ENCYCLOPEDIA
on Early Childhood
Development

Learning Through Play

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Introduction

We define play, review the main types of play and their developmental benefits in various areas.

Subject: What is Play?

Play is often defined as activity done for its own sake, characterized by means rather than ends (the process is more important than any end point or goal), flexibility (objects are put in new combinations or roles are acted out in new ways), and positive affect (children often smile, laugh, and say they enjoy it). These criteria contrast play with exploration (focused investigation as a child gets more familiar with a new toy or environment, that may then lead into play), work (which has a definite goal), and games (more organized activities in which there is some goal, typically winning the game). Developmentally, games with rules tend to be common after about 6 years of age, whereas play is very frequent for 2- to 6-year-olds.[1,2]

The Research Context

Play has been observed in all cultural contexts, including hunter-gatherer societies.[3] Between 3% and 20% of young children's time and energy is typically spent in play, more so in richly provisioned niches.[4,5] If young children are temporarily deprived of play opportunities, for example being kept in a classroom, they play for longer and more vigorously afterwards.[6]

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As children invest time and energy in play, and there are opportunities for learning when they do play, there seems to be a need for play. This is true of young mammals generally, although other mammals show much less variety of play forms than human children. These findings suggest that play has developmental benefits. Benefits might be immediate, long-term, or both.[7] However, the exact role of play in learning is still debated. A prevailing “play ethos” has tended to exaggerate the evidence for the essential role of play. Nevertheless, correlational and experimental evidence suggest important benefits of play, even if some benefits can also be obtained in other ways.[5]

Locomotor play, including exercise play (running, climbing, etc.), involves large body activity and is generally thought to support physical training of muscles, for strength, endurance, and skill. Exercise play increases from toddlers to preschool and peaks at early primary school ages, when the neural and muscular basis of physical coordination and healthy growth is important, and vigorous play obviously provides good opportunities for this; later, it declines. There is evidence that active, playground-type breaks can help young children concentrate better at subsequent sedentary tasks, consistent with the cognitive immaturity hypothesis that the “need to exercise helps young children to space out cognitive demands for which they have less mature capacities.[8]

Social play refers to playful interactions between children and parents or caregivers in children up to 2 years old, but increasingly with other children as social play increases dramatically from 2 to 6 years of age. At first, playing with one partner is complex enough, but by 3 or 4 years old a play group can consist of three or more participants, as children acquire social coordination skills and social scripts.

Parallel play, common in 2- and 3-year-olds, is when children play next to others without much interaction. Some play is solitary.[9] This type of play can be physical, incorporate objects or language, be pretend, or include all of these aspects. Rough-and-tumble play, including play fighting and chasing, can look like real fighting, but in play fighting children are often laughing, kicks and blows are not hard or do not make contact, and it is usually done with friends.[10]

Object play refers to playful use of objects such as building blocks, jigsaw puzzles, cars, dolls, etc. With babies, this play is mouthing objects and dropping them. With toddlers, this is sometimes just manipulating the objects (e.g., assembling blocks), but sometimes involves pretend play (e.g., building a house, feeding a doll). Play with objects allows children to try out new combinations of actions, free of external constraint, and may help develop problem solving

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skills. Any benefits of object play need to be balanced against those of instruction, bearing in mind the ages of the children, the nature of the task, and whether learning is for specific skills, or a more general inquisitive and creative attitude. The more marked benefits may be for independent and creative thought, though the evidence is equivocal.[11]

Language play -- At around 2 years old, toddlers often talk to themselves before going to sleep or upon waking up. This is playful, with repetition and sometimes laughter. Children use language humorously at 3 and 4 years old. (“I’m a whale. This is my tail.” “I’m a flamingo. Look at my wingo.”) Language skills--phonology (speech sounds), vocabulary and meaning (semantics), grammar (syntax), and pragmatics (using language appropriately in social situations)--are rapidly developing in the preschool years. Some phonological skills can be developed in the solitary monologues when children babble to themselves in their cot, but most benefits of language learning probably come in sociodramatic play.

Pretend play involves pretending an object or an action is something else than it really is. A banana is a telephone, for example. This play develops from 15 months of age with simple actions, such as pretending to sleep or putting dolly to bed, developing into longer story sequences and role play. Sociodramatic play, common from around 3 years of age, is pretend play with others, sustained role taking, and a narrative line. It can involve understanding others’ intent, sophisticated language constructions, and development of (sometimes) novel and intricate story lines. Children negotiate meanings and roles (“You be daddy, right?”) and argue about appropriate behavior (“No, you don’t feed the baby like that!”).

Many learning functions have been advanced for pretend and especially sociodramatic play.[5] One hypothesis is that it is useful for developing preliteracy skills, such as awareness of letters and print, and the purpose of books.[12] The narrative structure of sociodramatic play sequences mirrors the narratives of story books. For these benefits, some structuring by adults is helpful (in maintaining a story line, having suitable materials including plastic letters, books, etc.).

Another hypothesis is that pretend play enhances emotional security. A child who is emotionally upset, for example, by parents arguing or the illness or death of someone in the family, can work through the anxieties by acting out such themes in pretend play, with dolls for example. Play therapists use such techniques to help understand children’s anxieties; and most therapists believe that it helps the child work towards a resolution of them.[13]

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A further hypothesis is that pretend play enhances theory of mind development. Theory of mind ability means being able to understand (represent) the knowledge and beliefs of others; that is, that someone else can have a different belief or state of knowledge from yourself. This does not happen until the age of late 3 or 4 years old. Social interaction with age-mates seems to be important for this, and social pretend play (with siblings or with other age-mates) may be especially helpful, as children negotiate different roles and realize that different roles entail different behaviors.[14] While these benefits are plausible, there is little experimental evidence; the correlational evidence suggests that social pretend play is helpful but is only one route to acquiring theory of mind[5,15] More high-quality studies and evidence are needed before we can be confident of what benefits pretend play has.[16]

Key Research Questions and Gaps

We lack descriptive information on the time and energy spent in various forms of play, in different cultural contexts. Without this we cannot understand the putative benefits of play. Further, while play may have many positive benefits, this is not always so. Play fighting is viewed ambivalently by nursery staff as many staff find it noisy and disruptive, and believe it often leads to real fights. In fact, research suggests that during the primary school years, only about 1% of rough-and-tumble play bouts turn into real fighting. However, this is more frequent for some children who lack social skills and are rejected by playmates. These children often respond to rough-and-tumble play aggressively.[10] More generally, risky play can bring benefits for physical activity and well-being, but does need to be balanced with safety concerns.[17]

A related area of concern has been war play (play with toy guns, weapons, or combat superhero figures).[18] A developmental view that play including war play is a primary vehicle for children to express themselves, can be contrasted with a sociopolitical view that children learn militaristic political concepts and values through war play.[19] There is not a large research base on which to make informed judgments about whether the concerns are justified. One study found that 4-year-old, hard-to-manage children showed frequent violent fantasy and the extent of this was related to poorer language and play skills, more antisocial behaviour, and less empathic understanding at the age of 6 years. This does suggest concerns for the effects of such play on disturbed children.[20]

Implications

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Almost all children spontaneously play. An exception may be those who are malnourished, deprived, or have severe disabilities, where specific play-based intervention can be helpful.[21] In contemporary societies, adults are usually involved in children's play, providing play environments and toys. Preliteracy benefits of play can be enhanced by providing paper, crayons, and plastic letters. Exercise benefits of play can be enhanced by providing challenging forms of climbing apparatus. Creative play can be enhanced by providing lego-type bricks to stimulate creative construction activities.

Play training can be one enjoyable and effective way of improving skills in language development, cognitive development, creativity, and role-taking. Nursery staff can work with children to structure their play and give it more educational value by including activities such as jigsaw puzzles, color and pattern matching games, and materials like water, sand, and clay that children can manipulate and by enhancing sociodramatic play.[22] Such play tutoring involves providing suitable props (play house, clothes for role play, hospital equipment, etc.), taking children on visits to stimulate their imagination (to a hospital, zoo, etc.), and suggesting play themes and helping children to develop them.[23]

Most experts in play research believe that a balanced approach is best.[22,24] There should be good opportunities for genuine free play. Also, there should be some active involvement of adults in structuring some play, as in play tutoring. And, increasingly, as children get older, there is a need for direct instruction. The balance between types of play is a matter of continuing debate. As all types of play provide different opportunities, a blended program in preschool, with plenty of opportunities for free and structured play, is likely to be best for children and to provide them with a happy and stimulating environment in which they can flourish.

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