Gender Differences in Cognitive Development

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Introduction

Cognitive development can be defined as the study of a child's learning abilities, skills, understanding and perceiving methods, and development of the brain as a whole. Some examples of cognitive development are memory, social and communication skills, motor skills, language and vocalization, etc. The pace and environment in which a child develops cognitive skills are effective and important to monitor. This topic holds so much depth and importance because there is data and research proving how the development of genders differs. Male and female develop at a different level and speed than one another, which then pours into the way/how we communicate with the opposite gender. Jean Piaget's cognitive development theory proposes that younger children think differently than adults but prior to his theory, younger children were treated and assumed to think like adults. This was clearly not the case, younger children don't possess the ability to think as logically or quickly as adults. Piaget then applied this theory to gender and the differences between his daughter and his nephew as they grew and developed cognitive skills, giving us the data and research to go off of in today's children. There are many factors and stages that play a role in the cognitive development process between genders.

Stages of Cognitive Development

In Piaget's cognitive development theory, there are four stages in which children develop. Each child experiences and has different processing methods within each stage. The four stages are listed as sensorimotor, preoperational, concrete operational, and formal operational. Sensorimotor is developed from birth up to twenty four months of age, this stage can be referred to as the "trial and error" stage, this age can only observe and try things out, which explains why they always put items in their mouth. Memory and mobility are developing towards the end of

this stage. Preoperational stage happens between twenty four months and seven years. The child can now create imagination and have their own thoughts. Learning how to communicate is perfected but they are not yet able to logically make decisions or understand cause and effect. The third stage is concrete operational which occurs during the ages seven to eleven. They aren't able to understand possible outcomes of situations but do have their own feelings and thoughts and can realize they are unique to themselves. The last stage of cognitive development is the formal operational stage and this happens from eleven and on. This stage is the most intellectual, where children and adolescents are coming up with self made theories and possibilities, they can think and solve problems logically. They are forming and maintaining relationships at this age.

Research Literature on Gender Differences

The data and results regarding certain areas of cognitive development look different between boys and girls in each. According to the data findings, it's shown that girls typically mature faster than boys so girls outrun the boys in each area from this study. Some of the areas include their communication skills, socializing abilities, verbal ability, emotional maturity, etc. Girls do develop quicker than boys but from the research on this specific study, boys don't fall too far behind. Using the Wechsler Primary and Preschool Scale of Intelligence, Palejwala and Fine (2015) and Stumm and Plomin (2015) found that girls are at an advantage during early childhood development but after the age of sixteen, those advantages have evened out for the most part between the genders. Another measure of cognitive development in children is called the "School Readiness". This is based on social, emotional, and communicative aspects of the child at a certain age to be put in preschool. As research shows, girls score higher than boys on school readiness exams and are more prepared at that age. It's shown that girls are sixteen points higher on the exam then boys at the same age.

At Newcastle University a study was conducted proving that human brains begin to lose neural connections as we gain new knowledge that we consider more important or relevant. By losing these connections we are enabling stored information to organize itself, helping our brains to function more efficiently. The process of losing those networks occurs at a different age gap between genders, men lose theirs from the ages 15-20 and girls in ages 10-12, showing us one reason why girls happen to mature faster than boys.

Cognitive Differences applied to Gendered Communication Styles

Developing at a different rate than the opposite gender reflects how that gender communicates verbally and non-verbally in their daily life. Researchers' findings imply that different communication styles from the two genders root from the differences in all aspects of the child's cognitive development process. Learned in early childhood, women are taught to use nonverbal cues, like facing the receiver of the message when communicating, men are taught to use direct messages and movements to get points across while women are shown to be more go with the flow. In the area of "paralanguage" women are more drawn to show interest and show attention while communicating than men are. Phrases to show we are listening and receiving the message the other person is trying to put in front of us, like "mhm" or nodding our head as a nonverbal cue that we are still attentive to the message.

In order to overcome communication style differences, one may have to accommodate their style to the others. For example, men are typically more serious, lighter talkers than women. They keep a pretty monotone voice throughout the conversation so women must "accommodate" or match that style of communication to narrow that social distance. You wouldn't want to be enthusiastic and speak at a higher pitch or faster speed than someone who is not enthusiastic or is just short with their words. One of the persons in the conversation should accommodate the other

so communication happens efficiently and smoothly. This applies to communication accommodation theory which easily ties into cognitive development theory and the differences genders experience communicating.

Conclusion

In conclusion, past and ongoing research for gender differences is ever changing and being plugged into new and old theories for explanation on the processes. Gender differences are widely based on the environments and mannerisms we are taught while growing up, all throughout our early childhood and adolescent years. Women will always mature quicker than men but the differences are made up by mid teenage years, yet the two genders still find differences in interpretation as well as delivering, we can adjust our own norms to theirs to ensure miscommunication does not happen. The more familiar we are with our own communicating styles, the more we know how to adjust or correct them upon who we are communicating with, whether it be the opposite sex, an authority figure, or even a stranger.

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