

Neurologie & Rehabilitation I

The Relationship Between language and executive functions in Persian speaking students with Typical Development & Borderline intelligence quotient

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Objective

Potential relationship between language disorders and executive functions is considerable in child neuropsychology. This study investigated the correlation between linguistic variables and a part of executive functions in Persian speaking school-aged children with borderline IQ and typical students.

Method

In a cross-sectional study, 30 students with borderline IQ and 31 typical students were studied by Stroop test, continues performance test, Wisconsin card sorting test and linguistic tests. Statistical population was 6-13- year old students and participants were selected through random sampling from five primary schools in Tehran.

Findings

According to spearman's correlation test, there is a significant positive correlation between reaction time of Stroop test and continues performance test with ungrammatical sentences and unrelated information and there is a negative correlation between the reaction time with complex sentences, related information, story retelling and comprehension. Also there was a positive correlation between the true responses of Stroop test and continues performance test with related information, compound and complex sentences and also a negative correlation between false responses with these variables. Perseveration errors have negative correlation with related information and simple sentences.

Conclusion

These regulated relations show that there are significant correlations between the ability of response inhibition, attention, cognitive flexibility and linguistic variables such as complex sentences, comprehension and story retelling and related information but there is less relation between abstract behavior, set shifting and linguistic variables. So, it is recommended to do more research by simultaneous assessment of language and executive function in students with borderline IQ.

References

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