EVIDENCE OF EFFICACY: ULTRASOUND SPEECH THERAPY STUDIES

Study	*N*	*Age*	*Dx*	*Speech Targets*	*+ve Result*	*Mixed Result*
Shawker & Sonies (1985)	1	9	DSSD	r	✓	
Bernhardt et al. (2003)	4	16 to 18	HI	s, ʃ, r, l, i, ɪ, u, ʊ	✓	
Bernhardt et al. (2005a)	4	16 to 18	HI	s, ʃ, r, l, i, ɪ, u, ʊ		✓
Adler-Bock et al. (2007)	2	12, 14	DSSD	r	✓	
Bacsfalvi et al. (2007)	3	18	HI	i, u, ʊ , ɪ, ɛ	✓	
Bernhardt et al. (2008)	13	8 to 15	RSSE	r		✓
Fawcett et al. (2008)	3	21 to 27	DS	r	✓	
Modha et al. (2008)	1	13	DSSD	r	✓	
Bacsfalvi (2010)	3	15 to 18	HI	r	✓	
Bacsfalvi & Bernhardt (2011)	7	14 to 19	HI	N/A		✓
Klein et al. (2013)	2	5, 6	DSSD	r	✓	
Lipetz & Bernhardt (2013)	1	15	DSSD	s, z, ʃ, t ʃ	✓	
Preston et al. (2013)	6	9 to 15	CAS	sequences e.g. re, kr		✓
McAllister Byun & Hitchcock (2014)	4	6 to 10	DSSD	r		✓
McAllister Byun & Hitchcock (2014)	4	7 to 15	DSSD	r	✓	
Preston et al. (2014)	8	10 to 20	RSSE	s, z, θ, ʃ, tʃ, r ; Clusters: r, s, l	✓	
Preston et al. (2014)	1	59	AoS	r		✓
Cleland et al. (2015)	7	6 to 10	DSSD	k, g, r, ʃ, t	✓	
Hitchcock & McAllister Byun (2015)	1	11	DSSD	r	✓	
Lee et al. (2015)	1	13	DSSD	r	✓	
Blyth et al. (2016)	2	53, 59	Glossectomy	s, t Participant 1; s, l, ʧ Participant 2	✓	
Bressmann et al. (2016)	4	7 to 10	DSSD	r	✓	
Heng et al. (2016)	2	4	DSSD	k,g Velar Fronting		✓
Melo et al. (2016)	1	5	DSSD	k,g Velar Fronting	✓	
Preston et al. (2016)	3	10 to 13	CAS	r		✓
Preston et al. (2016)	12	10 to 16	RSSE	r	✓	
Preston et al. (2016)	3	10 to 14	CAS	r (2 participants), sibilants (1 participant)		✓
Roxburgh et al. (2016)	2	6, 9	CLP	n for one participant; k,g for another	✓	
Sjolie et al. (2016)	4	7 to 9	DSSD	r		✓
Preston et al. (2017)	6	8 to 16	CAS	r (5 participants), r and s (1 participant)		✓
Preston & Leece (2017)	4	13-22	RSSE	r	✓	
Furniss & Wenger (2018)	17	5 to 12	RSSE	r, s, ʃ	✓	
Preston et al. (2018)	12	8 to 16	RSSE	r	✓	

DSSD	Developmental Speech Sound Disorder	**HI**	Hearing Impairment
RSSE	Residual Speech Sound Error	**DS**	Down syndrome
CAS	Childhood Apraxia of Speech	**CLP**	Cleft Lip and Palate

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