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Assessment of financial decision making: an informant scale

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ABSTRACT

Older adults with cognitive impairment are a population at great risk for financial exploitation. At-risk older adults often have difficulty reporting on their own financial abilities. Collecting information from trusted others is vital for professionals investigating the financial exploitation of older adults. There are few reliable, valid, and standardized informant-report measures of financial capacity, and none that assess decisional abilities for an ongoing, real-world financial transaction. The present study sought to examine the psychometric properties of a new informant-report scale of financial decisional abilities in older adults. One hundred fifty participants were recruited to complete the Family and Friends and Interview regarding a known older adult’s financial decisional abilities. A factor analysis identified two subscales. The full scale had adequate sensitivity and specificity to detect an informant’s current concerns regarding financial exploitation. The Family and Friends Scale is a useful tool for collecting informant-report regarding an older adult’s ability to make financial transactions.

KEYWORDS

Financial decision making; financial exploitation; financial judgment; informant-report

Introduction

Financial exploitation is a substantial societal problem that significantly impacts older adults. A MetLife (2011) study estimated that financial exploitation costs older adults in the United States as much as $2.9 billion each year, and older adults with cognitive impairment are especially vulnerable to financial exploitation. Further, the ability to accurately report on one’s skills and abilities declines significantly in the presence of mild cognitive impairment (MCI) and dementia (Vogel et al., 2004). This decline in insight complicates the work of professionals who must assess the decisional abilities of financially exploited older adults – Adult Protective Services workers, psychologists, and attorneys, among others. Therefore, caregivers and other informants are often asked to report on a patient’s abilities, including their financial decision-making skills. In the case of suspected financial...
exploitation, it is critical to get a reliable and valid informant report of the patient’s decisional abilities. To date, relatively few instruments are available to collect this data from informants. The purpose of this study was to examine the psychometric properties of a new informant-report measure of financial decision-making abilities, the Family and Friends Scale (FF). To demonstrate the need for this new measure, we will first summarize the broader literature that examines the use of informant ratings of dementia symptoms and activities of daily living (ADLs), and then discuss the literature that more specifically assesses financial skills.

**Informant reporting in dementia**

Informant report has been found to predict several important outcomes for patient dementia symptoms. Galvin et al. (2005) found that their informant-report scale of dementia symptoms, the AD8, successfully differentiated between those rated as having no dementia and those rated as having very mild dementia by clinicians. This finding suggests that informant reports of dementia symptoms are sensitive to cognitive changes, including the early stages of dementia. Additionally, Mackinnon and Mulligan (1998) found that combining informant report with neuropsychological test data in a logistic regression better predicted the presence of dementia than either type of information alone. In another study (Carr, Gray, Baty, & Morris, 2000), researchers found that informant report of dementia predicted both current dementia status and future progression into dementia. Together, the results of these studies suggest that informant report of dementia symptoms is useful for evaluating important outcomes when used either on its own or combined with other objective measures of dementia symptoms.

Despite the utility of informant ratings, there is considerable variability in the degree to which self-report, informant-report, clinician ratings, and objective measures of dementia symptoms and ADLs are concurrent with one another. For example, Stella, Paulo, Canineu, de Paula, & Florenza (2015) found that caregivers’ and clinicians’ ratings of neuropsychiatric symptoms tended to be more concurrent when the patient had moderate-to-severe dementia symptoms, and less concurrent at earlier stages of dementia. Additionally, several informant characteristics affect reports of patient dementia symptoms. For example, the Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE; Jorm, 2004) is a commonly used informant report of dementia symptoms and has been found to be affected by the presence of informant anxiety and depression (Jorm et al., 1996). That is, informants who reported more of their own anxiety and depression symptoms also reported a greater number of dementia symptoms for the patient. Perceived caregiver burden has also been found to be an influential factor in informant report of ADLs in dementia patients. Zanetti, Geroldi, Frisoni,
Bianchetti, and Trabucchi (1999) found that increased perceived caregiver burden was related to over reporting of patient difficulties with ADLs. Finally, the specific dementia symptoms and ADLs being assessed also influence the accuracy of informant report and its concurrence with self-report, clinician ratings, and objective measures of symptoms and skills. For example, Zanetti et al. also found that concurrence of informant report and objective measures of ADLs was higher for skills such as walking and dressing, but had only moderate concurrence for ADLs such as shopping and telephone and money use. Siordia (2012) found that across 17 ADLs, self-report and information report were more concurrent for abilities such as bathing, eating, and toileting. Notably, the greatest disagreement between self- and informant report concerned the patient’s ability to manage their finances, such that patients rated their skills more favorably than their informants.

**Informant report for assessment of financial capacity**

Discrepancies between informant report, self-report, and objective measurements of financial skills warrant further exploration, given their potential importance in the context of financial exploitation. Relatively few instruments have been developed to collect informant reports regarding an older adult’s financial capacity. One such measure, the Current Financial Capacity Form (CFCF; Marson et al., 2000), has been administered in both a self- and informant-report format. When administered to informants, the CFCF prompts informants to rate the patient’s functioning across several domains of financial skills, such as “Basic Money Skills” and “Checkbook Management,” all of which parallel the domains of an objective measure of financial skills, the Financial Capacity Instrument (FCI). For each financial skill assessed by the CFCF, the informant rates the patient’s ability as “cannot do,” “can do but needs help,” and “can do without help.” Griffith et al. (2003) found that informant ratings on the CFCF differed significantly across patients with Alzheimer’s disease (AD) and healthy controls on most financial domains. Additionally, control participants and participants with MCI differed significantly on the global measure of Overall Financial Capacity. As is the case with informant-report measures of dementia symptoms and other ADLs, informant report measures of financial skills also successfully differentiate between patient groups and controls. Wadley, Harrell, & Marson (2003) compared self- and informant reports on the CFCF with objective performance on the FCI. The authors found that AD patients tended to overestimate their financial skills compared to their objective performance, suggesting decreased insight into impairment in financial abilities and highlighting the need for informant reports. Notably, caregivers were equally likely to overestimate or underestimate the AD patient’s financial skills.
Similarly, Okonkwo et al. (2008) found that informants tended to underestimate the financial skills of older adults with MCI. Together, these findings underscore the need to include informant report of financial capacity within a broader assessment that includes objective measures of financial skills.

The Measure of Awareness of Financial Skills (MAFS) has three parts: a self-report questionnaire, an informant-report questionnaire, and an objective measure of financial skills. The self-report and informant-report questionnaires consist of 32 parallel items that inquire about the subject’s ability to do specific financial tasks, such as counting currency or writing checks. Each item is rated on a 4-point scale ranging from 0 (no difficulty/no help) to 3 (completely unable/someone else does it entirely). Two more items on both forms of the MAFS questionnaire ask the older adult and their informant to rate how financially capable the individual is overall, as well as the likelihood that the older adult’s ability to handle their finances will result in a negative outcome. In addition to the total scores generated for the self- and informant report, the MAFS is also used to generate an unawareness score (informant score – participant score) for the participant, in which a higher score indicates an overly positive view of one’s financial abilities. The objective performance measure also parallels the same domains of the self- and informant-report questionnaires, and requires the participant to demonstrate six financial skills, such as balancing a checkbook. Cramer, Tuokko, Mateer, and Hultsch (2004) found that the unawareness score correlated significantly with cognitive impairment, such that individuals with greater cognitive impairment rated themselves much more favorably regarding their financial skills than their informants did. However, unawareness scores were not related to physician ratings of financial awareness. In another study, Van Wielingen, Tuokko, Cramer, Mateer, and Hultsch (2004) compared the MAFS scores from patient self-report and informants’ ratings of patient disability to quantify the patient’s degree of awareness in the financial domain. Lower scores on the Modified Mini-Mental State Examination were associated with higher unawareness scores on the MAFS, reflecting an individual’s more favorable self-report of financial skills than their informant’s rating. While individuals with mild dementia lacked insight into their impairment for complex financial tasks, participants with moderate/severe dementia demonstrated unawareness of deficits, even on basic financial tasks.

**Clinical uses of an informant scale**

There are many important clinical uses for an informant interview including detection of financial exploitation, documentation of financial exploitation, and support for prosecution of financial exploitation. An informant scale can be used early in an investigation of suspected financial exploitation to detect an older adult’s vulnerability and risk for financial exploitation. A reliable,
valid scale provides an efficient way for Adult Protective Services workers to gather information about an older adult’s financial decision making and vulnerabilities surrounding finances. In cases where financial exploitation is substantiated, the informant interview can be used for further data collection regarding the case and further strengthen the findings. Strengthening the evidence in financial exploitation cases can assist Adult Protective Services workers in providing evidence to prosecutors. Courts are accepting of reliable and valid scales that can be replicated, and prosecutors feel more confident about evidence collected through empirically validated instruments.

**Purpose of the study**

Current informant-report measures examine general financial skills, but not decision-making abilities for a significant or major transaction. The purpose of this study was to examine the psychometric properties of a new informant-report scale of financial decision-making ability, the FF. This informant-report scale was adapted from the Lichtenberg Financial Decision making Rating Scale (LFDRS; Lichtenberg, Stoltman, Ficker, Iris, & Mast, 2015), which was administered as a structured interview with multiple-choice response options to assess decisional abilities for a significant financial transaction. The scale used a person-centered approach that sought to support the individual’s autonomy in making their own decisions, emphasized their personal strengths, and respected their values, choices, and preferences (Fazio, 2013). Reliability and concurrent validity of this new measure will be examined.

Hypothesis 1: The FF will demonstrate adequate internal consistency and result in a 2-factor scale of psychosocial factors and intellectual factors, which will parallel the existing LFDRS subscales.

Hypothesis 2: The FF will demonstrate concurrent validity by predicting informant concerns about financial exploitation.

**Methods**

**Participants**

One hundred fifty informants were recruited to participate in the study; of these, 83% of all informants and 73% of older adult informants were female. First, more than 75 participants were directly recruited from the Healthier Black Elders Participant Registry, which is part of the University of Michigan-Wayne State University NIA P30 Resource Center for Minority Aging Research. This required additional approval from the Healthier Black Elders Community Advisory Board (see Hall et al., 2016, for details on
recruitment and retention of registry members). Second, the first author gave a number of presentations to groups of older adults across a wide variety of locations and settings (e.g., senior centers, churches, independent living center), and participants were recruited at these events. And third, a snowballing technique was used.

Informants’ mean age was 62.6 (SD = 11.7), ranging from 18 to 88; the mean age of the older adults being rated by the informants was 72.7 (SD = 9.4), ranging from 60 to 95. Informants’ mean education was 15 years (SD = 2.3), ranging from 10 to 22; the older adults’ mean education was 13 years (SD = 2.3), ranging from 5 to 18. The mean number of years the informant had known the senior was 42.7 (SD = 19.7), ranging from 1 to 80. We did not collect data on informants’ race, but of the older adults, 84% were African-American and 16% non-Hispanic White.

**Creation of the FF scale**

The items that comprise the scale were adapted from the Lichtenberg Financial Decision making Rating Scale (LFDRS) (Lichtenberg et al., 2015). A total of 25 items were adapted from the 34 item LFDRS which had four empirically derived subscales. The final scale was derived based on factor analyses, and consists of 14 items. These factor analyses were used to determine the dimensionality of the item set and the suitability of individual items for inclusion on one or more rating scales.

**Statistical procedures**

Dimensionality was examined by merged exploratory factor analysis (EFA) and confirmatory factor analysis (CFA; Asparouhov & Muthén, 2009) with polychoric correlations using MPlus (Muthén & Muthén, 2011). Confirmatory analyses of a unidimensional model and evaluation of the comparative fit index (CFI) were performed in the context of model fit for unidimensional – rather than multidimensional – models (Bentler, 1990; Cook, Kallen, & Amtmann, 2009; Meade, Johnson, & Bradley, 2008). Eigenvalues and ratios of the first to the second eigenvalue were studied; ideally, the ratios should be greater than 4. Model fit statistics – specifically, the CFI and the root mean square error of approximation (RMSEA; Bentler, 1990) – were evaluated. The following cutoffs for good model fit for categorical outcomes are recommended: RMSEA < 0.06, CFI > 0.95. Adequate fit is observed if the RMSEA is ≥0.1 and the CFI is ≥0.9. Item loadings on the estimated factors were examined; ideally, values >0.30 are desired. CFA was performed to evaluate the suitability and model fit of a 2-factor model.

Reliability was evaluated by decomposing the scale score into the sum of the item scores and the contribution of the common term or communality.
McDonald’s (1999) Omega Total (ωt) is a reliability estimate based on the proportion of total common variance explained.

Independent samples t tests were used to evaluate possible group differences between older adults whose informants reported that they were concerned about possible financial exploitation and those whose informants did not. Group mean differences were examined on age of the informant, age of the senior, informant years of education, senior years of education, and length of the relationship between the informant and the senior. Pearson chi-square analyses were used to examine potential group differences in gender of the informant and gender of the senior between informants who had concerns about financial exploitation and those who did not.

To examine sensitivity and specificity of the FF to detect informant concerns about financial exploitation, a receiver operating characteristic (ROC) curve analysis was conducted using the summed score of all 14 scale items. Thirty-two participants were unable to answer one or more items. Two items were missing from more than 5% of participants’ responses: “Are they helping anyone financially?” (6.0%) and “How much risk is there that the decision could result in a negative impact?” (5.3%). All participant responses were used in the ROC curve analysis, regardless of missing item responses. It is likely that in many cases, most but not all questions could be answered by the informant; therefore, their prorated score was used as the total risk score.

Results

Participants

Table 1 shows that the age of the informant and senior, informant and senior years of education, gender of the informant and senior, and length of the informant–senior relationship were not significantly different between those informants who had concerns about the senior’s being financially exploited and those informants who did not.

Item selection

The majority of the ordinal or binary items from the questionnaire were included in the analyses. Nominal items were not included. The item “Did anyone drive him/her to carry out this financial transaction or decision?” was excluded, because only 12% of informants responded. Two items were combined into one because of the header/contingency format: “Is the senior’s memory, thinking skills, or ability to reason with regard to financial decisions or financial transactions worse than a year ago?” and “Has this interfered with his/her everyday financial activities?” This combined item had three response categories: 0 (memory loss/ability to reason is not worse than a year ago); 1 (it is
worse but has not interfered); and 2 (memory loss/ability to reason has interfered with financial activities). Thirteen items were included in this analysis.

**Item recoding**

To facilitate the analysis, items with missing responses were prorated. Seventy-seven percent of the informants answered all 13 questions included in the analysis from the FF instrument; the remainder did not answer between one and four items. The mean value of an informant’s responses was used to replace the missing value for that informant.

**Exploratory/confirmatory factor analysis**

The ratio of the first to the second eigenvalue analyzing the 13-item set was very low, and the first eigenvalue explained only 25% of the variance. This result indicates that the item set is not a unidimensional construct. The same can be seen from the scree plot. Model fit statistics for the CFA model were also not in the acceptable range (see Table 2); the CFI was 0.523 and RMSEA was 0.131. In contrast, statistics for the 2-factor EFA/CFA solution were much improved; the CFI was 0.913 and the RMSEA was 0.062. As shown in Table 2, the 2-factor EFA/CFA estimated fit (CFI = 0.913; RMSEA = 0.062) was superior to that of a unidimensional model. The two factors extracted consisted of nine psychological vulnerability/susceptibility and four decision-making abilities items, respectively. Tests of scree (not shown) indicated that only 25% to 36% of the

<table>
<thead>
<tr>
<th>Table 1. FF sample demographics.</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Informant Age (Mean/SD)</td>
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<tr>
<td>Senior Age (Mean/SD)</td>
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<tr>
<td>Informant Education (Mean/SD)</td>
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<tr>
<td>Senior Education (Years of Education)</td>
</tr>
<tr>
<td>Informant Gender (%/n)</td>
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<tr>
<td>Female</td>
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<tr>
<td>Male</td>
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<tr>
<td>Senior Gender (%/n)</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Senior Race (%/n)</td>
</tr>
<tr>
<td>African-American/Black</td>
</tr>
<tr>
<td>Caucasian/White</td>
</tr>
<tr>
<td>Length of Informant/Senior Relationship</td>
</tr>
<tr>
<td>Years the Informant Has Known the Senior</td>
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</table>
Table 2. FF 13 item data set: factor loadings from the unidimensional and 2-factor exploratory factor analysis (EFA), 2-factor confirmatory analysis (CFA, MPlus), and model fit statistics.

<table>
<thead>
<tr>
<th>Item description</th>
<th>Corrected Item-Total Correlation</th>
<th>Loading on 1-Factor CFA</th>
<th>2-Factor Structure Matrix</th>
<th>2-Factor CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, how satisfied is senior with his/her finances?</td>
<td>0.25</td>
<td>0.43 (0.09)</td>
<td>0.55 (0.09)</td>
<td>−0.03 (0.12)</td>
</tr>
<tr>
<td>Who manages senior’s money day to day?</td>
<td>0.21</td>
<td>0.63 (0.08)</td>
<td>−0.17 (0.14)</td>
<td>0.95 (0.07)</td>
</tr>
<tr>
<td>Is senior financially helping anyone on a regular basis?</td>
<td>0.25</td>
<td>0.42 (0.10)</td>
<td>0.49 (0.10)</td>
<td>0.07 (0.15)</td>
</tr>
<tr>
<td>How often does senior seem anxious or distressed regarding their financial decisions and/or transactions?</td>
<td>0.36</td>
<td>0.60 (0.07)</td>
<td>0.69 (0.07)</td>
<td>0.02 (0.13)</td>
</tr>
<tr>
<td>Combined items: Is senior’s memory, thinking skills, or ability to reason with regard to financial decisions or financial transactions worse than a year ago? and Has this interfered with his/her everyday financial activities?</td>
<td>0.37</td>
<td>0.61 (0.07)</td>
<td>0.18 (0.11)</td>
<td>0.73 (0.08)</td>
</tr>
<tr>
<td>Does senior regret a financial decision?</td>
<td>0.41</td>
<td>0.68 (0.07)</td>
<td>0.92 (0.07)</td>
<td>−0.07 (0.17)</td>
</tr>
<tr>
<td>Was this decision senior’s idea or someone else’s?</td>
<td>0.09</td>
<td>0.16 (0.11)</td>
<td>0.01 (0.13)</td>
<td>0.25 (0.13)</td>
</tr>
<tr>
<td>How will the decision impact senior financially?</td>
<td>0.23</td>
<td>0.23 (0.09)</td>
<td>0.32 (0.09)</td>
<td>−0.01 (0.06)</td>
</tr>
<tr>
<td>How much risk is there that it could result in a negative impact?</td>
<td>0.38</td>
<td>0.57 (0.08)</td>
<td>0.60 (0.09)</td>
<td>0.19 (0.14)</td>
</tr>
<tr>
<td>Would others who know senior well say this decision is unusual?</td>
<td>0.21</td>
<td>0.31 (0.10)</td>
<td>0.43 (0.10)</td>
<td>−0.02 (0.11)</td>
</tr>
<tr>
<td>How much has senior come to rely on one person for financial decisions?</td>
<td>0.25</td>
<td>0.66 (0.09)</td>
<td>−0.01 (0.01)</td>
<td>0.81 (0.08)</td>
</tr>
<tr>
<td>Has anyone taken senior’s money without their permission?</td>
<td>0.25</td>
<td>0.40 (0.12)</td>
<td>0.32 (0.14)</td>
<td>0.30 (0.14)</td>
</tr>
<tr>
<td>How likely is it that anyone will take senior’s money w/out permission?</td>
<td>0.28</td>
<td>0.46 (0.11)</td>
<td>0.38 (0.13)</td>
<td>0.32 (0.15)</td>
</tr>
</tbody>
</table>
variance in the item set was explained, depending on the item subsets examined. Coefficient alpha internal consistency estimates were 0.62 unstandardized and 0.64 standardized for the 13-item set.

Sensitivity and specificity of the FF

To test our second hypothesis (see Table 3 and Figure 1) – that the FF would have adequate sensitivity and specificity to detect concerns about financial exploitation – a ROC curve analysis was conducted using the full-scale risk score. As shown in Figure 1, the ROC curve found good sensitivity and specificity of the FF score to detect an informant’s current concerns regarding financial exploitation (AUC = .806).

Discussion

Professionals who work with older adults need efficient, reliable, and valid measures to collect information from trusted others when investigating possible financial exploitation. While some assessment instruments can be used to collect informant reports regarding an older adult’s broad financial skills and capacity, no informant measures are currently available to assess financial decisional abilities in an ongoing, real-world financial transaction. To serve this need, our aim in this study was to examine the psychometric properties of a new informant-report scale of financial decisional abilities in older adults.

Two subscales were identified from the FF item set. One measures psychological vulnerability/susceptibility, and the other financial decisional abilities in older adults.
making abilities. Generally, the first subscale relates to an older adult’s feelings of anxiety, distress, and/or regrets regarding financial decisions, as well as the risk of negative impacts from a financial decision. The second factor relates to cognitive capacity for financial decision making and reliance on others for financial assistance. Use of the full-scale risk score in a ROC curve analysis demonstrated that the FF adequately detects the presence of informant concerns about financial exploitation of a known older adult.

The scale was created to strengthen the way third-party information can be collected and utilized in cases of financial elder abuse. First, the scale allows for an efficient method of collecting a third party’s perspective on both an older adult’s financial decision-making skills for a significant decision in question, and for their overall financial vulnerability (e.g., psychological, financial strain, conflict over finances). Second, the scale provides initial normative data so as to ascertain whether or not there is high risk for financial exploitation. Third, the data are collected by an empirically validated method and as such can strengthen its use in a court or other legal setting. Fourth, the scale items focus on informed financial decision making and gives more information to the professional working with the older adult in order to help find the balance between autonomy and protection.

To further best practice uses of the scale, we have created a narrated etraining that can be accessed at https://olderadultnestegg.com. The training

Figure 1. Receiver operating characteristic (ROC) curve for the Family and Friends (FF) score predicting informant concerns of financial exploitation.
details when and how to use the scale. The site also provides an on-line version of the scale. In addition, use of this site will not only calculate risk scores but also provide suggestions for next steps.

Study limitations include a relatively small sample size for latent variable modeling, although the sample size was sufficient to examine the 13 items in the scale. Another limitation is the relatively low amount of variance explained by the item set (25–36%). The sample was a convenience sample and is not able to be generalized to the population overall. Additionally, the information collected does not confirm the presence of financial exploitation, but rather only the informants’ reports of financial exploitation and their concerns. Finally, as some item responses were missing, it is possible that in some cases, the full FF risk score underestimates the total risk. Nevertheless, the FF is a new informant interview that is reliable and effective for detecting concerns about financial exploitation. This instrument offers a straightforward method that professionals who are investigating financial exploitation can use to collect information from a trusted other regarding an older adult’s ability to make a sentinel, and potentially risky, financial transaction.

Acknowledgments

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