



Preschool-age children who stutter with and without concomitant speech and language disorders: Similarities and differences.



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ABSTRACT

This study examined differences in stuttering severity, self-perception of speech difficulty, age of stuttering onset, and parents' perception of stuttering and its impact on their children between young children who stutter (CWS) with and without (CWS_Only) concomitant speech and/or language difficulties. A retrospective file audit of 116 Greek-speaking CWS revealed that young CWS with concomitant speech sound disorders (CWS+SSD) report greater negative attitudes towards communication/talking than CWS_Only. Also CWS with concomitant speech and/or language difficulties were reported to have later stuttering onset, stutter more severely, and be impacted more by stuttering than CWS_Only. No differences were found in terms of family history of stuttering, parent-reported stuttering severity, parental concern and parents' knowledge and confidence in managing stuttering.

INTRODUCTION

School-age children who stutter are more likely exhibit concomitant speech-language disorders than their typically fluent peers (e.g., Blood et al., 2003). Data on preschool-age children are limited and contradictory. A couple of studies (Louko, Edwards, & Conture, 1990; Yaruss, LaSalle, & Conture, 1998) reported a high percentage of concomitant speech sound disorders (37.40%-40%) while the percentage of comorbidity in a recent community-cohort study (Unicomb et al., 2020) was significantly lower (6.88%). Likewise, Yaruss et al. found that 29% of CWS had below typical expressive language skills, while a recent epidemiological study reported higher language skills for CWS than fluent peers (Watts et al., 2015).

Although more research is needed on the prevalence of co-occurring speech and language disorders in the preschool-age years, even less is known about similarities and differences between children who only stutter and those who present with one or more speech-language comorbidities.

The purpose of our study was to compare children who stutter with and without speech and/or language difficulties in terms of attitudes towards communication, stuttering severity, age of stuttering onset, and impact of stuttering.

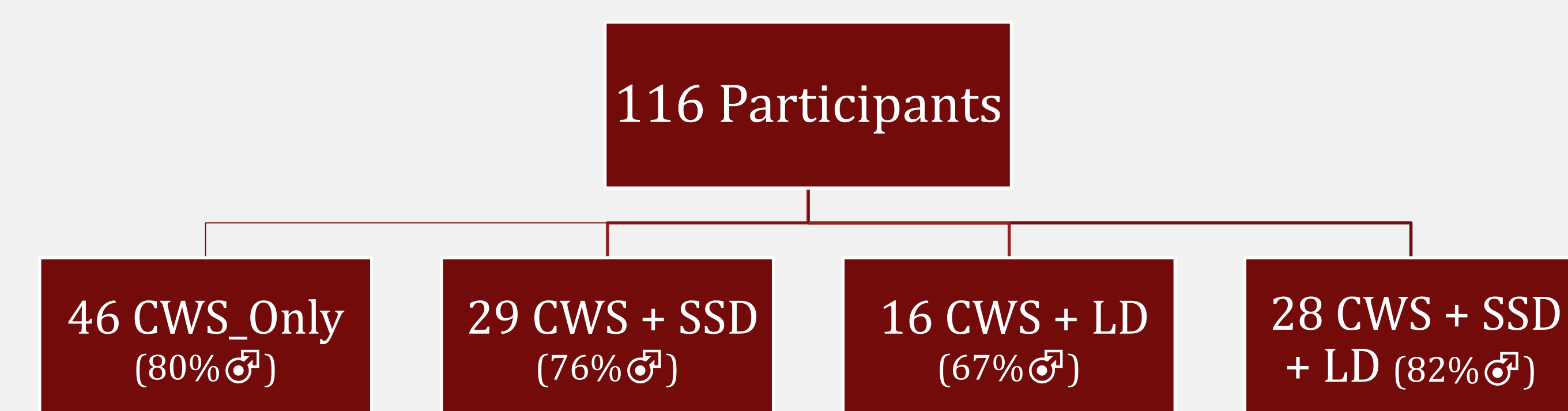
METHOD

Participants

Retrospective file audit on 116 CWS between 3;0 – 7;4 years of age ($M = 57.09$, $SD = 11.67$) from 3 clinics specializing in the assessment and treatment of stuttering in Greece and Cyprus. All participants were native speakers of Greek.

Group Classification:

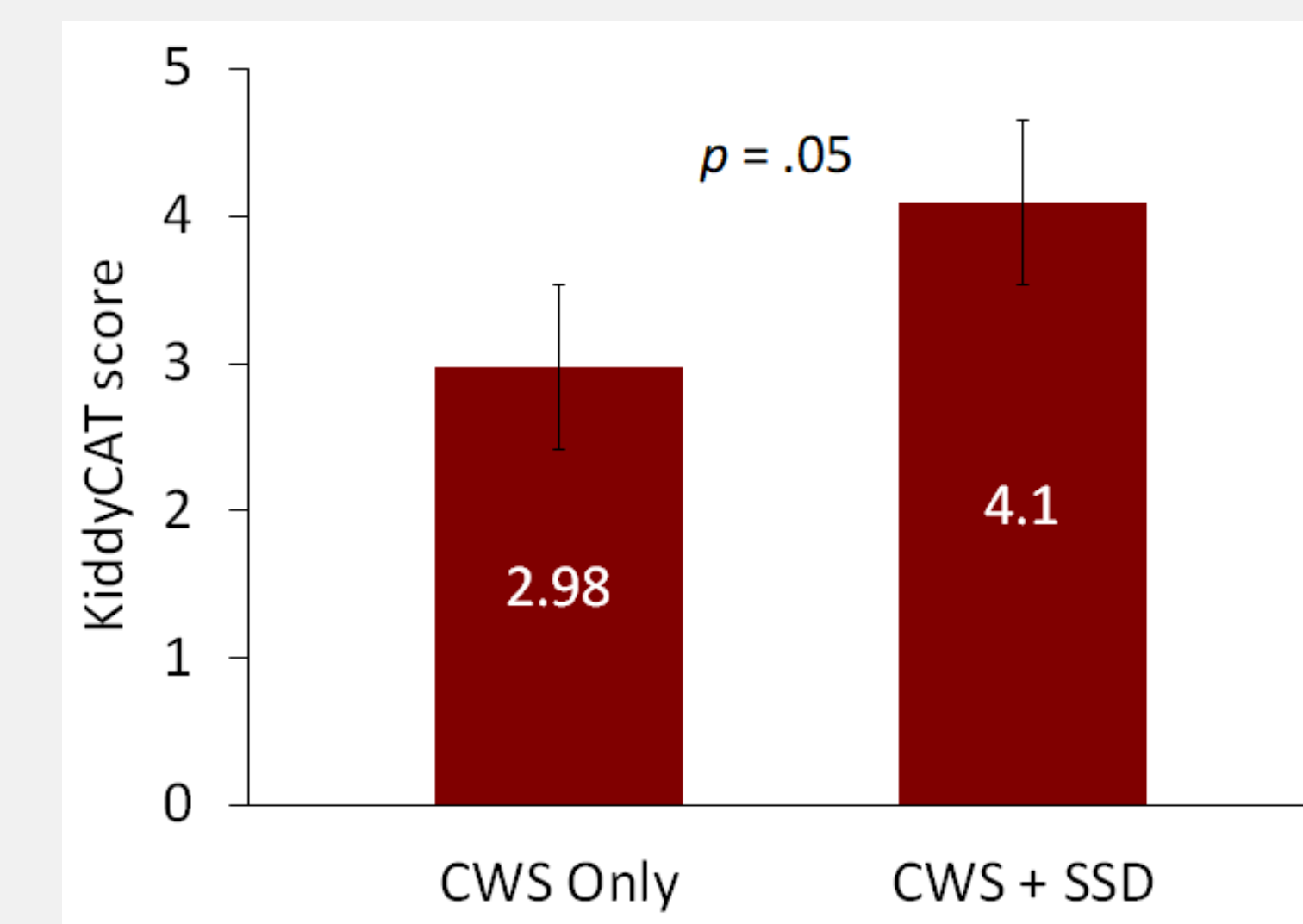
Participants received a speech-language assessment including formal speech-language tests such as the *Phonetic and Phonological Articulation Test* (Panhellenic Association of Logopedics, 1995) and the Greek adaptation of the *Action Picture Test* (Vogindroukas et al., 2010), informal measures, parent report, and clinical observation. Classification of participants to the four groups (CWS_only, CWS+SSD, CWS+LD, CWS+SSD+LD) was based on the speech-language therapists' diagnosis derived from the comprehensive assessment.



Variables

- ✓ Child's attitude towards communication measured by The Greek adaptation of the *Communication Attitude Test for Preschool and Kindergarten Children Who Stutter* (KiddyCAT; Vanryckeghem & Brutten, 2020): a 12-item, binary (yes/no) questionnaire designed to assess perception/attitudes towards speech difficulty.
- ✓ Age of Stuttering Onset in months
- ✓ Stuttering Severity based on an 1 to 10 clinician rating scale
- ✓ Impact of stuttering measured by the Greek translation of the **Palin PRS** (Millard & Davis, 2016): A 19-item parent questionnaire that yields scores for the following factors: (1) The impact of stuttering on the child, (2) The severity of stuttering and parent concern, (3) Parents' knowledge and confidence managing stuttering. Both parents completed the Palin PRS

RESULTS



Finding 1 - KiddyCAT: A Mann-Whitney U test indicated that CWS+SSD present with more negative attitudes towards communication than CWS_Only, $z = -1.98$, $p = .05$.

Finding 2 - Age of Onset: CWS_Only started stuttering significantly earlier (in months) ($M = 36.71$, $SD = 10.86$) than both CWS+LD ($M = 45$, $SD = 8.73$; $p = .004$) and CWS + LD+SSD ($M = 43.86$, $SD = 12.23$; $p = .009$).

Finding 3 - Stuttering Severity: The clinician-reported stuttering severity was significantly higher for CWS with concomitant speech and/or language difficulties ($M = 4.05$, $SD = 1.76$) than CWS_Only ($M = 3.39$, $SD = 1.74$), $z = -2.18$, $p = .03$.

Finding 4 - Impact of Stuttering on the Child: The perceived, by the fathers, impact of stuttering was significantly greater for the CWS+SSD than the CWS_Only group, $F(1, 73)=18.35$, $p < .001$.

DISCUSSION

1. The rate of comorbidity for SSD (25%), LD (13%), and SSD+LD (24%) is lower than the rate reported in the only other retrospective file audit study (Yaruss et al., 1998).
2. The difference in KiddyCAT scores between CWS+SSD and CWS_Only is not surprising given that the underlying factor of KiddyCAT is "speech difficulty" (Clark et al., 2012).
3. Unlike Wheeler, Fenton, & Millard (2011) we did not find differences in parents' knowledge and confidence managing stuttering for CWS with and without concomitant SSD.