

Remote Administration of CAMCOG-DS and mCRT for Alzheimer’s Disease Screening in Adults with Down Syndrome: A Validation Study



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Telematic assessment provides a valuable approach for monitoring Alzheimer’s Disease (AD) in individuals with Down Syndrome (DS),effectively overcoming logistical and accessibility barriers.

INTRODUCTION

Adults with DS face a genetic predisposition to early-onset AD, requiring frequent neuropsychological monitoring that is often hindered by geographical and mobility barriers.

While telematic assessment offers a potential solution to improve clinical accessibility, the reliability of digital administration for specialized DS tools has not been fully established.

This study evaluated whether the Cambridge Cognitive Examination modified for use in people with Down syndrome (CAMCOG-DS) and the modified Cued Recall Test (mCRT: total immediate free recall scores) maintain their psychometric integrity when administered via videoconference.

METHODS

Study sample

	Individual	Average (SD; min-max)	Asymptomatic (aDS)	Symptomatic (sDS)
Sex	51	F: 28, M: 23	F: 11, M: 13	F: 17, M: 10
Age	51	47.95 (9.02; 22-65)	41.28 (7.90)	53.89 (4.86)
Diagnosis	51		24	27
Intellectual Disability	51	Mild = 18 Moderate = 32 Severe = 1		
CAMCOG-DS (Total)	49	Trad 68.63 (16.21) Tele 69.33 (17.27)	Trad 76.38 (17.89) Tele 77.22 (18.38)	Trad 61.74 (10.83) Tele 62.35 (12.94)
mCRT (Total)	39	Trad 15.40 (8.51) Tele 16.30 (7.30)	Trad 21.61 (6.28) Tele 19.67 (7.19)	Trad 9.60 (5.80) Tele 12.39 (5.57)

Procedure

The CAMCOG-DS & mCRT were digitized and administered via videoconference.

Two evaluation modalities:

- Teleconference: remote
- Traditional: in-person

Two-month interval

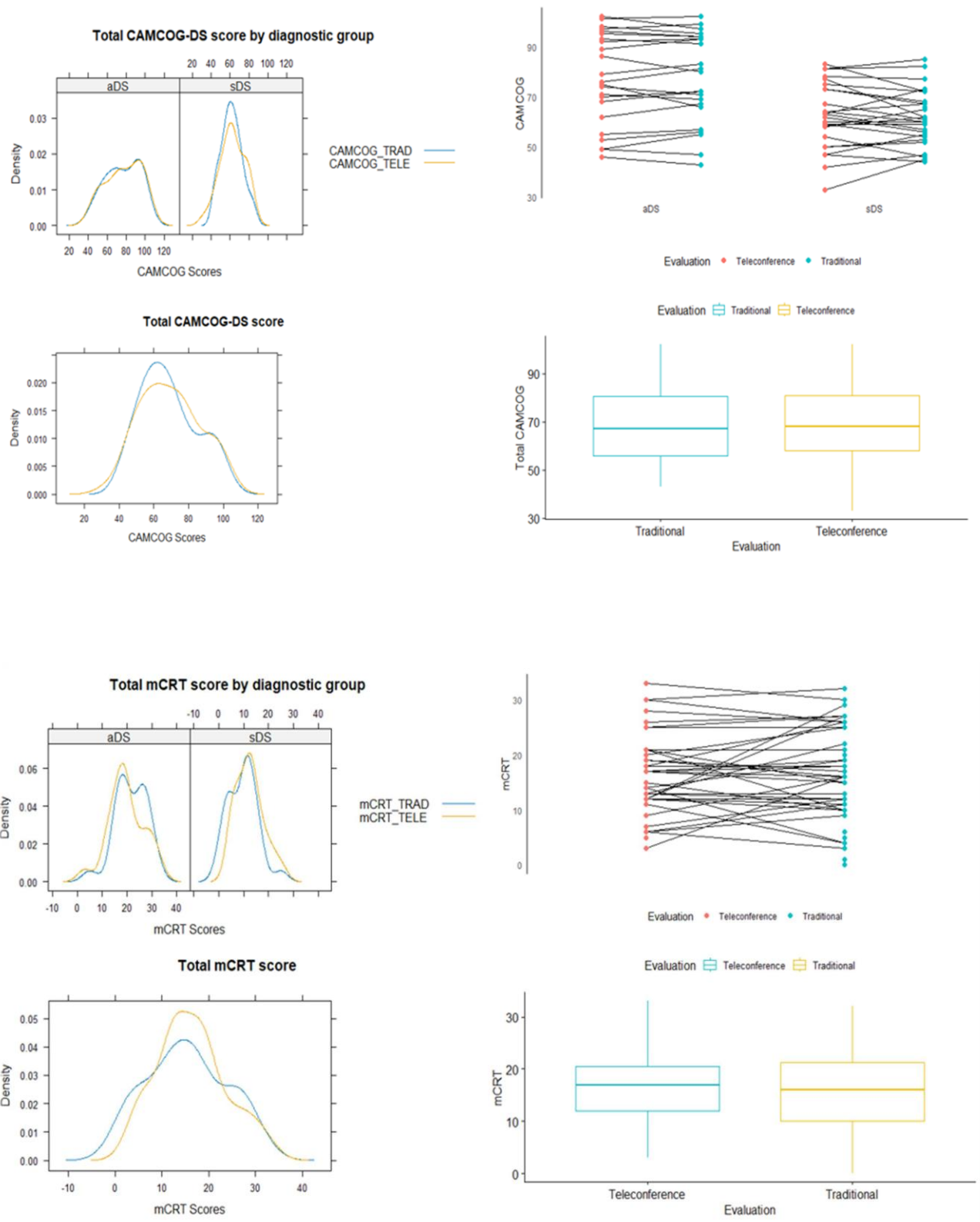


RESULTS

Scores were compared across modalities using Student’s t-tests or Wilcoxon signed-rank tests, alongside linear mixed-effects models.

No significant differences were observed between the mean scores obtained via Teleconference and Traditional (in-person) modalities.

- CAMCOG-DS Total: Teleconference (69.3±17.3) vs. Traditional (68.6±16.2; t(96.96) = 0.21, p>.05)
- mCRT: Immediate Free Recall: Teleconference (16.3±7.39) vs. Traditional (15.4±8.51; t(84.59)=0.56, p>.05).



REFERENCES

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CONCLUSIONS

Telematic assessment is a reliable and valid method for screening and longitudinal monitoring of AD in adults with DS.

By confirming that the CAMCOG-DS and mCRT retain their diagnostic utility remotely, this study supports the integration of telehealth into standard clinical practice.

This transition is essential for improving health equity, ensuring continuity of care, and facilitating larger, more diverse recruitment for future AD clinical trials within the DS community.

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