face and another clinician from a remote location. Moderate to very good agreement was established using the weighted Kappa analysis (0.66-.097) with no significant differences found between the two environments (p=0.06-0.68). Inter- and intra-rater reliability could not be statistically validated because of the small sample size, however, the means and standard deviations between ABA-2 subtest scores and severity levels suggested that inter- and intra-rater reliability was adequate, therefore, replication of the study with a larger sample study would provide better reliability. Hill et al. (2006) also gathered qualitative information by employing a questionnaire to participants following the video-conferencing assessment to determine participant satisfaction with the non-traditional form of assessment. Five out of six of the participants assessed through telecommunication reported high satisfaction and confidence in the results of the session.

Hill, Theodoros, Russell, Cahill, Ward and Clark (2006) were concerned with the feasibility and reliability of assessing dysarthria in adults with neurological impairment with motor speech impairments. In their counter-balanced repeated measures design, adults with dysarthria were assessed by the Frenchay Dysarthria Assessment (FDA), Assessment of Intelligibility of Dysarthric Speech (ASSIDS), a perceptual analysis of a speech sample, and an overall severity rating of dysarthria in both environments with a 2-3 day window between assessments. Percentage level of agreement measured the consistency in perceptual rating of speech dimensions across both environments in order to determine if a clinically significant difference existed. Overall, the video conferencing assessment exceeded the minimum 80% level of agreement across the four subtests when compared to face-to-face assessment results, indicating that results of video-conferencing tele-communicative assessment of dysarthria are comparable to face-to-face assessment.

Theodoros et al. (2003) explored the validity of telecommunicative assessment of dysarthric speech in adults following acquired brain injury. An overall 7-point rating of intelligibility was used in conjunction with the FDA and the ASSIDS to gather information

percentage of word and sentence intelligibility, words per minute and communication efficiency. Similar to the aforementioned article, participants were assessed in both the face-to-face and online-videoconferencing environments separated by a 1-day interval. The levels of agreement across the three tests and between the two environments were analyzed. Ninety-percent agreement was found between the two assessment environments for the overall severity of dysarthria rating in addition to the 70-100% level of agreement for the FDA. A significant Wilcoxon P-value was not found when the ASSIDS was used to determine if there was a difference between the face-to-face and online assessments in terms of percentage of sentence intelligibility, words/minute and communication efficiency, suggesting that Internet-based video assessment may be a valid method for assessing dysarthria in adults with acquired brain injury.

Palsbo (2007) investigated whether videoconferencing biased measurement of assessment of functional communication of speech in adults post-stroke in a randomized, double-crossover repeated measure design. The Boston Diagnostic Aphasia Examination (BDAE) as well as 3/11 single-item constructs from the National Outcomes Measurement System (NOMS) were used to assess functional abilities (including motor speech). A Speech Language Pathologist (SLP) via video-conferencing equipment and traditional face-to-face assessment recorded the scores of the two tests simultaneously. Statistical results of the 95% limits of agreement fell within critical criterion for remote administration of the BDAE, tional communication through video-conferencing is equivalent to face-to-face assessment.

Within-groups repeated measures design was used by Waite, Cahill, Theodoros, Busuttin and Russell (2006) to determine if childhood speech disorders could be assessed using Internet-based telehealth systems. The Single Word Articulation Test (SWAT), a connected speech sample, and an oral-motor assessment were used by clinicians in remote and traditional settings. Again, simultaneous assessment of the participants by both clinicians took place. Proportional agreements were used to evaluate reliability between the two clinicians across the three tasks. A 92% level of agreement was found between the two clinicians for consonants in all word positions for the SWAT, with intra- and inter-rater agreement at 94 and 87% respectively. Speech intelligibility based on the connected speech sample was rated as 100% in agreement between the two clinicians,

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