

## PLAY

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# Play and Disability

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### Introduction and Subject

This article identifies the main groups of disabilities present in early childhood and considers how those disabilities affect children's development and engagement in play.

Disabilities refer to impairments, limitations or restrictions to one or more of children's physical, cognitive, sensory, language, speech, communication, behavioural and/or social functions.<sup>1,2,3</sup> Disabilities can be mild to severe, according to how much core mobility, communication and self-care activities are affected.<sup>1</sup> Between 3.65% and 4% of 0- to 5-year-old children in developed countries are disabled, with higher prevalence among boys.<sup>1,2,3</sup>

Typically developing children engage in solitary and social play and find play pleasurable.<sup>4,5</sup> Play has different forms – locomotor, object, language, pretence and sociodramatic<sup>5</sup> – readily recognised by children and adults.<sup>6</sup> For some children, disabilities affect how often and what they play or whether they play at all.

Studying play in disabled children is challenging, because of existing debates in play and disability research.<sup>7</sup> In play research, debate focuses on potential developmental functions of different play forms.<sup>6</sup> In disability research, inconsistencies exist in classifying disabilities, and in recruiting disabled research participants.<sup>7,8</sup> Studying play in multiply disabled children is especially challenging, because of difficulty in understanding the unique or interactive affect each disability has on children's play. Knowledge of disabled children's play has accrued incidentally from studying other aspects of disabled children's behaviour.<sup>9</sup>

### Research Context and Results

Disabilities in language, speech and communication disorders are the most common types of disabilities in early childhood.<sup>10</sup> This is not surprising given that language, speech and communication delays are often comorbid with other disabilities.<sup>11,12</sup> Some language, speech or communication disabilities result from acquired brain injuries to language, speech and communication regions.<sup>13</sup> Insights into the effects of injuries to these

areas suggest that, the more severe the injury, the more delayed children's play, especially pretence and sociodramatic play.<sup>10</sup>

Autism Spectrum Disorder (ASD) is one of the most widely investigated disabilities to affect children's language, speech and communication. ASD children, besides language and communication delays, have significant impairments to social functioning and many have repetitive and stereotyped behaviours. Others have anomalies in posture and gait.<sup>14</sup> Symptoms, skill deficits and impairment severity vary enormously among ASD children.<sup>14</sup>

Posture and gait anomalies in ASD children impair locomotor play.<sup>14</sup> Restricted and repetitive behaviours, either self-focussed (e.g., finger flipping) or with a preferred object (e.g. stroking a favourite toy), affect most functionality in all or most play forms: locomotor, object, language and even pretend play.<sup>14</sup> ASD children have significant delays in eye gaze, facial expression, gesture, imitation and turn taking, which form the substratum of sociability and facilitate sociodramatic play. When observed in social classroom settings, ASD children are more often unoccupied onlookers and engage less in pretend and sociodramatic play than typically developing peers.<sup>15</sup>

Children with physical disabilities, for example, cerebral palsy (CP), have mild-severe motor delays affecting mobility, posture and strength<sup>16</sup> needed for locomotion and exploration of their surroundings. Locomotion helps to develop spatial understanding.<sup>11</sup> Severely disabled children with CP need assistance with mobility, restricting exploration<sup>16</sup> and affecting the development of locomotor and object play. Many children with CP also have impairments in sensory and language functions,<sup>16</sup> restricting social play. For some of them, opportunities to play are restricted to playful contexts set up and controlled by adults for instruction.<sup>9</sup> Their opportunities to develop play skills are incidental to learning in these interventions. Children with CP are usually time poor, because of time spent in adult-structured activities that preclude opportunity for play or leisure activities.<sup>16</sup> Severe forms of CP affect children's development of gestures and emotional expression, limiting or even precluding pretence and sociodramatic play.<sup>17</sup>

Children with intellectual disabilities (ID) have delays in intellectual functioning (learning, reasoning, problem solving) and adaptive behaviours needed for everyday living.<sup>12</sup> Such children develop play forms more slowly than typically developing children, and spend less time playing with others,<sup>18</sup> perhaps because many of them have language delays and/or sensory impairments.<sup>12</sup> When adults modelled play, children with ID engaged less in locomotor play, less toy play and less play with children than typically developing children.<sup>7</sup> However, when given opportunities to initiate their own play without adults, they played more with other children, used more complex language and engaged more in pretend and sociodramatic play than when adults structured activities.<sup>7</sup>

Visually impaired and blind children have concomitant delays in motor development, which impact upon mobility and spatial understanding.<sup>19</sup> Looking, reaching for and grasping objects promotes exploration and object play and contributes to spatial development.<sup>19</sup> Visually impaired children use tactile and auditory cues to locate, reach for and grasp objects. This develops later in visually impaired children, resulting in locomotor, object and social play delays.<sup>19</sup> Motion sensors that emit audible signals in response to sensors attached to children have been adapted to assist blind children to navigate their environments safely and develop spatial awareness.<sup>20</sup> Visually impaired children may develop idiosyncratic gesture and facial expressions, because they cannot observe the gestures and expressions that others use in communication.<sup>21</sup> It has been asserted that visually impaired children have delays in pretence and social play comparable to play delays of autistic children.<sup>21</sup> Yet

there is evidence that blind children's level of symbol play can be comparable to age and IQ matched non-handicapped peers.<sup>21</sup> Social skills of children, not vision, predicted the level of symbolic play.<sup>21</sup>

Hearing impaired and deaf children experience delayed language acquisition, if their hearing impairment remains undetected and there is no intervention to teach oral or sign language.<sup>22</sup> Hearing impaired children maintain joint attention and lip read to sustain social play with playmates using oral language, which are challenging tasks for young children.<sup>22</sup> Deaf children can have delays in gesture and vocalisations compared with hearing children, because they do not hear oral cues that place the gestures in its social context.<sup>22</sup> Signing and oral language used proficiently by young bilingual deaf children enabled conversations with others and led to *Theory of Mind (ToM)* performance comparable to hearing children.<sup>23</sup> Implications of these findings for the role of ToM in hearing impaired children's play development is speculative, because we do not yet understand the role of ToM in play, especially pretend and sociodramatic play.<sup>24</sup>

## Research Gaps

There are inconsistencies in classification of the same disability in different studies affecting generalisability of research findings. Diagnostic criteria of different categories of disability (e.g., CP, ASD, ID) encompass broad symptoms of varying severity. Many children thus classified have additional delays characteristic of other disabilities. There is a need to develop rigorous classification of disability in early childhood.<sup>8</sup>

Many children have multiple disabilities making it difficult for play researchers to design research that informs them about how each disability uniquely or interactively affects children's play. Disabled children can have similar delays in play, associated with distinct disabilities that have different aetiologies and life courses.

Comparison studies within disability groups are needed, because individual differences, for example, in blind children's social skilfulness,<sup>22</sup> and ID children's temperament,<sup>25,26</sup> affect play behaviours but are rarely controlled for in disability and play research.

Information about disabled children's play is often reported incidentally to main findings of adult modelled interventions designed to teach disabled children many different skills within playful contexts using toys.<sup>22,24</sup> There is a need to focus on disabled children's play behaviours per se to understand how disability affects play development.

## Conclusion

There is evidence that even children with severe and multiple disabilities can engage in some or all play forms during early childhood. There are, however, conflicting findings about the level of play development achieved by children with different disabilities. Methodological shortfalls in both play and disability research have contributed to this uncertainty. Information about play elicited during training and intervention studies provide only incidental evidence about the effect of particular disability on children's play development, yet have the potential to provide valuable insights into the role of play in development.

## Implications

All signatory nations are obliged to ensure that all the rights of their children are protected, as enshrined in

United Nations Convention of the Rights of the Child.<sup>27</sup> Disabled children have the right to receive special care and support to ensure they reach their full developmental potential (Article 21) and all children have the right to play, rest, recreation and leisure (Article 31). The goal should be to foster self-initiated play in an adequately provisioned and physically safe environment for disabled children. It is important to encourage play while remaining realistic about limitations and restrictions of children’s disabilities. Children with multiple disabilities present special challenges when structuring environments appropriately and safely, selecting appropriate toys and adapting emerging technologies that might serve these goals. It is also important to make sure that adults are not overly controlling during play interventions to enable the development of self-expression and independence in disabled children’s play.

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