

Video vs audio-based PANSS Independent Review: A comparison of score discrepancy rates in 2 large acute schizophrenia clinical trials

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SUBMISSION DETAILS

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What is the Methodological Issue Being Addressed? Independent review (IRev) of site-administered recordings is often used in schizophrenia clinical trials for quality assurance, continuous training, and increased endpoint data accuracy. Both video and audio recordings of site-administered assessments are used for ascertainment of site scores, but the data comparing the utility of both modalities is limited and largely unexplored.

Introduction The utility of using both audio and video recording for independent review of PANSS assessments has been previously documented (Targum et al., 2021, Targum et al., 2024); however, it is unclear how use of recording modality impacts score discrepancy rates. In this study, we compare two studies of acute schizophrenia and evaluate rates of score discrepancies across recording modalities in PANSS items, subscales, and symptom severity, and discuss the impact of visual observation on independent review outcomes.

Methods A total of 2,937 reviewed PANSS assessments from two similar large multi-site acute schizophrenia clinical trials were compared based on recording modality used for the review (video or audio). Discrepancy rates resulting from IRev were calculated across recording modalities. Independent sample T-tests were used to assess difference in overall discrepancy rates as well as by PANSS subscale and PANSS total score groups. We also evaluated score discrepancies at the item level.

Results IRev conducted using video recording (N = 1,593) resulted in significantly higher rates of discrepancies across all evaluated parameters compared to audio (N = 1,344). Overall Discrepancy rates were higher for video than audio overall ($t(2178.2) = 14.05, p < .001, d = 0.54$), across positive, negative and general subscales ($t(1989.1) = 12.09, p < .001, d = 0.47$; $t(2171.9) = 9.55, p < .001, d = 0.37$; $t(2318.7) = 9.69, p < .001, d = 0.37$) and across PANSS total score severity groups, with the most notable difference in the subject group with PANSS TS <60 ($t(143.9) = 6.84, p < .001, d = 0.73$). Individual items with highest difference in discrepancy rates include P1, P6, G2 and N1.

Conclusion Our findings indicate that conducting IRev using video recordings instead of only audio results in higher rate of score discrepancies across subscales and symptom severity levels. This was found for items that require visual observation for rating (e.g. N1) as well as for items that are less reliant on visual inspection (e.g. P1, P6). The fact that video recordings yield higher score discrepancy rates across all parameters evaluated may reflect increased confidence on reviewer's

own scores and rationales derived from visual observation of the subject. The findings suggest increased benefit of using video IRev compared to audio. Since use of video recordings has both cost as well as privacy implications, our results can be leveraged for cost-benefit analyses when deciding which IRev modality to use.

Future studies should aim to replicate this work by expanding the number of studies and into other schizophrenia subgroups. Also, a limitation and potential focus of future work is evaluating the directionality of discrepancies (e.g. whether site or review score higher) and the impact of IRev discrepancies on study outcome.

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