

The Impact Of Play On Cognitive Development Of Children

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ABSTRACT: Play is a vital component of healthy development in children, enhancing cognitive, physical, social, and emotional well-being. Additionally, play provides an excellent opportunity for parents to foster meaningful connections with their children. However, despite these benefits, free playtime has significantly decreased for some children due to factors such as busy lifestyles, shifting family dynamics, and a growing emphasis on academic and enrichment activities over recess and child-centered play. This paper explores these factors and provides comprehensive guidelines on the important of play, types of play, historical and cultural perspectives, current trends, cognitive development, theoretical frameworks, and implications, ultimately offering recommendations to promote and preserve play as an essential aspect of childhood development.

KEYWORDS: Play, Enrichment, Family, Lifestyles, Child centred.

INTRODUCTION

In recent years, the significance of play in children's daily lives and healthy development has gained increasing recognition. A substantial body of research now supports the notion that play is not only a natural behavior but also a vital contributor to children's overall quality of life, well-being, and holistic development, encompassing physical, social, emotional, and cognitive growth. Furthermore, the environment in which children play is crucial, influencing their experiences, choices, and relationships with others and their surroundings.

"Play is essential for children's daily lives and healthy development" UNICEF (2018).

The role of play in children's development has been debated extensively. While some argue that play is merely a rehearsal for adult life, it is now widely accepted that play is a vital behavior that serves its own purpose and drives developmental growth. From infancy to adolescence, play contributes significantly to brain development, social skills, and emotional intelligence. As children grow, play helps them navigate an increasingly complex world, fostering physical, emotional, and social skills.- " Play is essential for children's learning and development. American Academy of Pediatrics (2018).

The importance of play is recognized globally, with the UN Convention on the Rights of the Child enshrining the right to play. Scottish Government policies also acknowledge the need for play spaces that ensure children's safety and autonomy. Despite this, some individuals still underestimate the value of investing in play spaces, prioritizing other investments over this fundamental aspect of childhood development. Recognizing the importance of play is crucial for promoting healthy development in children": World Health Organization (2019).

The purpose of this topic is to explore and understand the significance of play in enhancing cognitive skills in children. This topic aims to shed light on how play contributes to brain development, problem-solving abilities, language skills, creativity, social cognition, and executive functions in children. By examining the relationship between play and cognitive development, researchers and educators can better understand how to support children's cognitive growth and optimize their learning potential. This knowledge can also inform educational policies and practices, and guide parents and caregivers in providing nurturing environments that foster healthy cognitive development in children. Research shows that play contributes to overall quality of life and well-being" Ginsburg (2007).

The scope of the topic is a comprehensive and multidimensional approach, encompassing various aspects of children's cognitive development from birth to adolescence. It involves the study of various types of play, such as physical, social, emotional, and cognitive play, and their role in developing specific cognitive skills like problem-solving, language, and creativity. In addition, it explores the impact of play on brain development and plasticity, social cognition, empathy, and executive functions.

The topic also covers the relationship between play and academic performance, as well as the influence of cultural and environmental factors on play and cognitive development. Furthermore, it considers the crucial role of parents/guardians, caregivers, and educators in facilitating play and supporting cognitive development in children. Overall, the scope is broad and inclusive, allowing for a rich and intricate exploration of the topic.

WHAT IS PLAY

Onyekuru (2021), defines play as imaginative, intrinsically motivated, nonserious, freely chosen and actively engaging. While most people see play as the domain of children because childrens play is typified by spontaneity, joyfulness and inhibition and is done not as a means to an end but for its inherent pleasure.

Bowlby J. (1953) defined play as any activity indulged in for the pleasure it gives and not for some end result. The person plays for play sake. play differs from work which a person engages in because he wants the end result which it can achieve. Play is so great a part of child life that people often overlook its important role in child development.

Play is "a complex and multifaceted phenomenon that encompasses a range of intrinsically motivated activities, including exploration, experimentation, creativity, imagination, and self-expression" (Hirsh-Pasek et al., 2015). It is "a dynamic and interactive process that involves the manipulation of objects, symbols, and ideas, and is characterized by a sense of freedom, choice, and enjoyment" (White, 2013).

Play is also "a way of learning, a way of being, and a way of experiencing the world" (Gackenbach, 2008). It involves "the use of imagination, creativity, and problem-solving skills to navigate and make sense of the world" (Shonkoff & Phillips, 2000).

Additionally, play is "a source of joy, pleasure, and fulfillment" (Kavanaugh, 2017). It is "essential for healthy development, as it allows children to develop social, emotional, cognitive, and physical skills" (American Academy of Pediatrics, 2018).

Types of play

1. Construction play involves manipulating one or more elements of the play environment to construct something new or manipulating multiple objects and materials to explore how they go together. It includes building or creating something using natural or manufactured materials (e.g. building sandcastles in the sand).
2. Rough-and-tumble play involves chasing, wrestling, spinning and playfighting. It is usually high energy, with children doing things like climbing over each other, wrestling and rolling around. This type of play is often mistaken for aggression or misbehaviour and therefore discouraged by adults.
3. Large-motor play involves exploring movements and ways to combine movements: running, climbing, sliding, dancing, swinging, jumping, moving through an obstacle course and other types of movement.
4. Dramatic play involves re-enacting everyday activities or situations that the child has observed. For example, a young child may gently rock a doll while feeding it a bottle. Dramatic play is sometimes referred to as pretend play or make-believe play.
5. Exploration play involves using physical skills and sensations to learn about materials and their properties, what they feel like and what can be done with them. For example, a child may experiment with a tool and how it works with clay or dough. This type of play involves exploring something new or unfamiliar.
6. Role play involves exploring ways of being, although not normally of an intense personal, social, domestic or interpersonal nature. For example, a child may sweep with a broom or drive a toy car during play (Hughes, 2002).
7. Language/communication play— involves playing with sounds, words, nuances and gestures. It includes unrehearsed and spontaneous manipulation of these, often with rhythmic and repetitive elements. It includes a child playing with rhymes, verses and songs they make up or change, mime/ charades and also jokes (Miller & Almon, 2009).
8. Socio-dramatic play involves enacting real and potential experiences of an intense personal, social, domestic or interpersonal nature (e.g. going to the shops) (Hughes, 2002). When it involves interaction and verbal communication with one or more play partners regarding the play event, it is termed socio-dramatic play. This is the combination of dramatic play and social play.
9. Social play involves play during which the rules and criteria for social engagement and interaction can be revealed, explored and amended (Hughes, 2002). The play is structured, meaning there are rules to follow (e.g. games, making something together), and it may incorporate elements of pretence or imagination.
10. Small-motor play involves developing, practising and refining small motor skills (e.g. stringing beads, playing with puzzles, sorting objects). This type of play enhances a child's physical dexterity and hand-eye coordination (Miller & Almon, 2009).
11. Symbolic play involves using an object at hand and converting it into the toy or prop needed through a process of fantasy or imagination (Miller & Almon, 2009, p.54). For example, a child may use a piece of wood to symbolise a person or an object (e.g. a stick to symbolise a sword).
12. Mastery play involves purposeful play or enjoyment of an activity that facilitates the mastery of a specific skill. Children often repeat an action in play and persevere until they master it (e.g. playing on a balance beam to become a circus performer or riding a bike) (Hughes, 2002).

13. Recapitulative play— involves play that displays aspects of human evolutionary history, stored and passed on through our genes. It allows access to the behaviour of ancestors (e.g. living with the elements or building res and shelters) (Hughes, 2002). It is often stimulated by aspects of the outdoor environment such as forests, pools, rivers and the weather.
14. Digital/technology play— involves using digital technologies and engaging in activities related to video and computer games, electronic toys and tablets, and the creation of digital content.

Cultural perspectives on play

Play is a universal aspect of human psychology, observed in every society where children have been studied. However, cultural context significantly influences play, with different societies valuing and engaging with play in various ways. Some cultures recognize play as essential for development and actively participate alongside children, while others view play as a spontaneous activity for children only or prioritize other activities over play. Children's play reflects and recreates their cultural environment, and studies across cultures reveal the impact of context on play. Factors like available time, space, objects, playmates, adult role models, and attitudes toward play shape the frequency, duration, and nature of children's play. For example, in some South American Indian communities, children play with natural objects like sand, water, and plants, while urban children in large towns play more frequently with manufactured toys in protected areas (Roopnarine et al., 1994).

Universal play activities, such as playing with marbles, flying kites, or playing with dolls, appear across cultures with their core structure intact, but are adapted and modified to suit local contexts, resources, and names. For example, in different regions of Brazil, children play with marbles, known by various names like *búrica*, *búlca*, *papão*, *peteca*, or *gude*, and use local materials like glass balls, mud balls, or cashew nuts, with unique rules and variations (Schwartzman, 1986).

Across cultures, two significant patterns emerge in children's play: the universal structure of play activities and gender-based differences in play preferences. Around age 3, children tend to prefer playing with same-gender peers, a preference that strengthens as they develop their gender identity. This inclination is rooted in social identification processes and is resistant to adult encouragement to engage in cross-gender play. Even when same-age peers are scarce, children tend to seek out companions of the same gender, often interacting with younger or older children. In larger groups, children of similar ages and genders tend to form play subgroups, highlighting the significance of gender in shaping play preferences (Whiting & Edwards, 1988).

Gender differences in play preferences are consistent across cultures, with boys and girls exhibiting distinct tendencies. Boys tend to engage in play that involves gross motor skills, occupying larger spaces, playing in larger groups, and venturing farther from home. In contrast, girls tend to play in smaller groups, closer to home, and engage in activities related to social and domestic themes. Interestingly, girls' pretend play themes are more diverse than boys', possibly due to the lack of male role models in some cultures. Even when mothers work outside the home, they often remain the primary models for domestic responsibilities, shaping girls' play preferences (Munroe & Romney, 2006).

Research suggests that sexual hormones may play a role in gender differences in play behavior, but cultural influences also significantly impact what types of play are considered appropriate for boys and girls. These cultural norms vary across societies, with some cultures having strictly defined gender roles that are reflected in children's play choices. Additionally, environmental factors such as available time and space, social context, and adult supervision can significantly impact the frequency, duration, and nature of play activities. These structural aspects of the immediate environment can shape play experiences and opportunities (Hutt et al., 1992).

The immediate environment's structural aspects, such as time and space availability, social context, and adult supervision, significantly impact play activities' frequency, duration, and nature (Hutt et al., 1992). The time allocated for play varies widely across contexts. In some societies, children, especially girls, are expected to help with chores, leaving limited time for play (Roopnarine et al., 1994). However, they often incorporate play into their tasks. The proximity to adult activities influences the realism in children's pretend play. In hunter-gatherer societies, children observe adults closely, while in urban contexts, boys' representation of male activities may be vague (Schwartzman, 1986). Media characters' influence is more noticeable in boys' pretend play (Gackenbach, 2008).

Modern societies often limit children's play due to safety concerns, preferring indoor activities like videogames or TV (Gackenbach, 2008). However, in some cultures, children have more freedom to play, with factors like available space, little adult intervention, and multiple play partners facilitating play (Whiting & Edwards, 1988). The availability of play partners reflects cultural conceptions and practices regarding childhood and social networks (Konner, 2005).

Cognitive development and play

Cognitive development is the growth of an individual's thinking processes and intellectual capabilities. It is a fundamental aspect of child development associated with decision-making, memory, perception, and language. Cognitive development occurs at various levels within children. Children develop motor skills and interact with the environment through touch and movements. At

the ages of 6 to 12, children begin to develop their thinking capabilities. While each child develops their abilities at different rates, their thinking processes continually advance as they grow

Surplus Energy (Schiller 1873 – Spencer 1875)

A child is a source of surplus energy. This surplus energy needs a let out. Play is a channel to let out this energy. The young children do not have the burden of the adult world. The basic duty of the child is self –preservation through play. The surplus energy finds a release through play activities. Play is a means to spend this energy, though energy is also required for maintenance of self. Example- Adhivi a child of 2 years is fascinated by opening and closing the bottle cap and continues to do this in several such objects where ever she observes a two objects that one can be fitted in to the other, like pen and cap, lipstick, variety of bottle caps, and till he has mastered the skill of closing and opening act either screwing or by fitting. In an observational record of a mother she had recorded this act about five hundred times.

This is the play activity fascinating at a particular age, at the same time spending all the energy to open and close and until she had mastered the task. This energy will transcend in to different play activities appropriate to a particular age. This skill is very essential to survive in the civilised world.

Growth Theories (Appleton 1919)

Play is a generalised behaviour for growth of an individual. The movement the child able to respond to external environment, through sensory interpretation then begins the skill of mastering behaviour required for survival in a particular environment. Example simple act of using a spoon. To aiming a target, with a ball or marble (concentration), and similar activities that are required for successful life. A child is scared to slide down at first as he gains confidence is able to do it independently and this gives him the confidence of mastering the environment. (To overcome fear heights, this is a skill required for later life.)

The peg board play of a child will help him/her in finer motor co ordination. The ability to use a striker in carom board is so unique which can be transferred to using a compass or instruments in chemistry laboratory.

Infantile Dynamics Theory (Lewin)

The cognitive space of a child is imperfect as she /he is in the process of forming image based on experiences which are real or imaginary some time and child from unrealistic world realises the realistic world. The child from playful experiences realises the realistic. During early child hood believing that the ‘boogy’ man will come and carry away. This will change as cognitive space improves. The blind folded play that children most often play.

Cathartic Theory- (Freud 1908)

Play is away that a child resolves the conflicts when she /he do not have other opportunities to let out to resolve conflicts. Punching a bag, using hands to kneed clay / or modelling an adult’s role on a toy or a younger sibling which they cannot do on the adult figure which inflected this on them. It could be any one in his environment. Example, imagining all cushions and pillows to be students and modelling as a teacher. Using a stick to ask children to keep reading or to answer a question ect.

Psychoanalytic theory – (Buhler-1930 Anna Freud 1937)

According to this theory a child masters a particular skill through repetition .A 3year old may jump from a foot high stool. As he/she jumps feels that he has accomplished a great task that was challenging. This gives him confidence. Similarly in ability to climb Jungle Jim may cause anxiety but with support and encouragement one may master the same which would give them the confidence. The lesson of coping is learnt. The ability to overcome anxiety causing factor. Play helps one to defend and cope with number of anxiety causing situations in life.

Cognitive Theory (Piaget – 1962)

The core of Piaget’s theory is assimilation and accommodation. Play encourages an individual to integrate the experience in to arriving at equilibrium. The integrates his new experiences in to relatively limited number motor and cognitive skills available at age. Example the at infancy puts everything in to his mouth, as this the oral stimulus is comparatively high based on his experience of the child will assimilate the information, this is true in all ages, child throws the ball in the beginning with great effort using his whole body (accommodation), as one learns the skill of throwing the ball effectively with experience (assimilation) would have set in. In short the initial attempts are the modified to skilled attempts.

Did you know that! (Food for thought)

Children who engage in pretend play have a 20% increase in problem-solving skills? By solving problems in their imagination, they develop essential skills to tackle real-life challenges. Encourage creative play and watch your little ones grow into resourceful and innovative thinkers.

Did you know that just 20 minutes of play can increase a child's attention span by up to 30%? Boost their focus and productivity with a short play break before homework or lessons!

Block play: the secret to math success! Research shows that children who play with blocks have a 15% better grasp of math skills in high school

Get building and give your child the math advantage!

Children who engage in regular physical play have a 35% lower risk of obesity! Encourage active play to help your child develop a lifelong love of physical activity and a healthy lifestyle!

70% of preschool learning happens through play, shaping young minds and setting them up for success. Let's prioritize play and unlock a world of possibilities!

Did you know that students in play-based kindergartens show 30% higher levels of reading comprehension by age 10? This is crucial, as recent research by UNICEF says only one-third of 10-year-olds worldwide can read and understand a simple story. Let's prioritize play-based learning to foster a love of reading and set our children up for success.

Imaginative play: the ultimate empathy builder! Children who engage in imaginative play show a remarkable 40% increase in empathy skills. By exploring different roles and perspectives, they develop a deeper understanding of others' feelings and needs. Let's encourage creative play to raise a generation of compassionate and empathetic leaders!

Game-based learning can boost retention of new information by up to 70%! This means less learning loss and a fun way to keep minds engaged, especially during summer break!

Children who engage in cooperative play are 30% more likely to develop advanced social skills in adolescence. Nurturing social skills through play sets them up for success in relationships and life! Let's encourage collaborative play and help our children build a strong social foundation.

Play-based learning increases problem-solving abilities by up to 45%, and these skills stay with children long after they grow up. Let's give our children the gift of playful learning and watch them become confident, capable problem-solvers.

Benefits/importance of play

- Cognitive development: playing helps children develop cognitive abilities, build new neural connections, and improve critical thinking skills.
- Language development: playing helps children learn new words and use more advanced language compared to when playing alone. It's because children often use words to narrate their activities or give life to their toys.
- Emotional development: playing helps children learn how to deal with emotions like anxiety, frustration, and trauma.
- Creativity and imagination: play help children develop vivid imagination early on. It also helps them solve problems more creatively.
- Relationship-building: playing with other children encourages cooperation and relationship building. Plus, these childhood friends often grow up to be each other's lifelong chums.
- Independence and world discovery: play promotes independence in children and has them gradually discover the world around them on their own.
- Social development: Play helps children learn how to communicate, share, collaborate, and form bonds with others. They also learn important social skills like empathy, negotiation, and conflict resolution.

- 8. Self-control: Play helps children develop self-control by allowing them to make their own decisions and experience the consequences of those choices.
- Risk-taking: Play's spontaneity encourages children to take risks and interact with their environment.
- Mental flexibility: Play helps children develop mental flexibility and executive function

My Position

Theories and researches suggest that Play is a vital component of childhood that plays a significant role in the cognitive development of children. Through play, children develop essential skills such as problem-solving, critical thinking, creativity, and social skills. Play allows children to explore, experiment, and learn at their own pace, fostering a deeper understanding of the world around them. Moreover, play helps children develop emotional intelligence, self-regulation, and self-confidence, laying the foundation for future academic success and lifelong learning. As such, I strongly believe that play should be prioritized and protected in children's daily lives, and that parents, educators, and policymakers should work together to create environments that support and encourage playful learning.

Through play, parents can connect fully with their children and have fun.

A parent can support and take part in their child's play activities but they shouldn't direct what happens.

It's important they give their children time, freedom and choice to play. If an adult makes all the decisions about how, what and when their child plays, the child won't enjoy their play experiences as it is also a determinant of a proper cognitive development of the child.

Conclusion

Play is a powerful catalyst for holistic development. It nurtures cognitive, social and physical skills in children. Through imaginative games, collaborative activities and outdoor adventures, play offers a dynamic platform for learning and exploration. By engaging in play, children not only sharpen their critical thinking, problem-solving and creativity but also develop essential social and physical competencies that shape their growth and well-being.

Embracing play as an integral part of childhood is essential. By prioritising play in educational settings, communities and homes, we create a culture that celebrates the joy of discovery and the power of imagination. When we recognise the many benefits of play, we give children the opportunity to thrive in a rapidly changing world

Recommendations:

1. Provide Opportunities for Play: Ensure that children have ample time for play, both indoors and outdoors.
2. Encourage Imaginative Play: Provide materials and opportunities for imaginative play, such as costumes, props, and storytelling.
3. Support Guided Play: Engage children in guided play activities, such as puzzles, games, and educational activities.
4. Monitor and Supervise: Monitor and supervise children during play to ensure their safety and well-being.

By prioritizing play in children's lives, we can help them develop the cognitive skills they need to succeed in life. Thank you.

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