

**This assessment review was compiled by our students and is intended to be used as a guide in assisting clinicians. We encourage you to review the evaluations and assessments for yourself to guarantee the most accurate and updated information.*

I. General Information

Title of the test: Minnesota Manual Dexterity Test (Revised Edition 1998)

Author: Lafayette Instrument Company

Publisher: Lafayette Instrument Company, PO Box 5729 Lafayette, IN 47904 USA Phone: (765) 423-1505 Toll Free: (800) 428-7545 (US Only) http://www.lafayetteevaluation.com/product_detail.asp?ItemID=164

Time required to administer: Variable. Consists of timed tasks and recommends two to four trials of each task per hand. If four trials of two tasks are completed for both hands, it could take up to approximately 56 minutes (based on the norms provided in the manual).

Cost of the Test: \$200.00 Kit; \$12.50 Additional score sheets (50)

II. Description of Test

Type/Purpose of Test: Standardized performance-based evaluation that measures simple, rapid hand-eye coordination and arm-hand dexterity (gross motor skills). The two main tasks are placing and turning but other areas of testing can include displacing, 1-hand turning and placing, and 2-hand turning and placing.

Population: Adults in rehabilitation (the manual states that the MMDT is used by occupational and physical therapists in rehabilitation, however, it does not describe if there are differences in scoring and interpretation), vocational aptitude determination, pre-employment screening.

Focus of measurement:

Organic systems Abilities Participation/life habits Environmental Factors

III. Practical Administration

Ease of Administration: The test is administered using standardized verbal instructions that are clearly outlined in the manual. All materials needed are included in the kit. This is a simple test to administer.

Clarity of Directions: The directions are clear and easy to follow. Directions for setting up a group testing environment are also included.

Scoring Procedures: The total number of seconds to complete each trial for each task per hand are added together (i.e. all trials for placing are added together and all trials for turning are added together) to obtain a raw score. The raw scores are listed on the Interpretation Chart by the number of trials and the tasks and provides a descriptive interpretation (very high, high, average, low, very low), a percentile score, a standard score, and a stanine score for individual testing. This chart also provides data for group testing.

A composite score can also be obtained by adding the raw scores of each task together and converting the total raw score to a scaled value using the charts in the appendices. This step is taken if the administrator wants to interpret the difference between the scores on the two tasks.

Examiner Qualification & Training: There are no specific qualifications or training required to administer the test. It is recommended that the administrator practice administering it and also taking it until able to perform each of the tasks at an above-average speed since demonstration of the tasks is part of the standardization.

IV. Technical Considerations

Standardization: Norms Criterion Referenced Other _____

Reliability:

2-Trial Placing: 0.87

4-Trial Placing: 0.93

2-Trial Turning: 0.91

4-Trial Turning: 0.95

2-Trial One-Hand Turning & Placing: 0.95

4-Trial One-Hand Turning & Placing: 0.98

2-Trial Two-Hand Turning & Placing: 0.94

4-Trial Two-Hand Turning & Placing: 0.97

Validity: 0.75 Criterion validity

Manual: Excellent Adequate Poor

What is (are) the setting/s that you would anticipate using this assessment?

The MMDT could be appropriate in inpatient rehabilitation, skilled nursing, outpatient, and home health.

Summary of strengths and weaknesses

Weakness:

- Information about the norms, reliability, and validity of the test included in the manual is from 1943 for the Minnesota Rate of Manipulation Test. Refer to the reference below for research about the differences in the outcomes of the two tests.
- The test was developed in 1931 as a pre-employment screening tool. Many of the tasks it was developed to test skills for are now automated or otherwise obsolete.
- Can take up to one hour if four trials of two tasks are administered and longer if more than the two main tasks are tested.
- Designed to be tested in a standing position to maintain standardization which limits the population it could be used for unless the client is only compared to his / her own performance over time.

Strengths:

- Simple to set up and administer.
- Time to administer can be modified by performing fewer trials and / or fewer tasks.
- Everything needed is included in the kit (except for a timer).
- Provides basic information about manual dexterity skills.
- Uses a simple task that might generalize to some occupations for some people.

Reference:

Surrey, L., Nelson, K., Delelio, C., Mathie-Majors, D., Omel-Edwards, N., Shumaker, J., & Thurber, G. (2003). A comparison of performance outcomes between the Minnesota Rate of Manipulation Test and the Minnesota Manual Dexterity Test. *Work, 20*(2), 97-102.