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Cognitive Development In Relation To Play In Young Children

As society is evolving, the tectonics of our priorities are shifting causing pressure induced stress. It is not just the adults anymore, but children's lives seem to be more overwhelmed than adults in today's time. I have had families come to me with concerns of poor attention span of their child in mastering academic skills. When the routine of the child is asked I find that child spends almost 10-12 hours studying. It goes from school-to-tuition to homework time at home; all this when the child is just in 2nd grade.

One major and most important thing missing from the lives of children is play. Video games, social media, and unsupervised internet surfing substituted play. Unsupervised screen time has been found to have a sharp increase in children's life which has affected the role of play immensely. I have seen in my practice that parents prioritize academics over play and leisure, probably because play needs their continuous supervision and monitoring which means investment of time. However, play is a basic right of the child given by the United Nation Convention Rights of the Child (UNCRC)

The Play Therapy United Kingdom Organization (PTUK) describes the play as 'A physical or mental leisure activity that is undertaken purely for enjoyment or amusement and has no other objective'. Neuroscience research confirms play may assist learning and self-development in infants and young children. It has been well established that play significantly affects holistic development of the child – physical, cognitive, socio-emotional, speech and language etc. Yet, in India, we

witness major decline in play time in children's lives today, especially in India. Among the other factors poor awareness among parents and families, space, and rapid urbanization in India might be contributors for decline in play.

Play has been found to help children with more clarity of what is around them and what is expected from them in this world. They have less anxiety and display socially appropriate behaviour. Cognitively, play helps in creativity, critical thinking, memory, problem solving skills, reasoning, social interactions, physical development and emotional skills in exploring the world. I have seen children with concerns of poor social skills, no eye contact, poor communication, and aloofness come for intervention; and only a few weeks of guided play intervention showed significant difference in these children. I had a child of 3 years with the same concerns come to me. In the initial few sessions he would only lie under the table with the same car in his hand, but gradually after four weeks of regular play therapy opened up the child to initiate peek-a-boo with us, additionally improved communication and following instructions.

Lack of play may have lasting effects on the development of a child. According to research, decline in social and emotional learning and damage to early childhood development has been found to have a connection with lack of unsupervised free play time for children (Brown S & Vaughan C, 2010). When play deprivation of severe to moderate level happens in early life of a

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child, especially the first 10 years, it leads to poor early child development. It affects a child's ability to adjust to change, exercise self-control and with maintaining and building interpersonal relationships. I have had lot of children come up with reports and various results of overwhelming assessments and tests concluding in provisional diagnosis of several conditions like Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder, Intellectual Disability and many more, but with a few months of play therapy they seemed to be typical children with very poor play skills and lack of opportunities to play in their environment. A child with hearing impairment was given the diagnosis of Intellectual disability only to be corrected later. For a few years the child was labelled as a child with intellectual disability depriving him from opportunity to play with other children resulting in excessive screen time and adopting a sedentary lifestyle. Intervention and support from teachers at

school helped this child to overcome many hurdles, one being the challenges and labelling of the misdiagnosis he received a few years before.

A large body of research is available to understand the importance of play. However, parents existential anxieties superimposed on children find themselves moving away from essential activities like play and leisure. It is high time we rethink about early child development practices around play in homes and institutions. We must reconsider how we promote and reestablish play in children's lives during their developmental years. Play is one of the most important parts of human development, and therefore, it is important that professionals in the field raise awareness among the new age parents. Play is simple and simplicity is the essence of happiness.

Latika Joel

Rehabilitation Psychologist

My name is George... (Part-1)

'No, I will NOT take my legs off the table' said the 6 year old boy with a very rude face. The class teacher had just come to class. There was quite a lot of portions to complete and she was pretty worried about finishing the syllabus before the exams. George was a difficult boy, but today, he was just pushing her limits.

'George, this is a class. You HAVE to put your legs down'.

George had no intentions of listening to the teacher. He gave a mischievous smile and leaned back on his chair.

The teacher, finally, sent George to the School Counsellor's room. George slouched on the chair with a grumpy face on the seat opposite to the counsellor. The counsellor tried to talk to George, but he did not speak a single word. The counsellor advised him and reassured him, that if he behaves like a good boy, he will have a lot of friends and teachers will be happy with him. But George did not respond to any of the well-intended words of the counsellor. He just wanted to go home. It was then, that the school decided to call George's parents. It is time for a meeting.

George's parents came to the school with a heavy heart. The principal was talking to them now.

'I am very sorry to say this, but I think your son needs a higher level of help. He is not able to read, he does not write a single word in the book and it is very difficult to manage him in class. He defies teachers openly and arrogantly. He is a very different George. It is so surprising that GEORGE came out to be like this. He used to be such a brilliant boy. I remember the first day he came for admission. He used to be so compliant, so caring and a wonderful student. Now, the teachers tell me that he is unmanageable.'

George's mother looked at her husband. He was very calm. He sat quietly. She knew that a tide of emotions were rising up in his mind. But he stayed calm.

The Principal continued, 'There are almost 35 children in a class. It is not possible for a teacher to spend so much of individual attention to one child. They are helpless. The school counselor is exhausted, trying one strategy after the other with him. If these

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behaviours continue, it will be difficult for us to help George further. We hope you understand. I don't mean to be rude, we are helpless. Please think about it'.

George's parents left the room. It was time to make a decision. Even the school counselor was not able to help. Where to go next.

They picked up George from his class and went home. It was a challenging night.

George's mother, Lucy, a successful neurologist and the primary source of finance for the house, sat in front of George and asked, 'George, why do you create so much of trouble to the teachers in school?'

George didn't say anything

'They are going to take you away from school. This is hurting us so badly.'

'Great. Be sad. Start crying'

This response from George was unexpected. Lucy had to move to her room, to fight back her tears. So much of hard-work and effort put into a family, and the

fruit of it.....so painful. Where did it go wrong?

George's father, Peter, came to the room to console his wife. 'The Principal is right, we need to find a higher source of help. There is this place, my friend suggested to me. Let's take him there.'

'Really? A Professional therapist? For our son?.....Peter!!' she broke into tears. This was too much for her to handle.

'We need to help our child. It is the last and final attempt. We need to bring our child back.'

Lucy was still reluctant.

'If we don't do this now, he might lose one year of his education.....and who knows if he will get admission in a different school.....he has changed.....we must try this.'

(to be continued)

Ammu Elizabeth Alexander

Rehabilitation Psychologist,
PhD Scholar.

Oxytocin – The Silent Player in Autism Spectrum Disorder

Oxytocin (OT) plays an evolutionarily conserved role in mammalian social behavior. It has been found that the Hypothalamus synthesizes OT.

Let's start with observing OT's cognitive and behavioral effects which have largely been attributed to central OT receptor activity. There is a large body of animal research reporting that intracerebroventricular (ICV) method of OT deliver. This is thought to diffuse OT throughout the brain and thereby modulating social behavior. For instance, ICV administration of OT facilitates partner preference in animals, induces maternal behavior in virgin female rats, and facilitates social memory in rodents. More recent work has administered OT to specific brain regions in animals. For example it has been found that, OT injection into the medial amygdala of mice lacking in the OT gene eventually rescues social amnesia. Injection into the central amygdala in rats has also been reported to have anxiolytic and antiaggressive effects.

Conversely, OT antagonists block social behavior, highlighting the critical role of the OT system. OT and OT receptors have been associated with positive social behaviors and

may function as a biological metaphor for social attachment or "love." However, complex behavioral functions including selective sexual behaviors, social bonds, and parenting, require combined activities of OT and VP (Vasopressin).

Vasopressin on the other hand acts in an opposite manner. It drives the organism to aggression and protection. Nonetheless both OT and VP are pleiotropic peptides and allow the mammalian body to survive, maintain homeostasis, and reproduce in an ever-changing world.

In recent years "prosocial" nature of OT is increasingly explored as a potential treatment for targeting the core characteristics of autism spectrum disorder (ASD). Bernaerts et al. (2020) have studied using a double-blind, randomized, placebo-controlled, parallel design study. They observed OT and Placebo effects on ASD and found that there is significant decrease in anxiety, repetitive behaviors and improved social approachable behaviors. However, long-term follow-up studies to evaluate the possibility of long-lasting retention effects are currently lacking. According to the pubmed, a reliable search

engine containing 32 million citations, the first recorded research on OT linked to autism was recorded in 1992, it started with a hypothesis to observe whether OT deficits mediate social deficits in autism. Waterhouse, Fein and Modahl (1996) documented neurofunctional mechanisms in autism. The paper describes 4 systemically related neurofunctional impairments: (a) *Canalesthesia*, wherein abnormal hippocampal system function "canalizes" sensory records, disrupting integration of information; (b) *Impaired assignment of the affective significance of stimuli*, wherein abnormal amygdaloid system function disrupts affect association; (c) *Asociality*, wherein impaired oxytocin system function flattens social bonding and affiliativeness; and (d) *Extended selective attention*, wherein abnormal organization of temporal and parietal polysensory regions yields aberrant over processing of primary representations. Interestingly, there were also studies done to examine whether exogenous administration of OT will have any adverse effect on the fetus. It is common practice in obstetrics to administer OT for contractions during perinatal period. Guastella et al., (2018) documented perinatal exposure to exogenous oxytocin influencing child behavioural problems and autistic-like behaviours to 20 years of age with a sample of 2868 mothers. The team used the Child Behaviour Checklist (CBCL) to measure offspring behavioural difficulties at ages 5, 8, 10, 14 and 17 years. ASD was formally diagnosed by consensus of a team of specialists. At 20 years, offspring completed a measure of autistic-like traits, the Autism Spectrum Quotient (AQ). OT exposure prior to birth was analysed using categorical and continuous approaches (maternal OT dose) found no evidence to link OT exposure prior to birth was leading to ASD.

Another review article by Carter (2007) theorizes that excessive vasopressin or disruptions in the pathway might cause ASD. A study by Zhou et al., (2021) reviewed 64 randomized, placebo-controlled trials involving 3,499 participants with ASD and found that OT did not demonstrate significant benefit in reducing restricted and repetitive behaviors in ASD.

To understand the future of OT as alternative psychopharmacological therapy in ASD, it is important to follow the studies which did not involve ASD. One such study by Rice (2015) reviewed empirical data suggesting callous-

unemotional traits have defined neuro-endocrinological correlates within the oxytocin system which supports that OT can be used as therapeutic alternative in children and adolescents with CU traits. As it is a known fact that social behavior is a complex variable, where there is no single dependent factor. It was eventually revealed that OT has no exclusive effect on social behavior, yet these studies promise hope for further scientific research.

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