

Relationship between speech severity and intelligibility of children with speech sound disorders

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Abstract

Purpose: In this study, the relationship between speech severity and intelligibility of children with speech sound disorders (SSD) was examined. It also revealed any possible differences in the intelligibility regarding the speech severity level.

Method: 28 children with SSD between 41-88 months ($M = 62.9$, $Sd. = 12.4$), and their parents were included in the study. Articulation Subtest of Turkish Articulation-Phonology Test (Topbař, 2005), The Intelligibility in Context Scale-Turkish (ICS-T) (Topbař, 2012) and children's spontaneous speech samples were used for determining speech severity and intelligibility of children. A relational research model was used.

Results: According to Spearman's correlation analysis, a statistically significant relationship found between speech severity and ICS-T scores ($r = 0.495$, $p < .01$), speech severity and researcher 1 (R1) ($r = 0.737$, $p < .001$), speech severity and researcher 2 (R2) ($r = 0.717$, $p < .001$). Depending on the Kruskal-Wallis analysis, speech severity levels differed in terms of the researchers' speech intelligibility percentages (χ^2 (R1) = 18.00, χ^2 (R2) = 17.03, $p < .001$); however, it did not differ for the ICS-T scores. Differences occurred in the mild and severe group (W (R1) = -3.80, W (R2) = -3.79, $p < .05$), moderate and severe group (W (R1) = -4.94, W (R2) = -4.93, $p < .05$) for the researchers.

Conclusion: There was a relationship between speech severity and intelligibility. However, the parental assessment did not determine the differences between the speech severity levels and intelligibility. Researchers' assessment revealed differences between the mild and severe group, moderate and severe group.

Keywords: speech sound disorders, speech severity, speech intelligibility

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Note: SSD is a common disorder that logopedists/speech language therapists (SLP) may confront in their clinical settings. Therefore, clinical measurements are important for the decision-making in the both evaluation and treatment process. We think that discussions about using clinical measurements in the clinical settings with researchers from different countries are critical for the treatment of children with SSD.