

Psychometric Properties of the Italian Version of Multifactorial Memory Questionnaire for Adults and the Elderly



S Raimo¹, L Trojano¹, M Siciliano¹, S Cuoco², D Biondi¹, R Greco¹, M Santoro¹, A Cappiello¹, F Santangelo³, L Abbamonte¹, D Grossi¹, G Santangelo¹

¹ Department of Psychology, Second University of Naples, Viale Ellittico 31, Caserta

² Center for Neurodegenerative Diseases, Department of Medicine and Surgery, University of Salerno, Salerno

³ Neuroscience Reproductive and Odontostomatologic Sciences - University of Naples Federico II - Naples

Introduction: The Multifactorial Memory Questionnaire (MMQ; Troyer and Rich, 2002) is a reliable and valid metamemory measures, developed to evaluate several dimensions of subjective memory functioning such as frequency of memory problems in different situations (Ability), affect related to memory abilities (Contentment), and strategy use in everyday life (Strategy). The aim of this study was to examine the psychometric properties of an Italian version of the MMQ.

Methods: The questionnaire was tested in a sample of 600 Italian healthy adult and elderly subjects (25 – 91 year old). Participants also completed an Italian validated questionnaire assessing metacognition (the Cognitive Failures Questionnaire, CFQ) and two batteries assessing cognitive global status (Montreal Cognitive Assessment, MOCA; Mini Mental State Examination, MMSE).

Results: MMQ was easy to administer, acceptable, and had good test-retest and intra-test reliability (r for the scales ranged from 0.95 to 0.97; Cronbach's alpha for the scales ranged from 0.87 to 0.91). An exploratory factor analysis provided a four-factor solution: Ability factor ($\alpha=0.91$), Contentment factor ($\alpha=0.91$), External Strategies factor ($\alpha=0.85$) and Internal Strategies and Mnemotechniques factor ($\alpha=0.78$; Table 1). The MMQ total score and MMQ Ability factor score showed good convergent validity when compared to CFQ score ($r_{rho}>.50$), whereas MMQ total score and the scores on the four MMQ factors showed good divergent validity when compared to MOCA and MMSE score ($r_{rho}<.27$). No correlation was found between demographic variables and MMQ total and factor scores.

Table 1. Factor analysis of MMQ (N=600)

MMQ Item	Factor 1 Ability	Factor 2 Contentment	Factor 3 External Strategies	Factor 4 Internal Strategies and Mnemotechniques
A18	.673	.211	-.169	-
A19	.666	.196	-.196	-
A5	.661	.175	-.194	-
A8	.636	.180	-	-.117
A13	.622	.164	-	-
A2	.616	.145	-.186	.115
A20	.613	.305	-.111	-.107
A10	.596	.256	-	-
A6	.593	.153	-	-.122
A14	.592	.212	-.181	-
A11	.566	-	-	-.176
A7	.562	.270	-.179	-
A17	.538	.180	-	-
A15	.518	.150	-	-.179
A3	.515	.235	-	-
A4	.515	.136	-.111	-
A16	.509	.146	-	-.161
A9	.494	.255	-.101	-.117
A1	.494	.196	-	-.200

Discussion: The MMQ showed good reliability and construct validity, providing a basis for use of the questionnaire in clinical applications and research. Exploratory factorial analysis revealed that a four-factor solution offers the most interpretable pattern of factor score, as founded in French validation study of the questionnaire (Fort et al., 2004). The Italian version of MMQ is a reliable and valid questionnaire to assess SMI and several dimensions of metamemory in adult and elderly subjects.

Troyer AK, Rich JB. Psychometric properties of a new metamemory questionnaire for older adults. *Journal of Gerontology* 2002;57, (1):P19-27.

Fort I, Adoul L, Holl D, Kaddour J, Gana K. Psychometric properties of the French version of the Multifactorial Memory Questionnaire for adults and the elderly. *Can J Aging*. 2004;23(4):347-57.