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Isabelle Fort, Linda Adoul, Delphine Holl, Joël Kaddour, Kamel Gana. Psychometric Properties of the French Version of the Multifactorial Memory Questionnaire for Adults and the Elderly. *Canadian Journal on Aging / Revue canadienne du vieillissement*, 2004, 23, pp.347 - 357. hal-01789129

HAL Id: hal-01789129

<https://amu.hal.science/hal-01789129v1>

Submitted on 14 May 2018

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Metamemory is commonly defined as the knowledge one has of general memory functioning, along with the monitoring and control processes that allow subjects to regulate their memory activity and control (Bjorklund, 1985). This definition includes two domains that refer to knowledge of memory functioning and to monitoring and control processes that are used to perform memory tasks. According to Flavell, Hartwig, Fisher, and Uhl (1986), the knowledge domain itself has two levels of content: (a) factual knowledge about memory processes and memory strategies and (b) the subject's beliefs about her/his own memory abilities. These authors also include another dimension pertaining to memory-related affect.

Metamemory has been studied mostly within two fields: educational psychology and the psychology of aging. In the latter field, it is considered to offer a possible explanation for the aging of memory abilities according to Hartwig, Fisher, and Flavell (1986): "Metamemory is not, by itself, a contributing factor to deficient strategy utilization by older persons in two ways: (a) older persons do not or do not identify the strategy behavior necessary to optimize test performance, and (b) inadequate ability to characterize the nature of memory" (p. 103). They add that older people may have accurate knowledge about memory functioning. Hartwig et al. (1986) study adults about age differences in metamemory support this hypothesis, demonstrating that older adults' judgments of self-estimated ability than younger subjects report more memory problems and use external aids more often (Bjork, 1985; Chaffin & Berman, 1981; Craighero & Pass, 1989; Elder, Neuhoff, & Balthazy, 1989; Lewis, Stone, & Cook, 1987; Mack, Stone, & Bagnall, 1989).

In the field of aging psychology today, we are witnessing an evolution in the place given to metamemory studies as the relationship between metamemory and concepts from social cognition are now being considered. Craighero (1989) and Craighero, Faldutis, and Hartwig (1992) feel it is useful to integrate other concepts into models of these relationships—order to qualify the nature of monitoring and beliefs about memory. For instance, according to Craighero, attentively monitoring memory involves one of the characteristics of cognitive structures, which is the distinctive sense of the representational categories associated with memory aging. "Metamemory shows up in the elderly as an instance of memory problems that those of young people continue to be cognitive self-ratings among older subjects. The relationship between general beliefs about memory aging and beliefs about one's abilities has been empirically supported by Craighero and Hartwig (1992), Stone,

and colleagues concerning memory aging, will influence the way subjects answer questions dealing with the utilization of abilities.

Another specificity of the concept of metamemory is that it is considered an aging stability, so that it encompasses the concept of stability's complexity. Memory complexity refers to an impression that one's memory abilities have improved with age (Bjorklund, 1985). While ability self-ratings to itself a dimension of metamemory, it also seems to include memory complexity. However, Bjorklund (1985) and Craighero (1989) and Craighero, Fisher, and Uhl (1986), Balle, Craighero, and Craighero (1989), Craighero, Faldutis, and Uhl (1992), and Uhl (1987) authors have been focused regarding the relationship between memory complexity and depression. Analyzing the link between depression and self-evaluation of ability could help us gain a partial understanding of how self-ratings are influenced.

Metamemory Subjects: Memory Functioning

A person's awareness and knowledge of her/his own memory functioning are usually measured by self-reports from questionnaires that rely on self-ratings of memory in various situations or with the frequency of forgetting in everyday life. Others deal with a more diverse range of topics, such as changes in a subject's difficulties during the day for the execution of memory tasks, or the influence of affective factors (Bjorklund, 1985; Craighero & Faldutis, 1989).

The most widely used questionnaire dealing solely with frequency of forgetting and ability self-ratings is the Inventory of Memory Experiences (IME). Developed by Craighero and Balthazy (1989), a short version of this questionnaire (the Short Inventory of Memory Experiences (SIMEX)) is described by Craighero (1989). Like the original version, it has two components. The first contains 16 items related to forgetting and assess the following areas: memories people cannot, geographical difficulties, conversations, things learned by one, absent-mindedness, and failure to remember something one knows. The second part contains two sections: recall of early childhood (first names) and recall of various specific events (first names). This questionnaire has been used in several studies pertaining to age differences in the relationships between metamemory and memory (Chaffin & Berman, 1981; Craighero & Pass, 1989; Elder et al., 1989; Bjork, 1985). However, neither the factor structure nor the internal consistency of this short version has been studied.

The most frequently used questionnaire dealing with diverse topics on the Memory Functioning Questionnaire and the Inventory of Subjective Questionnaire (Bjork, 1985; Craighero, 1989; Craighero & Pass, 1989; Craighero, Faldutis, & Uhl, 1992). Lee,

ness et al., 1997; McClelland, Shiffrin, Gault, & Rydqvist, 1997; Lee & Zelazo, 1997). The Memory Functioning Questionnaire was designed as a self-report measure of ability-memory functioning to reflect it was derived from Zelazo (1996) and Thompson's (1997) Memory Questionnaire and was shortened by factor analysis using the principal-components method (Zelazo et al., 1996). The authors obtained a final questionnaire consisting of 16 items. The factor analysis revealed four factors that accounted for 73.1 per cent of the variance. Factor 1 was interpreted as 'general memory ability' (i.e., the total score indicated a level of ability), factor 2 was interpreted as a composite functioning factor, and factor 3 included items about strategy use and was named 'strategy use'. This factor structure was chosen to be similar to that of the *alpha*-coefficients of the different forms, varied from .83 to .89, indicating good internal consistency within each form. The MFAQ has been translated into French (Gault & Walz, 1998), but the psychometric properties of this version have not been investigated.

The Memory in Addition (MIA) scale was developed by Gilson and Hébert (1998). The authors aimed to derive a multidimensional psychometric instrument to represent a multidimensional construct of memory in addition. After an examination of questionnaires and interviews about semantic memory, episodic memory, memory metamorphosis, and self-perception, its initial goal is to be able to present a content analysis of this part but the authors decided to create 18 items, covering the following dimensions: strategy (memory strategy use) and knowledge about memory processes and taking explicit knowledge about one's own abilities, change (pattern of evolution of one's memory), ability (judging the functioning memory ability), strategy and ability strategy activation (importance of according to a task), and level (level of control in memory ability). *Alpha*-coefficients indicated relatively high estimates of internal consistency (from .88 to .91), except in the case of the strategy dimension (.76). The results of a factor analysis showed that level of the eight dimensions were clearly distinct, but the strategy dimension was combined with the change dimension. Moreover, within the strategy dimension, one could distinguish between use of internal strategies and use of external strategies (Gault & Hébert, 1998). Although the reliability and validity of the MIA have been appropriately proven recently, its dimensional structure has not been demonstrated (Hébert, Gault, & Gault, 1999). Moreover, the MIA has been validated in French (Gault & Hébert, 1998). Gault (1997) conducted a principal component analysis of the MIA. With the exception of writing, all of the dimensions

were identified. The other four supplementary estimates of the internal consistency of the dimensions ($\alpha < .75$) resulted with the exception of motivation ($\alpha = .73$).

Hébert and Gault (1998) examined the existing questionnaires to have proved inadequacy that made their internal use difficult. The drawbacks were related to the nature of the items, the fact that some items are not relevant for all subjects, the length of the questionnaires, and the diversity of the instruments. Therefore, Hébert and Gault (1998) designed the Multidimensional Memory Questionnaire (MMQ). The MMQ consists of 16 items, seven of which are more hypothetical dimensions: structural memory judgments, memory assessment, memory ability self-appraisal, and strategy use (strategy use). The authors aimed to create short items and to include only items dealing with situations where action is possible, along with some situations relevant to memory use (strategy use). Memory assessment deals with the technique, participants have about their current memory ability (speed, focus, satisfaction, understanding, retention) and with the self-evaluation abilities. It includes 10 items in 1-point Likert format, ranging from 'strongly agree' to 'strongly disagree', with higher scores indicating higher satisfaction with one's memory. Memory ability addresses frequency of forgetting in different situations. It consists of 10 items that ask the subject to rate the frequency of events that do not fit his requirement in the last 2 weeks on a 1-point Likert-type scale, ranging from 'never to always', with higher scores indicating more memory problems. The strategy dimension deals with strategy use in everyday life. It includes 10 items. Participants answer on 1-point Likert-type scale, ranging from 'never to always', in accordance with how often they used the strategies in the last 2 weeks. Higher scores indicate greater propensity to use memorization strategies. The MMQ was used by Hébert (1999) in a study about the effects of an intervention program for older adults.

Hébert and Gault (1998) examined the internal consistency test-retest reliability and construct validity of scores on the MMQ scale among 16 middle-aged and elderly subjects (50% were female) aged from 40 to 60 years ($M = 54$, $SD = 8$). The mean level of education was 12.6 years (ranging from 8 to 16, $SD = 2.8$). Construct validity was tested for MMQ content, test-retest reliability, and internal MMQ construct validity. Test-retest correlations after a month interval were strong, ranging from .83 to .93 ($p < .05$). The convergent validity of the MMQ scales was demonstrated by their correlations with the Memory Functioning Questionnaire (MFQ) (the Memory in Addition Questionnaire (MIA)) and objective memory tasks. Dimensional validity was demonstrated by the lack of correlation between the MMQ scale and

translation team. A principal component analysis with a varimax rotation identified three factors corresponding to the hypothesized dimensions scales. The BMMQ scores were psychometrically sound and ready for translation.

The aim of the present study was to develop a French version of the BMMQ and to examine its psychometric properties in order to provide a tool for research and clinical purposes. In order to our knowledge, the psychometric properties of a French version of a measurement instrument have been investigated only for the BMMQ. Therefore, this study will provide researchers and practitioners with the opportunity to select among our self-report measures to assess well-being.

Method

Translating and adapting the BMMQ

The BMMQ was translated in three steps: firstly, three translations were produced by four English-speaking persons, one of whom was a professional translator (senior); for each item, each translator was asked to select which of the four translations best represented the meaning of the original item. Finally, an experimental version generated from the consensus given by the translators (the shortened, original) and approved by a committee of psychologists working in the field of psychological measurement. The final version is presented in the Appendix.

Participants and Procedures

The study participants were 196 French adults (198 women and 98 men) from average age of 61.9 years (ranging from 41 to 90, $M = 61.9$, $SD = 10.6$) and lived in their own homes. All participants lived in retirement homes, and 100 percent had 10 or more years of education. They were contacted by the authors' graduate or through independent clubs and associations. Participants were informed of the voluntary and anonymous nature of the study.

Measures

The participants filled out the BMMQ individually in the format originally proposed by Ingle and Kirk (1981). The other measures described below were used to evaluate the construct validity of the scale.

An adapted French version of the BMMQ scale (Ingle & Kirk, 1981) validated by Bourgeois (1991) was administered. This is a 14-item questionnaire in 4-point Likert format assessing five dimensions of well-being: *energy* (13 items, $\alpha = .85$), *I do not get tired when I am put on the spot to remember new things* (5 items, $\alpha = .86$), *I do not get the feeling that I am forgetting things* (5 items, $\alpha = .87$), *energy* (10 items, such as "I am good at remembering names") and *strategy* (14 items, such as "Do you ever appear

stupid or as someone to help you remember them?"). Alpha coefficient estimates of reliability for the items on each dimension were 0.85, 0.89, 0.83, and 0.82, respectively.

A French version of the short version of the Cognitive Function Scale (CFS) (Folstein & Folstein, 1986; Folstein, Folstein, & Tangheroni, 1983) validated by Bourgeois et al. (1991) was used to measure short status. This is a 10-item, dichotomously scored scale in which respondents are asked to respond yes or no to each item. A sample item from this scale is, "Can you do good games such as the game?" Item that the scale was designed especially for the ability, but it is also suitable for younger participants. Bourgeois's estimate of reliability for scores on the CFS was 0.76. Bourgeois research has demonstrated that mood affects not only cognitive functioning, but also self-evaluation; we hypothesized that scores on the BMMQ would be positively correlated with scores on the CFS (Jok, McLaughlin, & Ingle, 1999; McLaughlin, 1999).

Fort's (1988) Memory Aging Questionnaire (MAQ) was administered to assess how participants perceived of memory change with advancing age. The MAQ is a 14-item scale (1-5-point Likert) with lower scores indicating stronger beliefs that aging is associated with declining memory performance. This scale includes items such as "With advancing age, memory decreases" and "With advancing age, people are better at remembering things to do". The reliability of the scores on this scale was satisfactory ($\alpha = .81$). We hypothesized that negative beliefs about age-related memory performance would be negatively associated with memory judgments.

Self-perceived health was measured by a single item, "How do you judge your health right now?" Answers were given on a 5-point scale ranging from *excellent* to *poor*, with higher scores indicating greater satisfaction with one's health (broad self-perceived health).

Results

Comparisons with the English-speaking sample

The BMMQ scores are presented in Table 1, along with scores from an English-speaking sample (Ingle & Kirk, 1981). To compare the two samples, three tests were performed. The results showed that our sample had higher scores than the English-speaking sample on the commitment and ability dimensions of memory, energy (intercorrelation on the energy dimension: Note, though, that our sample was younger than the English-speaking sample) (191 vs. 187 of our study and 81 vs. 73 in the original study, $p < .0001$).

Table 1. Descriptive statistics for the dimensions of the IQM2

	Countdown		Ability		Strategy		Age	
	Female	Male	Female	Male	Female	Male	Female	Male
	speaking sample							
<i>M</i>	10.2	10.1	10.1	10.1	10.1	10.1	10.1	10.1
Standard deviation	1.0	1.0	1.1	1.1	1.0	1.0	1.0	1.0

Factorial structure

A maximum likelihood confirmatory factor analysis was conducted to evaluate the three-dimensional model proposed by Torgue and Bork (2004). This model did not adequately fit the data ($\chi^2(128.5)$ $df(128)$, $p < 0.001$, $RMSEA = 0.10$) and principal component analysis, followed by variance rotation, was then performed. The solution for use of a factor analysis was evaluated by applying Bartlett's dimension test and the Kaiser-Meyer-Olkin test. The χ^2 value on Bartlett's test was $\chi^2(127.1)$ $df(128)$, $p < 0.001$ and the value on the Kaiser-Meyer-Olkin test was 0.80, both indicating adequate homogeneity. The number of factors extracted was based on the eigenvalues greater than 1 criterion plus another interpretability of the solution. The initial analysis revealed without specifying the number of factors to be extracted. This procedure resulted in six factors with eigenvalues greater than 1. However, after many trials, the two-factor solution provided the best interpretable factor pattern. This solution accounted for 64% percent of the total variance in the questionnaire responses. Items with structure coefficients greater than 0.400 were found to be meaningful for the questionnaire.

Factor 1 (aggressive IQM2) accounted for 26.5% percent of the variance variance and included all items on the ability dimension of the IQM2. Factor 2 (aggressive IQM2) accounted for 3.7% percent of the total variance and included all four test items of the countdown dimension. Factor 3 (aggressive IQM2) accounted for 4.7% percent of the variance variance and included nine items from the strategy dimension. It was labelled the overall strategy factor. Factor 4 (aggressive IQM2) accounted for 7.3% percent of the variance variance and included nine other items from the IQM2/strategy dimension. This factor was named the overall strategy factor. Only two items (C7 and C10) did not have high coefficients (>0.400) along an axis.

Internal consistency of factors on the Parent Version of the IQM2

The internal consistency of the scores on the items constituting each IQM2 dimension were examined using Cronbach's α coefficients. For the countdown dimension, $\alpha = 0.748$ (α on the original version) for ability scores, 0.68 (α on the original version) for strategy scores and 0.67 (α on the original version).

We also conducted an item analysis in order to provide evidence of internal consistency and identify items that failed to contribute optimally to the respective total dimension scores. All but two items, total correlation coefficients for the countdown dimension exceeded 0.50, all but one item, total correlation coefficient for the ability dimension exceeded 0.50, and all but three items, total correlation coefficients for the strategy dimension exceeded 0.50. One dropping these items did not improve α coefficients.

Construct validity

Like Torgue and Bork (2004), we studied convergent validity between the IQM2 and the IQM by comparing correlation coefficients. Table 3 summarizes the results. The countdown dimension of the IQM2 was significantly correlated with both anxiety and strategy on the IQM ($r = 0.29$, $p < 0.001$) and $r = 0.18$, $p < 0.001$), which is similar to the results reported by Torgue and Bork (2004) ($r = 0.18$, $p < 0.001$) and $r = 0.16$, $p < 0.001$). These results indicate that a high degree of anxiety/correlation was associated with a low level of anxiety and a finding of ability concern. In our's children, being significantly correlated ($r = 0.24$, $p < 0.001$) with IQM2 between the IQM2/ability dimension and the IQM/ability dimension, as reported by Torgue and Bork (2004) ($r = 0.14$, $p < 0.001$). The correlation indicates that an optimal rating of one's abilities was associated with low reports of difficulty. The strategy dimension of the IQM2 was strongly and significantly correlated with the strategy dimension of the IQM ($r = 0.70$, $p < 0.001$).

Table 6. Maximum likelihood estimates for the GMM ($\beta = 100$)

GMM test ^a	Structure coefficient ^b				Normality
	Form I	Form II	Form III	Form IV	
0.1	0.0000	0.0000	0.0000	0.0000	0.000
0.2	0.0000	0.0000	0.0000	0.0000	0.000
0.3	0.0000	0.0000	0.0000	0.0000	0.000
0.4	0.0000	0.0000	0.0000	0.0000	0.000
0.5	0.0000	0.0000	0.0000	0.0000	0.000
0.6	0.0000	0.0000	0.0000	0.0000	0.000
0.7	0.0000	0.0000	0.0000	0.0000	0.000
0.8	0.0000	0.0000	0.0000	0.0000	0.000
0.9	0.0000	0.0000	0.0000	0.0000	0.000
1.0	0.0000	0.0000	0.0000	0.0000	0.000
1.1	0.0000	0.0000	0.0000	0.0000	0.000
1.2	0.0000	0.0000	0.0000	0.0000	0.000
1.3	0.0000	0.0000	0.0000	0.0000	0.000
1.4	0.0000	0.0000	0.0000	0.0000	0.000
1.5	0.0000	0.0000	0.0000	0.0000	0.000
1.6	0.0000	0.0000	0.0000	0.0000	0.000
1.7	0.0000	0.0000	0.0000	0.0000	0.000
1.8	0.0000	0.0000	0.0000	0.0000	0.000
1.9	0.0000	0.0000	0.0000	0.0000	0.000
2.0	0.0000	0.0000	0.0000	0.0000	0.000
2.1	0.0000	0.0000	0.0000	0.0000	0.000
2.2	0.0000	0.0000	0.0000	0.0000	0.000
2.3	0.0000	0.0000	0.0000	0.0000	0.000
2.4	0.0000	0.0000	0.0000	0.0000	0.000
2.5	0.0000	0.0000	0.0000	0.0000	0.000
2.6	0.0000	0.0000	0.0000	0.0000	0.000
2.7	0.0000	0.0000	0.0000	0.0000	0.000
2.8	0.0000	0.0000	0.0000	0.0000	0.000
2.9	0.0000	0.0000	0.0000	0.0000	0.000
3.0	0.0000	0.0000	0.0000	0.0000	0.000
3.1	0.0000	0.0000	0.0000	0.0000	0.000
3.2	0.0000	0.0000	0.0000	0.0000	0.000
3.3	0.0000	0.0000	0.0000	0.0000	0.000
3.4	0.0000	0.0000	0.0000	0.0000	0.000
3.5	0.0000	0.0000	0.0000	0.0000	0.000
3.6	0.0000	0.0000	0.0000	0.0000	0.000
3.7	0.0000	0.0000	0.0000	0.0000	0.000
3.8	0.0000	0.0000	0.0000	0.0000	0.000
3.9	0.0000	0.0000	0.0000	0.0000	0.000
4.0	0.0000	0.0000	0.0000	0.0000	0.000
4.1	0.0000	0.0000	0.0000	0.0000	0.000
4.2	0.0000	0.0000	0.0000	0.0000	0.000
4.3	0.0000	0.0000	0.0000	0.0000	0.000
4.4	0.0000	0.0000	0.0000	0.0000	0.000
4.5	0.0000	0.0000	0.0000	0.0000	0.000
4.6	0.0000	0.0000	0.0000	0.0000	0.000
4.7	0.0000	0.0000	0.0000	0.0000	0.000
4.8	0.0000	0.0000	0.0000	0.0000	0.000
4.9	0.0000	0.0000	0.0000	0.0000	0.000
5.0	0.0000	0.0000	0.0000	0.0000	0.000

a. GMM tests are based on the GMM test statistics.

b. Structure coefficient is the correlation coefficient between the two variables.

Table 1 (continued)

1998 Item ^a	Structure coefficient ^b				Communality
	Factor 1	Factor 2	Factor 3	Factor 4	
133	0.520	0.175	0.152	0.001	0.331
134	0.580	0.097	0.001	0.001	0.340
137	0.475	0.101	0.054	0.001	0.301
138	0.580	0.114	0.014	0.001	0.350
139	0.580	0.144	0.001	0.001	0.357
140	0.481	0.179	0.001	0.001	0.330
151	0.001	0.054	0.054	0.480	0.331
152	0.001	0.001	0.140	0.480	0.351
153	0.001	0.001	0.040	0.001	0.140
154	0.001	0.100	0.470	0.001	0.447
155	0.001	0.054	0.100	0.480*	0.351
156	0.100	0.075	0.480*	0.001	0.354
157	0.040	0.017	0.017	0.480	0.357
158	0.100	0.101	0.480	0.001	0.354
159	0.040	0.100	0.001	0.480	0.354
170	0.101	0.001	0.111	0.480	0.311
171	0.074	0.001	0.480	0.001	0.401
172	0.001	0.101	0.054	0.480	0.351
173	0.100	0.001	0.480	0.001	0.401
174	0.144	0.101	0.480*	0.001	0.351
175	0.047	0.111	0.001	0.480	0.354
176	0.001	0.054	0.480	0.017	0.354
177	0.001	0.101	0.480	0.175	0.454
178	0.001	0.001	0.001	0.480	0.375
179	0.001	0.054	0.470	0.001	0.401

a. N = 1,000; Cronbach's $\alpha = 0.88$; $\omega = 0.88$.

b. Entries below diagonal are values from other factor.

This correlation is higher than the reportedly 'large' and 'high-stimulus' ($r = 0.44$) and equates that reported use of 'strategies assessed by the WBI' and associated with highest use of the strategy assessing the WBI.

As reported, a significant correlation was found between depressed mood and monetary judgments. Table 1 shows that the three dimensions of the WBI were significantly correlated with the CDS, except 'clarity of depressed mood' was negatively correlated with satisfaction with one's money habits ($r = -0.16$, $p < 0.01$) and frequency of budgeting ($r = -$

0.21 , $p < 0.01$) and positively correlated with the use of monetary strategies, especially interest rates ($r = 0.16$, $p < 0.01$).

Also as reported, a significant correlation was found between monetary judgments and beliefs about aging-related money performance. Table 1 shows that the three WBI dimensions were significantly correlated with stereotypes about aging money. These results mean that beliefs in negative stereotypes about money aging were associated with a low degree of satisfaction with one's habits ($r = 0.21$, $p < 0.01$), enhanced reporting of money problems

Table 2. Correlations between the MMQ dimensions, the MMQ subscales, dependent level strategies about memory aging, and demographic variables

	MMQ- Subscales	MMQ-Ability	MMQ-Strategy	MMQ-Strat1 Strategies	MMQ-Strat2 Strategies
MMQ-Strategy		0.27**			
MMQ-Change	0.20**				
MMQ-Strategy	0.28**				
MMQ-Strategy			0.75+	0.67+	0.75+
Dependent level	0.28**	0.28**	0.32**	0.32**	0.31
Demographic about aging	0.07+	0.03+	-0.05+	-0.05	-0.05+
Age	-0.11	-0.12*	0.05	0.05	0.12*
Education	-0.01	-0.01	0.15+	0.08	0.21+
Subjective health	0.30**	0.28**	0.17*	0.08	0.17**

**Significance at $p < 0.01$; *Significance at $p < 0.05$.

($r = 0.18$, $p < 0.05$), and frequent use of mnemonic strategies especially external ones ($r = 0.20$, $p < 0.001$).

Finally, correlations between metamemory judgments, on the one hand, and age, education, and self-perceived health, on the other, were computed. As shown in Table 3, only ability and external strategy subscales were statistically significant results. *Metacognitive* ($r = 0.14$, $p < 0.01$) and *ability* ($r = 0.15$, $p < 0.01$) subscales were related to report more memory problems and used external mnemonic strategies more frequently than the *change* and *strategy* subscales did not report any significant correlation between age and the MMQ dimensions in their high-functioning sample. Level of education was significantly correlated with the MMQ strategy dimension only (more precisely for external strategies, $r = 0.13$, $p < 0.01$). Self-perceived health was positively correlated with metamemory (*ability*, $r = 0.13$ and *ability*, $r = 0.14$, $p < 0.01$), and negatively correlated with strategy ($r = -0.16$, $p < 0.01$). Positive self-perceived health was related to a lower propensity to use more memory strategies, fewer externalizing problems, and greater satisfaction with one's abilities.

Discussion

This article focuses on the three constructs, memory reliability and ability estimates of scores on the French version of the MMQ. The results allow us to conclude that our French version of this scale is psychometrically sound (internal reliabilities on the French MMQ proved highly reliable and correlated to the expected dimensions with other constructs. Evidence for the convergent validity of the MMQ scores was provided by three statistically significant positive cor-

relations with the MMQ. Correlations between the MMQ subscales and the MMQ subscales were strong, ranging from 0.75 to 0.79, and similar to those obtained by Lopez and Holt (2011) in their original study. Validity was established by examining the relationships between subscale scores and external variables. We found that metamemory judgments were associated to the expected direction with dependent level use in previous studies (see Plieger et al., 1995; Balle et al., 1991; Johnson et al., 1997) and to negative beliefs about aging-related memory performance (as hypothesized by Fleming and, 1995). It should be noted that beliefs in negative stereotypes about memory aging were associated with the frequent use of external mnemonic strategies, which could be considered as a way of compensating for one's need or imaginary memory impairment. Also, we found that perceived good health was related to a lower propensity to use mnemonic strategies, less frequent awareness of memory problems, and more satisfaction with one's abilities. Our results revealed that, with advancing age, subjects tend not only to report more problems concerning but also to use external mnemonic strategies more often. These results are in line with those obtained by other authors who have examined the relationship between metamemory and age (Lopez, 1991; Charlton & Harrison, 1991; Cunningham & Pass, 1999; Balle et al., 1991; Lavenex et al., 1995). Finally, we found that the higher the subjects' level of education, the more they relied on mnemonic strategies. These results are close to studies that examined the validity of the MMQ scores.

Regarding the factor structure, the results of the exploratory factor analysis did not support the a priori three-factor model of the MMQ: no explanatory factor

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