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KIN316-1003

**KIN316- Critical Abstract Assignment**

Resource: Stevenson, J.L., Lindley, C.E., & Murlo, N. (2017). Retrospectively Assessed Early Motor and Current Pragmatic Language Skills in Autistic and Neutrotypical Children. *Perceptual & Motor Skills, 124*(4), 777-794.

**Purpose of the study:**

The purpose of the study is to aimed to explain the relationship between early motor skill, observed retrospectively, and the present maturity of language use between autistic children and neurotypical children.

**Methods/Procedures:**

Researchers recruited participants through autism services, fliers, and word of mouth. Thirty-one neurotypical children and forty-five autistic children between ages 3-18 had initially enrolled in the study. Researchers filtered out participants through the use of the Social Communication Questionnaire to verify an ASD (Autism Spectrum Disorder) diagnosis, and excluding participants with medical conditions or multiple diagnosis (ie. ADD/ADHD, epilepsy, premature birth) in which could be a major explanation of their delayed motor or language development. The final comparison evaluations were carried out with 13 neurotypical (9 boys, 4 girls) and 13 (9 boys, 4 girls) autistic children.

Primary caregivers (typically their parents) filled out the Children’s Communication Checklist (CCC), in which researchers used it to find each individual’s pragmatic composite score. Parents also were interviewed concerning their child’s Individualized Educational Programs (IEP) goals and filled out questionnaires, to assess characteristics of autism. To see where the autistic children’s level of social capabilities were, two additional phone interviews were completed by the primary caregivers, concerning their child: the Social Communication Questionnaire (SCQ) and the Social Responsiveness Scale (SRS). Validity of answers were verified with home videos demonstrating child’s motor and oral capabilities. Data is graphed, comparing results from neurotypical children versus autistic children and the probability scores. Researchers created two main graphs: One comparing probability findings from the CCC, SCQ, and SRS scores. The other graph compared scores in oral motor, manual motor, and milestone development from 6-24 months using retrospective questionnaires.

**Results:**

Autistic and neurotypical children were compared with typical developmental expectancies in oral-motor and manual-motor development. First of all, manual-motor development was more advanced in both neurotypical and autistic children than oral-motor development was. In addition, the percentage of motor skills were roughly equivalent across 6-24 month olds in neurotypical children, while the development of autistic children in motor skills were declining as the months increased. At 24 months, the average autistic child was only meeting 30% of its expectancy in motor skills while neurotypical children’s average was about 85%. In conclusion, both oral and manual motor skills had a positive correlation with pragmatic language.

**Criticism:**

The researchers conclude in their study that oral-motor and manual-motor development is a major cause for one’s capabilities to use language effectively in a social setting (aka pragmatic language). However, there are some key factors that may give off a possibly misguided result of this experiment. First, sample size comparisons are miniscule. Comparing nine boys and four girls of each group (autistic vs. neurotypical) to conclude correlation is not enough; a much larger sample size is needed to improve accuracy.

Secondly, the research is done through questionnaires on the phone and verified through home videos. It is not done with an on-site interview, which eliminates the person-to-person interaction. Researchers would benefit to meet the caregiver and child in person to interact with them and gain more insight into their subjects.

Lastly, many factors could correlate to why both motor and pragmatic speech is delayed in autistic individuals. One of the greatest hallmarks of autism is the inability to speak affluently in social settings. However, correlation does not equal causation. A greater explanation of inability to speak in social settings and a deficit in motor development is due to lack of eye contact. Autistic individuals tend to be fixated on something that is not a person; they typically do not have personal interests in social reinforcement. They will not hold a pencil, nor a conversation if it is not their own personal interests to do so. Therefore, they lack proper imitation and fail instructions which leads to deficits of typical neural development, social development, and eventually pragmatic language skills when it is needed in a conversation.

In conclusion, the autism spectrum disorder is a large disorder that is difficult to compare neurotypical children with. Children on the autism spectrum disorder may range from high-functioning and verbal to low-functioning non-verbal individuals and everything in between, which makes it challenging to compare. A narrowed research needs to be done to separate the generally high-functioning from the generally low-functioning. In addition, as previously mentioned, a greater sample size, person-to-person interviews, and an enhanced comparison method is needed to see if focusing on early motor development would help with the individual’s pragmatic language.