

Post-2020 Follow-Up Cognitive Testing

The post-2020 follow-up phase of the AIRWAVE study focused on continuing cognitive testing after a pause during the COVID-19 pandemic. While the study retained its core structure, this phase introduced important changes in how cognitive data were collected, reflecting adaptations to new circumstances.

More information on the Study is available at <https://police-health.org.uk/>.

Context and Timeline

Although this phase is referred to as the post-2020 follow-up, cognitive testing was temporarily suspended during the pandemic. Testing resumed in February 2023, marking the beginning of a new data collection period under revised procedures.

Key Methodological Differences

In the baseline and pre-2020 follow-up phases, all cognitive assessments were administered in clinical settings, with participants completing tests on-site. By contrast, during the post-2020 follow-up, participants were given the flexibility to complete the cognitive test battery remotely using their personal devices. This shift enabled broader participation but also introduced new considerations for data quality and test sequencing.

Participation Overview

A total of 4,163 unique participants took part in this phase. Some individuals completed the test battery multiple times (up to three attempts) tracked using the variable `ATTEMPT_NUMBER`.

- Total tests started: 4,383
- Total tests completed: 4,000

Not every test that was initiated was brought to completion. This discrepancy reflects a combination of participant drop-off and technical factors associated with remote testing.

Data Quality and Anomalies

During data review, 89 records were identified as not following the expected test sequence. Notably, 77 of these irregularities originated in the Vocabulary section, where participants sometimes skipped ahead. For example, completing Surveys and Reaction tests, then jumping directly to Vocabulary. In such cases, only the data from Surveys and Reaction were retained. The out-of-sequence Vocabulary results were excluded to maintain consistency.

Standard Test Order

1. Surveys
2. Reaction
3. Quiz
4. Number
5. Pairing
6. Stroop
7. Matrices
8. Vocabulary
9. Trails
10. Symbols

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