**Medicine Arrangement Test Occupational Therapy- M.A.T.O.T**

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**Background**: The ability to organize medications is significant for the independence of the elderly. Occupational therapists from the Meir Medical Center and from the School of Occupational Therapy at Tel Aviv University developed a computerized test for arranging medications (M.A.T.O.T.), using virtual reality.

**Aim of the Study**: Testing the parallel forms and differential validity for the M.A.T.O.T. among independent elderly persons residing in the community and in geriatric rehabilitation.

**Method**: Population: 84 elderly persons (30 men, 54 women) (average: 75.25, s.d.:6.60, range: 64-90), cognitively preserved (MoCA score range: 25.2-29), with no symptoms of depression. These were divided into an experimental group: 24 hospitalized (M: 77.38, 6.80+) and a control group: 60 independent individuals living in the community (M: 73.12, 5.46+).

**Research Tools**: A bio-demographic questionnaire; Cognitive tests: Four Item Tablet Test (4ITT), The Modified Mini-Mental State Examination (3MS), and the M.A.T.O.T., comprising two stages. The first stage includes the arrangement of pills for two days using a weekly medication organizing kit, according to medical instructions. The second stage includes the arrangement of pills for an additional day, in light of changes in the medical instructions.

**Results**: 1. The results yielded weak to strong significant positive/negative correlations (r=-2.15 - r=.772; p<0.001 – p=0.050) between the parts of the M.A.T.O.T. and the final score of the 3MS and its sections, among the study groups.

2. Low to high significant positive/negative correlations (r=-.219 – r=-.660; p<0.001 – p=0.048) were found between the M.A.T.O.T. and the 4ITT, among the study groups.

3. Significant differences were found in the performance of the M.A.T.O.T. between the experimental group and the control group (Z=-3.93 – p=-1.99; p<0.001 – p=0.046) and between women and men (Z=-2.73 – 1.95, p<0.001 – p=0.046).

**Conclusions**: Results show that the parallel forms and differential validity for the M.A.T.O.T. satisfies the need identified in the literature for the development of a computerized ecological tool for evaluating executive functions through the use of IADL tasks. We recommend that this test be included in the occupational therapy toolbox and that it be tested further on various populations.