to move and play in a variety of ways with minimal open-ended resources to cater for the very young babies through to the more active toddlers.

The floor is an important workplace for this age group, the “athletic field of the child” according to Arnold Gesell. We are fortunate to have theatre lighting and sound, so the space has a magical quality and atmosphere. The floor can be lit with twists and patterns that move and change. The floor is an important workplace for babies through to the more active toddlers.

There are no toys, but there are things that children find fascinating including a Treasure Basket, a small library of books for babies put together by one of the parents, a selection of corks, lids, ping pong balls, shakers, sticks, bottles with different things in like shells, buttons, ribbons, bottle tops and bells that all make different sounds, balloon comets, balls of different material from stainless steel to fabric and felt, and cardboard tube skittles to knock down and stand up again. Parents comment that children love these playthings, and they can easily provide them at home too.

I support parents through one-to-one conversations, and observing and feeding back or voicing over what I see happening in terms of movement and development with their child. “Baby whispering”, if you like. We are all learning together “in the moment” as each child is different from any other, and yet there are some well-known universal milestones.

Bonnie Bainbridge-Cohen talks about how in this first year of life:

The relation of the perceptual process (the way one sees) and the motor process (the way one moves or acts in the world) is established. This is the baseline for how you will be processing activity, either in receiving or expressing, throughout your life. (1984).

Early patterns of movement
Movement, play and dance are fundamental. They are crucial for development at the beginning of life, and just as vital for health and wellbeing throughout life. My own understanding of infant development has been deepened by working with Bette Lamont from the USA, who is a Neurological Reorganisation Therapist. Bette talks about children needing to spend 50 per cent of their time in the loving arms of their parents or caregivers, and 50 per cent of their time playing on the floor. There are connections between body movement and brain development, and some movement patterns are like a “double click” on the brain, opening up many functions rather like when we double click and open up a programme on a computer.

Two significant early patterns will be described here: belly crawling and creeping on hands and knees.

Belly crawling
The young child placed on the tummy will squirm and wriggle in a seemingly random way, but given the opportunity will find a pattern of organisation that will lead to the belly crawl. They may go through a series of movement patterns: homologous (upper/lower), homolateral (using limbs on the same side) and contralateral (using limbs on the opposite sides of the body).

The belly crawl is a top-to-toe workout, and very hard work. It may be a brief phase, but is a critical and distinct phase that puts many specific and necessary pieces into place. According to Bette Lamont:

Many people allow, or encourage children to skip it because when they put them down they hear grunting and fussing that sounds like distress. In many cases this is simply the infant trying to sort out breathing from moving, so the grunts are understandable... and necessary. (Personal communication, 2006).

Babies put on to their backs will wriggle and roll over, finding the prone position by themselves if we give them the freedom to move and get comfortable. Gaining head
control is the baby’s first and most important task as many other movement abilities are built on this foundation skill.

Parents may be reluctant to put their babies on their tummies following the Back to Sleep campaign warning of the dangers of suffocation, so babies must be supervised at all times when in the prone position. They can hold them in the prone position across their legs, over their arms in the “Tiger in a tree” position, or relaxing on their chests. There are many good reasons to encourage “tummy time”, and here are some of them:

- It stimulates horizontal eye tracking, and helps the eyes to work together in correct alignment.
- Early head movement helps the neck to grow strong and the skull to round out, preventing flat head syndrome (positional plagiocephaly).
- It strengthens the arches in the feet, helps with heel to coccyx alignment, and stabilises the hip sockets.
- It promotes cervical and lumbar spine stability, and neck strength, so helps the development of the mature S curve from the infant C curve.
- It makes the child aware of the genital area through ventral stimulation, and helps with on time toilet training.
- It helps with the supination and pronation of the lower arm, and helps the hands to open out from the grasp reflex to eventual cortical control (fine motor skills).
- It creates a feeling of vertical “throughness” which helps the child to feel grounded.
- It is the first self-determined movement.
- It seems to be connected with brain stem development, and functions that ensure survival: accurate perception of pain, heat, cold and hunger.
- It builds a sense of self, and is the basis for development of empathy and compassion.

**Developmental process**

Youngsters given good health and opportunity will access these important movement patterns as part of their everyday play, and they will access them in their own time. Each of the patterns is a potential within us, but we have to actually do them to realise that potential. It is important not to rush youngsters through the developmental sequence, but to allow them to find the movements and the transitions. Tina Bruce talks about hurrying youngsters on to the next stage as being like putting them in a pair of shoes that are the next size, and therefore too big (personal communication). We must join them as they play on the floor and take pleasure in their discoveries and achievements as these unfold in the moment.

There may be unintended consequences of putting babies in devices which limit their ability to move in an unrestricted way, such as in buggies, bucket shaped containers, bouncy chairs, bumbos, swinging devices hanging from door frames, baby walkers or comfortable looking baby gyms where the toys move overhead, but the baby is immobile apart from their eyes and fingers, and where their spine is only ever in the “C” curve shape. These devices may be convenient, and appear to keep the baby safe and content, but they waste valuable time and interfere with the baby’s development, keeping the baby in a neurologically neutral state.

The development of neuromotor skills is a dual process, driven primarily by maturation within the nervous system but also entrained in the context of the physical interaction with the environment and social engagement. (Goddard Blythe, 2009).

**Creeping on all fours**

Towards the second half of the first year, the baby may push up onto hands and knees and after a bit of rocking back and forth, pushing off and going backwards instead of forwards, the infant begins to creep on all fours.

There are many good reasons to encourage this too, including:

- It stimulates vertical eye tracking, visual convergence, teaches the eyes to cross the midline and practice near and far point vision.
- It promotes hand-eye coordination.
- Shoulders and hips are further rotated into alignment.
- The hands are more fully opened out as they support the weight.
- Balance away from the floor is explored through much trial and error, and mastered gradually. This forms the basis of balance throughout life (physical and emotional).
- It involves working through a number of stages that the child must practice and play with, before arriving at the cross pattern crawl.
It supports the development of the corpus callosum which is the major inter-hemispheric communicator and as such it mediates between the hemispheres to synchronise their particular specialisations. (Field, 1995).

It fires connections between the two hemispheres of the brain supporting retrieval, filtering, sorting and sitting, and sequencing, and without the connections we may see difficulties knowing right from left, letter, word and number reversals, eg b/d, p/q, on/ no, patterns of learning and forgetting the same thing several times. In short, difficulties with learning and memory.

It seems to be connected to development of the mid brain, building a bridge between oneself and the world and making relationships.

It enables the vestibular, proprioceptive and visual systems to connect and operate together for the first time. Without this integration there can be a poorly developed sense of balance and poor space and depth perception.

Support and attentiveness

It can be difficult to watch babies and toddlers struggling to gain mastery over their body movements as it is hard work and they become frustrated, but with plenty of time and practice they will solve the problems with our support and attentiveness. It is tempting to prop them up, or use devices that hold them in an upright position, but if they cannot maintain this position themselves then it is of no benefit. Bette Lamont advises that the fussing and crying we hear borne of frustration is like salt. A little is fine, but a lot is harmful, so the youngster needs comforting and reassuring if they get too stressed.

There are useful films available on the internet (easily accessed by smart phone) that demonstrate these important movement patterns in an accessible way (see references).

Bodyfulness

Having described some aspects of physical development, I want to differentiate this from physicality in young children, or what I prefer to call “bodyfulness”. If the more familiar concept of mindfulness means: “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally”, then bodyfulness might include:

- sensing: smelling, touching and being touched, tasting, hearing and seeing things from their perspective, and connecting up the hidden senses of balance and proprioception
- getting the body moving and under control with practice and struggle, and working through frustration with support
- being in the body, starting from the inside to discover all about themselves, the world around them and the people in it, including other youngsters
- being active and exploring, following their curiosity and desire
- whole body movement in different planes: up and down, forward and back and rotating around
- finding out what happens when... or if....
- problem solving and making mistakes
- being imaginative and creative
- being loved and bonding with others
- feeling joy, anger, sadness, interest, excitement, fear
- feeling pleasure in the body moving
- resting, relaxing and breathing in those loving arms.

For our infants there is a whole world of sensations, feelings, thoughts and images to explore as their bodies and minds grow and develop under our watchful gaze.

Parent’s comment

Here is a comment from a parent on their experience at Rich Mix.

I moved into the area when W was 9 months so it was great to have somewhere social to go but what was most wonderful and felt really unique, was Jasmine’s radical commitment to movement development and play. I could sense her knowledge and loved reading the information she sometimes offered about the importance of movement in child development eg I remember well the leaflet on “tummy time” which I photocopied and passed on numerous times for friends. This is stuff that as mothers we do not generally know. Even as a dancer myself I realised I was of very limited knowledge about physical and brain development of children, and was grateful to have access to this as support for my instinctive belief in movement. I also just loved the freedom, ease and playfulness of the sessions...I loved being able to lie down and roll around with my baby. This was really great for me and my own body, especially as I was extremely sleep deprived and suffering from some post-natal depression at the time. To be able to stretch and relax in the company of my child having a lovely time, and with Jasmine’s kind attention, was really good for both me and W. The sessions were a highlight of our week. In our generation of exhausted working parents, often disconnected from families and communities, and where both children and carers are increasingly attached to technology, it is potentially seriously damaging to the developmental processes of babies if they don’t have enough opportunity to move around and to play physically. I knew this instinctively as a dancer myself but in Jasmine’s sessions I was able to properly appreciate and explore this in a place of fun, friendliness and real relaxation.

Mother L

Jasmine Pasch is an Associate of Early Education, working across the areas of physical development, movement, dance and play as a movement practitioner, educator, trainer and writer.

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Films

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Somatic movement in early years
Karen Adcock Doyle

I work as a senior leader in a primary school in North Yorkshire with families and their children aged from 2- to 11-year-olds. As part of my role I have responsibility for children’s wellbeing through the Social Emotional and Mental Health (SEMH) part of Special Educational Needs and Disability. I trained as a somatic movement educator and use this approach in working with children, promoting early movement with families and practitioners in early years and working with older children to revisit early movement exploration.

**The problem of restricted movement**

One of the best parts of my day is meeting and greeting families in the morning as they arrive in the school playground. I see children coming up the entrance on bikes, scooters, running, swinging on the barriers and climbing over the wall, kicking footballs, and squealing with laughter as they chase their friends. We open the main playground early so children can play football supervised and have a large space to run in, ten minutes before school starts; this has helped stop fallouts, and allowed energy to be run off before lessons. I also see babies and the young members of our school in buggies, or standing on buggy boards; young children with rucksacks or harnesses with a handle for parents to hold and restrict movement, keeping the child close; lifting them by the handle into the air to stop or change the child’s direction; parents carrying heavy car seats with tiny babies in them. Although this keeps children safe as they travel to school, the problem is that they are using restrictive devices that prevent the child developing well.

The amount of time very young children spend in restricted seating devices is also a concern. Loving families do what they think is best for their child by buying these devices, as there is very little information about the importance of early movement exploration, particularly floor-based movement and play. As soon as they are born, children are carried and placed into structures to support them to sit upright, making it difficult to move freely and explore the environment and to be inquisitive.

In *Wisdom of the Body Moving*, Hartley asserts that: “all patterns once developed and integrated continue to be refined and strengthened throughout childhood and adult life”. Families celebrate children’s development in stages such as reaching, rolling over, sitting up, crawling, and walking. In between each of these stages there is a complex range of movement skills being developed that support a child moving from lying to sitting, sitting to crawling, crawling to walking. If children have had opportunity to freely explore these “in between” movement stages, they are more likely to be confident movers.

I am interested in helping the children who are struggling with some aspect of physical or emotional wellbeing. These children are often unable to transition from sitting to standing, they wriggle and move at carpet time, they struggle to walk up and down stairs, unable to coordinate their movements, they are often not toilet trained, and they avoid food that needs chewing and can’t use a spoon. In older children I see how they are often unable to develop strong peer relationships, and may react by hitting and hurting others, have low self esteem, impulsive behaviour, trouble resting, and experience constipation and bedwetting. In school they lack the ability to hold a crayon and mark-make, hold a pen and write, to sit still and pay attention and to track a line of print with their eyes.

The addition of free movement in school opens up young children’s worlds. Taking them from an often restricted, small and limiting environment. Opening up opportunities for body movement allows them to explore how they use space, how to interact, and opens up the mind. This builds confidence, enabling children to really believe “I can do it”.

**Case study: 1-year-old**

A 1-year-old comes with her mum and older sisters to the school coffee morning. She sits in the buggy placid and quiet; mum has a well-deserved coffee while the little ones play. Mum and baby have been spending an hour a week with S, a children’s centre practitioner, focusing on sitting and crawling. The baby is resistant, but after several sessions – success! She briefly crawls alongside the adults. S was concerned, however, that after missing a week, at the next session she couldn’t sit upright, and kept collapsing like a rag doll. We watched the Baby Liv film and discussed the prerequisite skills for crawling as exemplified in the film. S is a highly skilled practitioner and quickly made the connections - this little girl had missed earlier movement patterns and therefore did not have a secure foundation to build on. Because earlier movement patterns had not been embedded, she was unable to maintain her crawling. Through observation and discussion with mum we were able to understand this little girl’s early movement experience and give her lots more time playing on the floor.

**The need to be witnessed**

Children naturally want to move and be seen. Somatic movement talks of witnessing: the ability to, without judgement or direction, give full attention to a child, being their companion as they move and explore their environment. In the nursery playground, I am immediately surrounded by 3- and 4-year-olds. They want me to watch them climb and jump from a pirate ship...
that becomes a space station, a batmobile. All are shouting to be seen, creating long queues refusing to jump until my eyes are on them. A child behind is shouting at me over and over again; when I turn around, he holds himself absolutely still on a milk crate in Spiderman pose – it’s easy to interpret; the stillness and the sculpture are incredible – he’s 3-years old - ready to leap! What inspires me is how children show us their ability if we take the time to tune in and listen. They have all the bodily resources, they just need some safe ground to experiment, no judgement, and to be seen.

**Missing stages**
I regularly join in with PE lessons, and watch in amazement as the children move. There is a 4-year-old who is so fast at running that no one can run fast enough to get away from her in a game of tag. When the children return to class, I am surprised to see the amazing sprinter can barely hold the pen and her marks are difficult to understand. I’m confused: how can such a skilled sprinter not be able to hold a pen and mark make? The following week in PE, the children are learning to throw a beanbag in the air and catch. Again, the little sprinter throws her beanbag; it goes off in one direction and her eyes look in the opposite direction. The PE teacher and I discuss developing a game where all the children crawl on the floor. I observe that the sprinter (along with three other children) cannot cross-crawl, and she struggles to push and pull herself along on her belly. When I share the names with the EYFS team, they are the four children who have been identified through the WELCOM assessment for daily intervention. This interests me, as there seems to be some link between language, communication and movement.

**One-to-one sessions**
Some children observed struggling in PE lessons work one-to-one with me. I start by playing alongside them, encouraging games and role-play. We get Lycra and sit holding the sides, sliding underneath and pulling ourselves back out; we make hammocks, and rock to familiar songs. We create dens, complicated systems of tunnels, and hiding places that can only be reached by getting on your belly and pulling yourself in or pushing yourself out. We play lots of games that use stories with sea creatures and animals that have four limbs on the ground, giving children lots of time on the floor with their bellies and limbs in contact with the ground. We slow right down, learn to balance between rest and play, breath deeply, pay attention to sensation. Children often need the toilet or feel hungry when playing in this way.

**Case study: 5-year-old**
In discussion with the mother of a 5-year-old who was having difficulties in class, mum told me how the child’s first exploration of crawling was abruptly stopped when something fell on her head and she needed stitches. She recalled how she always something fell on her head and she needed stitches. She recalled how she always seemed to be having accidents after that, and quickly went from sitting to walking. I spend regular time in movement-play with this 5-year-old and a friend. We make “cushion sandwiches”, inviting her friend to lay on one of the cushions while we place another one over the top of her, giggling. When it is time to switch, she looks worried and does not want to play the game; instead, she encourages her friend to have another go. What might it be like to experience something heavy landing on your head unexpectedly? Maybe you wouldn’t feel safe to lay on your tummy exposing your back and head. So we play lots of crawling and lying-on-your-back games. After a few weeks I introduced a yoga ball, and the little girl watches me roll about, balancing first on my tummy, and then my back. She decides she enjoys sitting on it with feet on the floor, and after some sessions wants to have a go at rolling onto her tummy. The pleasure on her face said it all - her confidence in “having a go” is building. We use lots of stories and imagination: we are starfish under the sea, and I blow bubbles while she lays on her back, reaching with her head, arms and legs to pop the bubbles. We come out of the sea as alligators, looking around and slowly moving to safety. We use the yoga ball to count who can balance for the most seconds with hands and feet off the ground. We find words to describe sensations and we draw pictures and narrate stories. The quality of her mark-making and time spent concentrating are dramatically improving after movement-play and her teacher tells me she can see a difference: the child is calmer, comes to the carpet, and sits for longer.

**How somatic movement makes a difference**
Somatic movement enables children to develop body confidence and self-esteem, to become skilled movers and develop self-regulation skills. Somatic movement education works with the unfamiliar and vastly important language of sensation or “sensate body”. I offer children an opportunity to explore movement, and this is supporting them on a day-to-day basis to access education and feel a valued part of their school community.

Karen Adcock Doyle works as a Pupil and Family Support Manager in a primary school in North Yorkshire part of their school community.

**Further reading**
Movement matters: promoting physical and mental wellbeing through movement play from birth to eight

Carol Archer and Iram Siraj

Why is physical wellbeing so important?
The body is inextricably linked to the brain, which develops and structures itself based on experiences. Hannaford (1995:15) reminds us that learning is not all in the head: “the body plays an integral part in our intellectual processes from our earliest moments in utero right through to old age”.

Every time we move, think, interact, talk, walk, learn and feel or remember something, our neurons are making connections. Young children stimulate these connections as they encounter new experiences by repeating them over and over again in an attempt to make sense of the world around them. In this way they design their own nervous system as they encounter a myriad of choices and challenges through their lives (Archer & Siraj, 2015a:8). It is primarily through movement experience that young children stimulate the neurological system; it is movement that fires and wires the brain. Movement is the stimulus that connects the mind and body, feelings and thinking, laying important foundations for young children’s future learning and development (Hannaford, 1995; Goddard Blythe, 2005; Lamont, 2007).

Children express themselves through movement in many different ways, as they run, walk, spin, slide, hang upside down or lie/move on their tummy and roll over. Children want to connect to their body, to their creativity, to breathe life into their body, expressing their capacity for sadness and deep joy. The young child typically yearns for movement, to relate to, and interact with others, and it is through movement and sensations that they strive to understand the world around them. The optimum learning environment would therefore need to offer young children a myriad of opportunities for small, fine movement and energetic play where they are encouraged to be curious, imaginative and risk takers.

Creating the optimum environment for physical activity
It takes skill to create an environment that stimulates purposeful physical play and movement that motivates curiosity and extends learning. Careful consideration needs to be given to the organisation of equipment and resources provided both indoors and outdoors at the Early Childhood Education Centre (ECEC) (Archer & Siraj, 2015a; Archer & Siraj, 2017). Movement indoors may take place on the floor where children tummy crawl, crawl on all fours through tunnels, roll around and climb over soft play shapes, pull and stretch using Lycra material, gather together holding onto a large cotton covered elastic. Movement patterns that develop here will support posture, balance and coordination, all of which are prerequisites for functioning positively in a more formal classroom later.

The adult role is to join children on the floor, down on their tummies, or crawling, making eye contact, smiling, laughing and communicating with them at their level, interacting with them as movement takes place.

Young children need spaces to run, to climb up hills and down again, to roll around on the ground or down a slope, to climb trees or a climbing wall, to hang upside down, to jump from a great height, to plant, grow and harvest food. They need places to dance and to express their feeling, spaces to be still and quiet, to be in nature for their wellbeing and health. Physical activities involving building with mud and bricks, which can be transported by wheelbarrow, encourages the child to lift and pull and push using muscles and the whole body.

A wide range of resources, portable and fixed equipment must be accessible on a daily basis both indoors and outdoors for children to engage in all the physical activities and movements that they want and need to do.

Researching the role of the early years pedagogue
The pedagogue can participate with children in their physical play, joining them in their movement activities, sustaining their thinking and ideas through communication, supporting their curiosity and problem solving as it arises in the context of their play. “The most important element of effective pedagogy is not the person who initiates the activity, but the degree to which adults and children themselves engage in co-construction and high quality interactions between adults and children amongst children.” (Siraj-Blatchford, 2010).

In an optimal environment the young child would be free to explore their body potential
though a multitude of movement experiences, although this should by no means end in their early years. The role of the pedagogue not only requires nurturing the child’s interaction with the world but also demands that we teach in such a way that children develop motivation, competence and confidence to be active through their lives (Lloyd, 2016). This is undeniably, as Lloyd suggests, “a tall order” for the pedagogue, who will undoubtedly need much curricular and pedagogical support to fulfil their vital role in nurturing and supporting children in the development of their movement capabilities.

This was an important aspect of our small-scale study in 2011 (Archer & Siraj, 2015b) which comprised an intervention consisting of training in movement-play for whole staff teams, including managers and deputies. We were also interested to know whether an intervention not only made a difference to pedagogy but whether children’s movement experiences improved. At the time of our study there was, to our knowledge, no straightforward means of assessing the environment and pedagogy in movement-play so we developed a scale, modelled on the Early Rating Scales (ERS), for the purposes of carrying out the study (Archer & Siraj 2015b).

We found prior to the intervention that practitioners in all settings involved in the study adopted a non-interactive, observational approach in their role when children were being physically active. Comments made by practitioners in response to questions about joining children in their movement activities included: “adults don’t join babies as they move”; while other members of staff working with different age groups responded with: “I observe”, “I make sure they are safe” and “We create the space for movement and the adults stand in specific areas” and observe the children in their play outdoors (Archer & Siraj, 2015a:30).

Interestingly, similar results were found when trialling our new extended Movement Environmental Rating Scale (MOVERS) in the UK (Archer & Siraj, 2016) and Australia (Kazmerska-Kowalewska & Jones, 2016); that is that the level of adult engagement in movement with children was minimal or below prior to an intervention. These findings suggest quite strongly that early years pedagogues need to be trained well in order to feel confident to carry out their role effectively in this area of learning.

After the intervention our findings showed that staff were more knowledgeable about the movement curriculum and understood how they could best implement it and the importance of engaging in movement with children. This has been borne out over the extensive period that staff in early childhood settings in Camden have been trained. An Ofsted inspector recently observed children engaging in movement indoors and outdoors during her visit at one of the children’s centres and commented how confident the staff were in their role, knowing when to step in and support children and when to stand back, as they competently assessed levels of risk and safety (Barker, 2016). She recognised that staff were well-trained and experienced, confident in letting children run around with bare feet, hang upside down on equipment, jump from great heights, while staying close by and giving children guidance when needed. The ethos of the centre is to support a child when they show interest in any risky or challenging movement activity rather than discourage them unless of course it is unsafe or inappropriate (Barker, 2016). In her observations of specific children the inspector noted their ability to move around indoors and outdoors independently, and their high levels of confidence as they explored the environment, their ability to regulate their behaviour when energetically moving on the mats and, importantly, their resilience as they tackled the ups and downs encountered during their play.

The early childhood settings in our study which received the intervention were assessed post intervention using the movement-play scale and were found to have made significant improvement in levels of adult engagement in movement with children (Archer & Siraj, 2015b). The post-test results indicated that adults in the intervention settings were encouraging, initiating and joining children in their movement activities after training, support and advice. Observations after training revealed that children were engaging in a wide range of movement activities using a variety of resources. Findings therefore showed that improvement in the quality of the adult role in this study led to children expanding their movement repertoire. However, this was not found to be the case with practitioners at the comparison settings that did not receive training who were taking on a more passive, observational role.

Assessing practice and environment for high quality, physical well-being

The Environmental Rating Scales (ERS) have traditionally been used to assess areas of social and emotional development (SSTEW, Siraj et al, 2015), language and cognitive development (ECERS-R, Sylva, et al, 2010) and social-emotional behaviour (SSTEW, Siraj et al, 2015). An important and overlooked area however, is the quality of the ECEC environment and pedagogy in the area of physical development and movement (Siraj, 2016). We have addressed this gap in the development of the new Movement Environmental Rating Scale: The MOVERS for 2-6 year olds provision (Archer & Siraj, 2017).

The MOVERS can be used to assess the quality of the environment and pedagogy. There are four subscales: curriculum, environment, and resources; pedagogy and physical development; supporting physical activity and critical thinking; and parents/carers and staff. These represent 11 items to be rated individually. This scale uniquely includes: children’s movement vocabulary; sustained shared thinking by communicating and interacting through physical activity; and supporting children’s curiosity and problem-solving. Each item is supported by extensive supplementary information.

Most ECEC specialists and developmental psychologists would argue that not only do the three main domains of development, cognitive, social-emotional and physical, matter but that they overlap and are interrelated (Bowman et al., 2002). For instance, most specialists in the area of literacy would concur that hand-eye coordination and fine motor skills for the pincer movement are vital to early writing or that children’s role play and physical activity play is vital to social skills, language development and reasoning skills. Yet there are no equivalent ERS of ECEC environments.
and pedagogy that measure the quality of the physical and movement environment for young children. We would go so far as to say that the staff who work with young children are least knowledgeable about physical development and its relationship to promoting other domains of development (Goddard Blythe, 2005; Archer & Siraj, 2015b).

Yet we are living in an age where increasing numbers of young children are overweight or obese and who are vulnerable to chronic health conditions (WHO, 2013). Changes in dietary patterns, physical inactivity and increasing sedentary behaviours are seriously affecting young children’s health today. Obese children have a higher chance of becoming obese adults, leading to premature death and disability (WHO, 2013). In the UK the Chief Medical Officers (CMOs) (Department for Health, 2011) for the first time have provided new and revised recommendations for physical activity at a national level for children under 5-years-of-age: floor play for infants not yet walking and parent and baby water play; and three hours of physical activity for children walking independently.

Increasing numbers of young children are attending a range of early childhood settings, including compulsory schooling, children’s centres, preschools, playgroups, kindergartens, day nurseries and childcare provision as well as childminders, family daycare or being looked after by relatives. With such increasing numbers of young children attending early childhood education and schools at a critical time in their development, these settings could provide a suitable intervention in terms of levels of physical activity, reductions in sedentary behaviour in line with the CMOs’ recommendations and implementation of opportunities for children to move through significant patterns to support their learning and development. But how do we assess how well we are doing after training and implementation? We would like to suggest that their knowledge about this curriculum area had improved and their confidence in implementing it had grown. Participants held meetings with parents to inform them about this vital area of children’s learning and development. They were also aware of the CMOs’ recommendations for physical activity for young children and were addressing this at their settings. Training in the use of the movement-play scale enabled participants to assess their own settings and plan for progression. Participants appreciated the length of the course which gave them time to implement and discuss any issues with colleagues, bringing back successes and constraints to each session.

The MOVERS is a unique assessment tool for physical development which can be used for research, self-evaluation and improvement, audit, and regulation. The importance of the MOVERS lies in its focus on physical development, movement and practice when supporting children’s health, wellbeing, learning and development. The MOVERS is currently being tested further for reliability and validity by the Early Start Research Institute at the University of Wollongong, Australia. We recommend that the MOVERS is used alongside our book, Encouraging Physical Development through Movement-Play (Archer & Siraj, 2015a) which provides deeper knowledge about movement and physical development, both theoretical and in practice, and is illustrated with photographic examples of adults and children engaged in physical play activities. The MOVERS scale is intended for settings that work with children aged two to six.

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Photos supplied by the North London Forest School Nursery, Agar Children’s Centre and Talacre Community Sports Centre with permissions from parents.

**References**


Creating a movement-rich outdoor environment

Jan White

A new focus on physical activity

The government’s long-awaited Obesity Strategy, Childhood Obesity: a plan for action (HM Government, 2016:10) states:

> The early years are a crucial time for children’s development. One in five children are already overweight or obese before they start school and only one in ten children aged two to four meets the UK Chief Medical Officers’ physical activity guidelines for this age group.

Even more than the rapidly rising levels of overweight and obesity in children, anxiety has been growing in the medical profession regarding the low level of fitness in our children, which gives rise to a very wide range of health and developmental issues. Research in 2014 indicated that the majority of primary school-aged children have inadequate levels of physical fitness (especially stamina and coordination) to ensure health and physical literacy, even at 5- to 7- years-old (Fit for Sport, 2015).

After many years of reporting on the issue, concern about the increasingly sedentary nature of young children’s lives led to official recommendations for children from birth to five of a minimum of three hours’ activity a day (Department of Health, Physical Activity, Health Improvement and Protection, 2011). The British Heart Foundation (BHF) has been at the forefront of promoting these physical activity guidelines for under fives (BHF, 2016), yet they have been worryingly little known amongst early years practitioners and parents alike.

So it is a great relief that in the Obesity Strategy the Government commits to launching an awareness-raising campaign and promises during 2017 to: “update the Early Years Foundation Stage Framework to make specific reference to the UK Chief Medical Officers’ guidelines for physical activity in the early years (including active play)” (HM Government, 2016:10). Providers of early childhood education and care will therefore need to consider how active their children actually are, and in what ways they are limited or restricted. They will want to review how their policies, provision, planning and practice can encourage movement and physicality, and seek to replace sedentary behaviour with physical activity.

The physical activity guidelines

It is emphasised in the Chief Medical Officers’ guidelines that this activity must be taken playfully, across the day and according to the child’s lead; so this is not adult-led, programmed physical exercise but the naturally active play that children willingly engage in (see the Department for Health’s Every Movement Counts infographic). It is also emphasised that the three hours is understood as a minimum, rather than a limit – young children benefit from much higher levels than this. In fact this should not be difficult, as research shows that 1-year-olds can be naturally on their feet and actively moving around for over six hours a day (Adolf et al, 2003).

Responding to the guidelines

Young children show a need for natural bursts of activity interspersed with periods of rest and recovery. Activity should therefore be encouraged in frequent and diverse doses across the day, rather than all at once. Many different experiences are clearly required to support the many important physical processes taking place during early childhood. In order for children to develop well physically, they need a great many opportunities every single day to play with, explore and experiment with their bodies, the spaces around them and the features, equipment, forces and resources in their environment.

The most effective approach to support movement and activity in this way is to offer continuous, open opportunity for each child to respond spontaneously to their own body’s need for physicality by making lots of possibilities available through the planning of layout, provision, routines and experiences, combined with active, playful adult interaction.

Physical activity of pre-schoolers has been found to be highly correlated with their child care environment... More active play opportunities are needed to increase physical activity, including more outdoor time [and] more teacher-led and child-initiated active play, (Tandon et al, 2015)

Therefore young children need access to physically active play experiences for lots of time, every single day, right across the year, all through their childhood. The best way for children to develop physically and healthily is for movement to be possible in and out of almost everything they do, both indoors and outdoors, so that they can engage in valuable energetic and full-bodied experiences naturally, across and throughout each day. In this approach, physical development is seen as part of life rather than a separate series of activities. An environment that supports children’s physical development really well will have physical activity built into every experience. Feeling and understanding through sensations in the body (embodied, intuitive thinking) is also a key component of learning language, mathematical and scientific concepts and creative thinking, so the best learning for young children is full of action, doing, moving and whole body use – active learning in a physically-based curriculum.

The culture of the setting has to be that every child must have movement-filled days throughout their time in the centre, and be supported to have a movement-rich existence in their family life too. This culture needs to be fully shared and visible in all aspects of the centre’s work. Such cultural value of movement and physicality then drives decisions at all levels and in all aspects of provision and practice: how the environment is set up, how it operates and is used, and how it is to be developed in the future. This culture results in two
key considerations for overall practice: maximising integrated opportunities for physicality throughout the day, and reducing the time children spend being sedentary, other than when resting or sleeping.

Making the most of play outdoors
What have we learned about how the environment and resources provided outdoors can encourage movement, energetic activity and full-bodied physical play? Each of the following elements can contribute to creating movement-rich outdoor provision, and could be gradually worked upon over time.

Ensure that the stimulus and opportunity for both controlled and energetic movement exists.
There is space to move and run without obstruction, and interconnecting pathways with variety and challenge built into them.

This means capitalising upon the feeling of bigger and more open space and the stimulus that this provokes for energetic movement. To make the most of this, ensure that wide and long views and spaces are available – a climbing frame in the centre of the space can significantly reduce both the feeling of space and the opportunity to simply run and chase. Interconnecting pathways, tunnels and bridges all encourage children to move along or through them and can hugely increase the motivation to be active and to transport materials or each other.

Ensure that children experience a range of ground materials that increase challenges for locomotion and demand more complex use of the body.

There is a variety of surfaces – soft, hard, loose, uneven, bumpy.

Outside it is possible to provide a mosaic of different kinds of ground surfaces, from hard, flat and resilient, to more textured or bumpy, to softer, less firm and possibly slippery, to uneven and less predictable, materials that give way underfoot, or gradients and different levels. Each of these puts the moving child in a different association to the ground around them, so that they can explore their own relationship to surface, space and gravity. Each surface in such a mosaic makes different demands on the child’s management of their body, and the contrast between different types of surface makes the child change how they use their body as they move from one to another. Extended daily experience being active in such a “terrain” will result in strong self-awareness as well as good control and coordination.

Ensure that a variety of levels are available and that there are lots of ways to move between them.
There are different levels and a range of ways to move between them, including slopes and steps, raised surfaces to balance along and jump off and stepping-stones to jump between, and things to clamber, climb and wriggle over, under, between and through.

The outdoor world is a three-dimensional one and this should be harnessed for physicality in an early childhood setting. Consider whether you already have different levels that children could make more use of, both for moving themselves and for lifting or lowering resources. When children can choose from alternatives for up and down experiences and methods that are side by side, so that these can be compared or contrasted, the learning value is multiplied.

Give children extensive surfaces to work on in a dramatic, energetic and whole-bodied way.
There are large vertical and horizontal surfaces for aiming, bouncing and painting on a grand scale.

Expansive surfaces are wonderful for working on a large scale with complex, whole-arm movements that incorporate strength and control in the shoulders, elbows, wrists and fingers, encourage use of both arms and raising them above the head, and additionally work the muscles of the torso, hips and legs. Large surfaces also tend to engage several children at the same time, working side-by-side or collaboratively.

Make the most of walls, fences, sheds, paving and tarmac for chalking, painting with water, or spraying, squirting and splashing with poster paint. Use fences for large-scale weaving with ropes, ribbon, tinsel and tapes. Painting with water can involve a huge range of applicators from DIY stores: consider how well and in what ways these resources will challenge and extend your children’s overall physicality as well as their fine motor control.

Give children copious quantities of loose materials that can be worked with in a big and full-bodied manner.
There are places and materials for digging and filling, such as sand, soil, gravel and pieces of wood.

Places to dig using long-handled tools, and materials that are loose, heavy and in good supply, such as sand, soil or gravel, provide
fabulous physical workouts for lungs, circulation, bones, muscles, ligaments and tendons, and give strong stimulation for wiring up the proprioceptive sensory system throughout the body. The most effective provision for physical development, and the most satisfying discovery and play, will be a digging place that is large enough to get into, especially with others, deep enough to push the spade well under the surface and lift up a full load, and big enough to bring in large buckets or wheelbarrows to transfer this into. Long-handled tools demand use of much more of the body than hand tools do, and metal spades are much more effective for digging deep than plastic ones can be.

Ensure children have a highly flexible environment that encourages them to interact with resources in a very physical way.

There are lots of things to lift, carry and transport, especially big, heavy and awkward items, and a variety of containers are available to fill, empty and move things in, including carts, wheelbarrows, baskets and buckets.

Loose materials can be gathered, handled and manipulated, piled up, collected into containers, transferred between containers, mixed together and carried about by children. As well as sand, gravel and soil, water is a superbly manipulable substance that can be contained, poured, transferred and transported in abundance. It is clear that the greater the scale that children are able to work at, the greater the demand on all aspects of physical development, and being outdoors allows for the use of larger, heavier and more awkward resources as well as offering a larger, more physically demanding space and landscape to interact with them.

Ensure that young children’s love of bikes, trikes, prams and pushchairs is harnessed to best effect.

A wide variety of self-propelled, wheeled vehicles are available.

Bikes and other wheeled vehicles are superb resources for encouraging the kinds of actions and movements needed to drive the core neurological maturation processes that are the foundations of healthy physical development. Moving through space, especially fast down a slight slope, and working every part of your body as it is used to push, pull and lean feels fabulous - no wonder young children love these treasured resources so much! Strength, flexibility, hand-eye coordination, spatial awareness and timing are also amongst the physical benefits gained from playing with wheeled toys. To get the best out of vehicle play, ensure that there are both a wide range of things that children can do with them and good physical challenges for their use. Levels of interaction and the quality of play are greatly enhanced by incorporating vehicles into interesting, relevant, well-planned and supported role play, remembering to encourage energy and action – such as delivering pizzas made in the mud kitchen!

Weave the pleasure of organised movement into daily life at every opportunity, both inside and outside.

Every opportunity is taken for dancing, active singing and action rhymes and games.

Make sure that music is played, sounds are created, songs are sung, rhymes are chanted and games are shared outdoors too, taking advantage of the space and special stimulus of being outside. Most importantly, use any and every opportunity to weave such organised movement experiences throughout the everyday life of your setting – while jumping in puddles, washing hands, climbing up and sliding down, mixing paint or waiting for lunch. Use lots of sources for inspiration: action songs, hand games, nursery rhymes, popular songs and TV programmes or cultural music and events. Try changing the words of popular rhymes to fit the situation you are in or to add extra interesting movements like gallop, wriggle and slither.

Take full advantage of what the nearby locality has to offer for being active beyond what the setting can provide.

There are frequent excursions and expeditions outside the nursery grounds into the local community and locality.

Taking small groups of children for frequent short walks into the streets just outside your setting is an excellent way of increasing opportunities to be active, especially for developing stamina and robustness. The value of these local excursions for all round learning and development is considerable, embedding being active into highly holistic and motivating experiences. Give thought to how such regular walks with only a few children at a time can be enlivened by balancing along curb-stones and low walls, running up and down lines in the pavement, jumping across the cracks in paving stones and twirling around lamp posts. If parks are within reach by walking, take advantage of pathways and slopes as well as swings and slides in the playground. If nature-filled areas are close by, make the most of logs to clamber upon, rough ground to master and hills to conquer.

This article is an edited extract from Every Child a Mover: a practical guide to providing young children with the physical opportunities they need by Jan White (Early Education, 2015)

Jan White is an early childhood consultant specialising in outdoor provision for play and learning. Her website is janwhitenaturalplay.wordpress.com

References


Newham Outdoors and Active

Newham Outdoors project of 2010, the London Borough of Newham, in partnership with Early Education and based on key messages from Jan White's book *Every Child a Mover* (Early Education, 2015) developed the Newham Outdoors and Active project. This included a programme of practical workshops, forums for discussion, specialist advisory visits to settings and peer support together with the production of materials and resources. The focus has been on children’s physical development and their “physicality” – the state of being physical. This involved raising awareness, in particular, of vestibular and proprioceptive development and their significance in all aspects of children’s learning and development.

The project involved 20 practitioners from a range of providers in Newham’s early years community. Led by prominent specialists in the field of early years physical development, Jan White, Julie Mountain and Jasmine Pasch, settings undertook an action research project over an eight-month period, which supported them in making positive and measurable changes in provision and practice. Topics included creating opportunities for physicality in limited outdoor spaces, increasing the physicality of less active children and increasing children’s resilience and risk taking.

Results from the project are showing a greater understanding not just of the benefits of using the outdoors for learning and play, but also of a “risk benefit” (rather than “risk avoidance”) approach, which has led to improved practice in the use of the many outdoor spaces in the borough as well as raised outcomes in children’s physical, cognitive and learning development.

Legacy materials from the project include guidance on:

- carrying out your own action research project
- overcoming the barriers to getting outdoors and active.
- practical audit tools
- loose parts and landscapes to support physicality
- activity ideas

A book detailing the project findings and including resources is also available from Early Education.

Find out more about the project on the Early Education website
www.early-education.org.uk/outdoorsandactive

Outdoors & Active only £8

or buy a combined package of Outdoors & Active and Every Child a Mover for £22 (usual price £26 for the two)

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