

**Critical Review:**

**What evidence suggests that (Central) Auditory Processing Disorder is due to impairments in the descending auditory pathways?**

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American Speech and Language Association (ASHA) states that (Central) Auditory Processing Disorder ((C)APD) is a deficit in neural processing of auditory stimuli that is not due to higher order language, cognitive, or related factors (Working Group on Auditory Processing Disorders, 2005). Assessment and treatment measures have been developed based on this definition. However, a recent study suggests that (C)APD is unrelated to auditory sensory processing, and could be a deficit in attention (Moore, Ferguson, Edmondson-Jones, Ratib, & Riley, 2010). If (C)APD has higher order etiologies, as audiologists we must refer to and collaborate with other professional perspectives. Therefore, we need to review the evidence that suggests that (C)APD is a top-down di



significant difference in TEOAE suppression values for females. Between the groups, the TEOAE suppression values were higher for the study group, but this was not statistically significant. When comparing acoustic reflex sensitization among ears, the only statistically significant difference between the right and left ears was at 2000 Hz in the control group. Mean acoustic reflex sensitization values in females were higher than those in males, but this was not statistically significant. Between groups, the mean acoustic reflex sensitization values were higher in the study group than the control group at all frequencies except for 500 Hz, but this was not statistically significant.

Overall, this study found that the children with (C)APD had lower OAE suppression values than those without (C)APD, but this difference was not statistically significant.

*Sanches & Carvalho (2006)*

The authors evaluated children between the ages of 7 to 11 years. The children were divided into three groups: a control group which consisted of children with normal



which components of processing influence (C)APD. Burguetti & Carvallo (2008) analyzed their data with the Wilcoxon and Mann-Whitney tests, which assesses two sample populations with a hypothesis. The significance value of  $p = 0.05$  is a higher value than the other studies critiqued, but the results still did not show significance. This study demonstrates equivocal evidence due to the statistically insignificant results. Sanches & Carvallo (2006) used ANOVA to analyze the variance in their results, and a significance level of  $p = 0.05$ . This study demonstrated significance of their results with these statistical methods. The calculation of