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4 **Acreeagnosia (Loss of financial knowledge):**

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7 **a symptom of functional and cognitive loss in frail elderly**

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50 **Key words:** Alzheimer's disease; Mild Cognitive Impairment; Cognitive Aging; Geriatric
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52 Assessment, Financial Management; Instrumental activities of daily living.
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3 The ability to maintain one's own finances is a complex function which relies on several
4 cognitive constructs. Its decline is argued to be an early symptom of dementia and a strong
5 predictor of future cognitive decline (Marson *et al.*, 2000). The impairment in financial
6 abilities and the lack of awareness of such deficits carry considerable social and legal impact,
7 and are among the primary factors precluding independent life and requiring legal assistance.
8 Despite its relevance, little attention has been paid to this common symptom. To highlight the
9 specificity of the symptom we suggest a term to define it: *Acreemagnosia*, from the Ancient
10 Greek ἀ- (a-, "lack of"), χρήμα (creema, "money") and γνωσιακή (gnôsis, "knowledge").
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21 Data from recent studies suggest that managing finances is among the earliest IADL
22 impairments in MCI. Sikkes *et al.* (2011) in a longitudinal study on the Instrumental
23 Activities of Daily Living (IADL) scales' ability to predict future dementia showed that two
24 of the most discriminating items between normal and pathological ageing were handling
25 money and understanding personal financial affairs. Peres *et al.* (2008) showed that decline in
26 managing finances was the strongest predictor of cognitive decline up to 10 years before the
27 onset of dementia.
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37 Most IADL scales include only a few items inquiring about financial abilities, and these
38 items are rather dated. However, the clustering resulting from item analysis of the output from
39 these scales suggests that *Acreemagnosia* is a deficit in its own right and as such should be
40 recognized, offering a conceptual frame within which to devise appropriate assessing
41 instruments.
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49 Three instruments have been specifically developed to evaluate financial abilities: (i) The
50 Financial Capacity Instrument (FCI) (Marson *et al.*, 2000) and subsequent variants, none of
51 which is available for use; (ii) The Financial Competence Assessment Inventory (FCAI) based
52 on the legal and monetary Australian and American systems also unavailable for public use
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3 and never published in full; (iii) The Measure of Awareness of Financial Skills (MAFS)
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5 based on the view that awareness of financial abilities is a central component of
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7 competence as unawareness would relate to the severity of cognitive impairment. Contrary to
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9 their prediction though, the authors found very little correlation between performance on
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11 different cognitive tests assessing executive functions, global cognitive function, and degree
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13 of financial awareness.
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17 Indeed, specific cognitive impairments and the ability to make financial decisions are
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19 dissociated and people who perform well on psychometric tests may still perform poorly on
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21 financial competence tests. Okonkwo *et al.* (2006) in their study using FCI together with a
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23 comprehensive neurocognitive battery, demonstrated that executive deficits (assessed by
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25 means of WAIS-III, Trial Making Test A, and visuo-motor sequencing) and impairment of
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27 attention (assessed by means of the Dementia Rating Scale (DRS)-2, Attention and Wechsler
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29 Memory Scale (WMS)-III, Spatial Span Forward) were the only cognitive impairments
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31 associated to the financial abilities decline of people with amnesic MCI. Other studies
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33 however have questioned the correlation between scores in cognitive tests and financial
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35 management competence. Basset (1999) in her study with mild and moderate AD patients
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37 found no correlation between general cognitive function (as measured by the MMSE) and
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39 financial competence. There is growing concern that cognitive assessment tests are unsuitable
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41 for evaluating financial ability.
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46 Assessing the possible presence of Acromagnosia with proper instruments is important as
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48 older people are at great risk of functional dependence and are prone to different types of
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50 financial frauds. There is an unmet need for a new instrument, which could aid the diagnosis
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52 of Acromagnosia and quantify its severity. Such tool should incorporate informant-based,
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54 self-report and performance-based measures that would complement each other. It should be
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3 based on sound psychometric techniques (e.g., Item Response Theory Analysis) and should
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5 incorporate unidimensional items which measure specific constructs as well as items which
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7 measure more than one construct, referred to as complex. It should consider prior knowledge,
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9 proficiency or interest in finances. Finally, the ideal instrument assessing financial
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11 competence will have to be culturally valid.
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