



# play deprivation

## Play Deprivation – facts and interpretations

This briefing paper has been developed for playwork practitioners, provision funders and providers, elected members, parents and anyone whose work impacts upon children's opportunities to play. It explores the question: 'If playing is important to human beings, what happens if children do not have the opportunity to play and become play deprived?'

### Is play important to human beings?

Increasingly the literature confirms that play<sup>1</sup> is essential both to human development and to our survival as a species. Play has long been known to have a significant role in building communication and social skills, aesthetic appreciation, creativity and problem solving, and scholars have also highlighted its role in the development of the flexible and non-specialist behaviour necessary for our species' survival as ecological and other conditions change<sup>2</sup>.

However, more recent studies<sup>3</sup>, also confirm that play is a significant factor in brain and muscle fibre development, in the creation and development of our consciousness and our ability to think reflectively and in the creation of our cognitive organisation. It is vital to 'the development of empathy, social altruism and the possession of a repertoire of social behaviours that enable those who play to handle stress, particularly humiliation and powerlessness', and to be able 'to roll with the punches associated with daily social interactions.'

Some theorists<sup>4</sup>, indicate that play may also have evolved into the complex forms we see today in order to enable human beings as they evolved to address and adapt to circumstances that threatened them with extinction.

### What is play deprivation?

Play Deprivation is the name given to the notion that not playing may deprive children of experiences that are regarded as developmentally essential and result in those affected being both biologically and socially disabled.

### What evidence is there that Play Deprivation exists and could be harmful?

Although human data on the impact of not playing is rare, the findings of the studies that do exist, give cause for concern.

There are 5 main study areas. They can be interpreted as follows:

1. If normal play experiences are absent throughout a child's life, that child is more likely to become highly violent and antisocial regardless of demography.<sup>5</sup>
2. If children are kept in and not allowed out to play, they experience play deprivation and are likely to manifest symptoms ranging from aggression and repressed emotions and social skills, to an increased risk of obesity.<sup>6</sup>

3. When children are chronically play deprived as one aspect of a life of almost continuous sensory deprivation they suffer symptoms ranging from depression and withdrawal to a gradual loss of all electrical activity in the brain".<sup>7</sup>

Whilst other factors – lack of human contact and other forms of sensory deprivation - undoubtedly played the major part in creating the condition suffered by the children, described above (3) the fact that they were unable to play during what has become known as the 'sensitive period' for neurological growth<sup>8</sup> between the ages of 0 and 7, would also have been a significant contributory factor.

4. More recently, other studies<sup>9,10</sup> have stated that play is essential for brain development. Implying that play deprivation will adversely affect brain growth.

One study implies that play is not just active during the sensitive period for brain grow but that play IS the sensitive period. In other words it is only when children play that the brain grows. Or put another way, if children do not play then their brains will not grow. Although this in itself is a catastrophic conclusion, the same study also describes play as a modifier of brain structure. Meaning that as well as having the effect of generally increasing brain size, playing acts to develop the actual structure of specific brain areas, for example the cerebellum. The converse being, that if they are affected by play deprivation children will not only have smaller than average brains, but specific areas of those brains will be malformed.

Another USA study similarly reported these devastating effects of play deprivation on Rumanian orphans, linking them to reduction in the brain size of the affected children.<sup>11</sup>

Play deprivation studies on other species confirm that its effects are equally powerful on those affected. For example:

5. When other species are deprived of play they show highly aggressive and bizarre behaviour and appear to completely lose touch with the social norms and accepted behavioural protocols of that species<sup>12</sup>.

### **Why is play deprivation so harmful?**

We can only speculate why play deprivation may have such a catastrophic impact on human children. However, the literature does show us that from birth to about age 7 or 8, human children pass through a 'sensitive period' for neurological growth and formation. Although other factors, like diet and the quality of care have an obvious affect, the predominant influence on children's lives for much of this period is how and where they play. Edelman (1992) implies that during the sensitive period, experience creates in children what he calls cortical maps which enable them to develop an emotional relationship with the world and gradually create a conscious reality. Vygotsky saw play as the "very process whereby meaning was created".

It follows that play deprivation, if it happens, will also occur during that sensitive period when children would normally be playing, and because its effect is a chronic shortfall of the sensory interaction with the world required to provide experiences, it will result in inhibited brain growth (synapse elimination), contribute to the malformation of vital areas of the brain and cause malfunction of the centres which control certain neurochemical levels.

Increasingly play is being described as the means by which human children perceive the world outside of themselves and develop the skills to both navigate and understand that world. An inability to engage in play can only result in behavioural instability, neurological dysfunction, unhappiness and a lack of mental well-being in affected children.

### Who is most at risk of play deprivation?

Because a range of different factors can conspire to create the conditions necessary for play deprivation to occur, including poor diet, repressive or abusive treatment and lack of access to appropriate spaces for play, children are at risk from play deprivation across the board. No group is exempt. However, it is reasonable to conclude that the risk for low to moderate levels of play deprivation, is probably highest for children whose parents/carers can afford the transport for the school run, and the out of school activities that keep their children away from roads, predators and other perceived 'hazards' and who, because of their aspirations for their children, may want them to be 'gainfully' employed when not at school or doing their homework. It may also happen where parents/carers use the television or computer games as a form of pacification of their charges.

Thus, it could be argued that whilst children from less well-off backgrounds may be in greater danger from the 'hazards', they may be less likely to be deprived of the interactions with other children, species and environments that are essential prerequisites for quality play experiences. However more generally, it is our belief that it is children from any background but who experience chronic violence and bullying, neglect/abuse, domestic imprisonment, warfare, institutional neglect and/or material/cultural poverty who are most at risk from high levels of play deprivation and who are therefore more likely to become randomly violent and disconnected from social norms.

### What can be done to counter the affects of play deprivation?

Ideally children should be able to play and range in adult free, physically diverse and challenging spaces. Where these opportunities do not exist, dedicated play provision, in particular staffed adventure playgrounds<sup>13</sup> are the most appropriate response in the current climate.

Why? Whilst other forms of artificial play space offer children only limited access to the range of play experiences necessary to avoid any play deprivation, adventure playgrounds are widely regarded within the playwork profession as offering the most comprehensive and authentic play experiences to the children using them. Not only is the environment itself subject to continual modification, the children are also monitored by qualified and experienced adults, who understand the developmental role of play, and who ensure that the children's self directed engagement with the challenge and diversity on offer is properly facilitated.

### Conclusion.

Clearly play is of extreme importance to human children, particularly during the 0-7 sensitive period. There is little doubt that children deprived of play suffer considerable physical and psychological consequences, consequences which may be devastating to those affected. Children will adapt through their play to many changes in circumstances, like, for example the proliferation of computer toys, and may evolve new skills as a consequence. However, play deprivation is not about change but about an absence of those sensory inputs essential for the maintenance of humanness. Chronic play deprivation may have the effect of gradually dehumanising the children it affects, with a consequent loss of their ability to care, to empathise and exercise compassion, or share the same reality as other children. The available evidence suggests that play deprived children become disturbed, aggressive and violent adults.

Studies on other species conclude that regular access to quality play experience eradicates the effects of play deprivation.<sup>14</sup>

## Notes:

- 1."Play encompasses children's behaviour which is freely chosen, personally directed and intrinsically motivated. It is performed for no external goal or reward, and is a fundamental and integral part of healthy development - not only for individual children, but also for the society in which they live." Welsh Assembly Government Play Policy October 2002
2. A very useful although elderly chapter on this is: Sylva, K. (1977)
- 3.Damasio 1994, Byres and Walker 1995, Byres 1998, Siviy 1998, Brown 1998
4. See Hughes 2003a, 2003b
- 5.The earliest information, although only recently published, (Brown and Lomax, 1969, in Brown 1998), makes a link between play deprivation and violent and anti-social behaviour. In it Brown states that in a study of 26 young murderers, "normal play behaviour was virtually absent throughout the lives of [these] highly violent, antisocial men regardless of demography". He also found that, "play deprivation also takes a devastating toll on women". (p. 249) The research from which these conclusions are drawn was commissioned in 1969 by the Hogg Foundation following a multiple murder at the campus of the University of Texas at Austin. Brown later concluded, " ... play deprived children are the tragic forerunners of social and personal breakdown". (p 251)
6. Huttenmoser *et al*, (1995), for example, referring to what they describe as 'battery children', attributes play deprivation symptoms to the effects of incarceration because of traffic and parental fears of predatory adults. Battery children were "often aggressive and whine a lot. By the age of five they are emotionally and socially repressed, find it difficult to mix, fall behind with school work and are at much greater risk of obesity".
- 7.Tobin, (1997), citing reported that Rumanian orphans who had been without play and were stimulus deprived suffered "severe learning difficulties, erratic behaviour, difficulty in forming bonds". Others were 'unable to cope, became depression and withdrawn resembling autistic children or hyperactive and out of control, like children with ADD'. Citing Chugani he added that, "regions of children's brains are utterly devoid of electrical activity".
8. See Huttenlocher, 1990, 1992
9. For example, Byres (1998) states, "A sensitive period in behavioural development refers to a window in development during which specific types of experience permanently alter the course of the brain or of other systems that support behaviour. The experience dependent development is not possible at ages before or after the window". He continues, "...it is reasonable to postulate that play with its discrete age range of expression, may be another example of performance dependent development. ...Play must represent a sensitive period."
10. Linking of play and neural development further, Byres states, "... play is turned on when there is an opportunity for experience dependent modification of the cerebellum and is turned off shortly after the architecture of the cerebellum is complete."
11. Brown et al (2001) state, "For young children, it is play, not direct instruction ... that positively affects brain development. Brain scans of Romanian orphans clearly show that play deprivation results in biological regression of brain development. Baylor College of Medicine reported in 1997 that children who do not play develop brains 20-30% smaller than normal for their age.
- 12."An adventure playground is a staffed open access facility where children have the opportunity to design and build their own play equipment, to mould their own environment to their own purposes, and to engage in a whole range of activity including playing with earth, air, fire and water. They can choose to confront and learn to manage risk in an environment facilitated by trained playworkers. Generally adventure playgrounds have been developed in urban areas to compensate for the absence of natural open space with trees, fields, streams etc where children would have played independently in the past." PlayWales
13. See, for example, Suomi, S.J. and Harlow, H.F. (1971) and van den Berg et al, (2001)
14. See Einon et al 1978 and Thompson 1996

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