

Note: this document may not describe the most recent version of this cognitive test available from TestMyBrain. TestMyBrain cognitive test documentation will be updated over the next several months to align with current test versions.

TMB Cambridge Face Memory Test

Constructs Measured: Facial recognition, visual memory

Duration: 8 minutes

Sample size for which normative data are available: 40,164

Description of procedure: Participants memorize a set of six faces and then identify these faces from sets of one target and three decoys. This version of the test uses computer generated faces.

Click on the face you memorized.



The CMFT is a test of facial recognition and memory in which participants are asked to distinguish faces they have learned from other similar faces. This test shows high internal reliability and is a predictor of facial recognition in other contexts. Drawbacks include the length of the test, which may make it burdensome to some participants relative to other cognitive tests.

Psychometric Characteristics

Here we focus on accuracy (number correct or proportion correct) as the primary outcome measure or score. There are other reaction time-based measures that could be derived from this test (e.g. mean response time), but since this is not a speeded test the interpretation of these measures would not be clear.

The CFMT shows high internal reliability ($r = 0.91$, split-half with Spearman-Brown correction). This test shows some range restriction, with many participants scoring near the maximum possible score (see Figure 1). Performance is fairly consistent across the lifespan (see Figure 2). There are no significant differences in performance between male and female participants (see Figure 3). Participants with higher levels of education show better performance on this test (see Figure 4).

This test does not show significant practice effects. First-time participants had a mean accuracy of 81.4%, compared to 83.3% for participants who reported having completed the test before.

Validation

The Cambridge Face Memory Test has been used successfully to distinguish participants diagnosed with prosopagnosia from typical controls (Duchaine & Nakayama, 2004). The CFMT's applicability to other facial recognition tasks has also been demonstrated in TestMyBrain participants. Performance on this test is strongly correlated with performance on the Famous Faces task, which asks participants to identify the faces of widely known celebrities (age-corrected $r = 0.52$, 95% CI [0.50, 0.54]). This indicates that the tasks presented by the CMFT are related to facial recognition in more realistic contexts.

Appropriateness for Field Test Use

To familiarize participants with the format of the task, the test begins with a practice trial using easily distinguished cartoon faces.

Device Effects: Participants using different devices showed similar performance on this test. Users of iPhones had a mean accuracy of 87.7% (SD = 10.4\5), while users of iPad tablets had a mean accuracy of 86.5.1% (SD = 11.3) and users of Macintosh computers had a mean accuracy of 87.3% (SD = 11.2).

Participant Burden: This test poses a moderate burden to participants, primarily due to its length; at approximately 8-10 minutes, it takes significantly longer to complete than most other tests on TestMyBrain. 75.9% of participants who begin this test complete it, lower than the sitewide battery completion rate of 81%. However, participants who do complete the task typically review it favorably. Average participant rating for batteries containing this test is 4.01/5, compared to a sitewide average of 3.67/5.

Figure 1. Distribution of scores

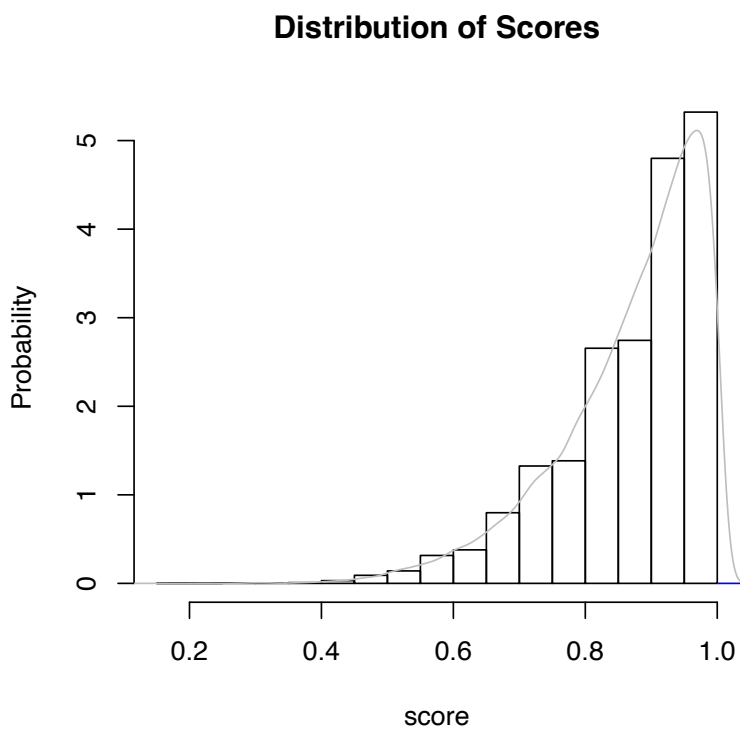


Figure 2. Age-related differences in performance

Age Differences

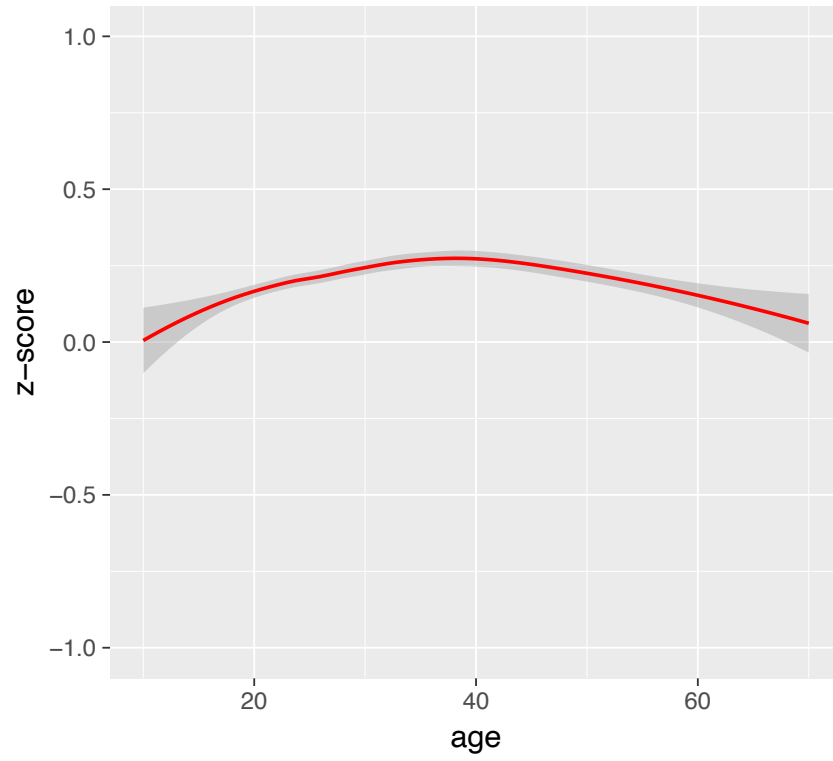


Figure 3. Sex differences in performance

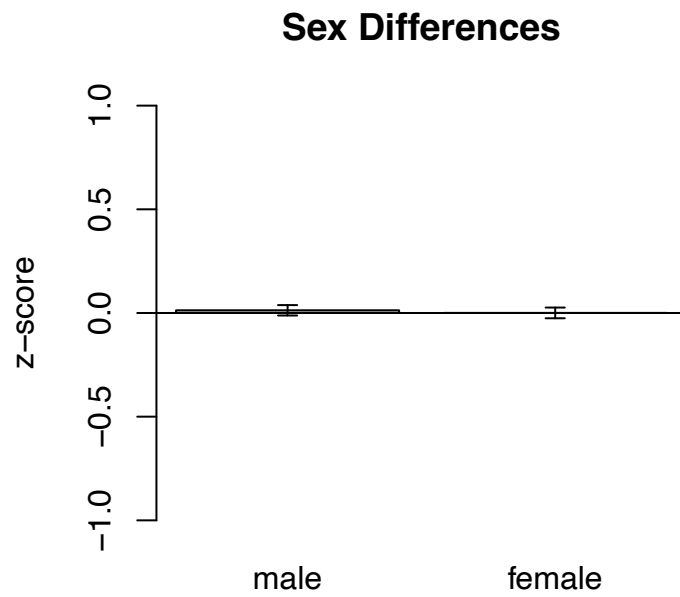


Figure 4. Education-related differences in performance

