Medication Management and Compensatory Strategy Use

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INTRODUCTION

- Instrumental activities of daily living (IADLs) encompass the performance of complex, multi-faceted activities individuals engage in daily such as managing medications

- It is estimated that 50% of community-dwelling older adults have difficulty adhering to their medication routine (Pasina et al., 2014)

- The ability to complete IADLs such as medication management allows individuals to maintain independence

- As cognitive abilities decline with age, individuals often begin to use compensatory strategies to assist in managing their medications

- Little is currently known about the accuracy of self-reported use of compensatory strategies for medication management

Research Questions:

How accurate are community-dwelling older adults in self-reporting their compensatory strategy use when it comes to medication management?

How consistent are:

(1) Participant self-reports compared to observation of task-based performance?

(2) Knowledgeable informant reports compared to observation of task-based performance?

(3) Participant self-reports compared to knowledgeable informant reports?

PARTICIPANTS

Full sample (N = 45):
- Community dwelling older adults
- 36 female and 11 male
- Ages ranged from 54 through 90; M age = 73 ± 9.6 years

→ 49% of the sample (N = 22) had a knowledgeable informant complete a compensatory strategy questionnaire

DISCUSSION

- As represented by strong associations, community-dwelling older adults appear to be mostly consistent in their reports of compensatory strategy use when compared with their task-based performance, with the exception of keeping medication in a visible location

- Community-dwelling older adults also appear to be more reliable than informants when reporting use of some compensatory strategies, including pill box and the use of notes or alarms

- As the task-based assessment involved the participant walking the research assistant through their routine (there was no way to know if this routine was actually followed), the assessment could represent an additional form of self-report explaining its greater consistency with self- compared to informant-report of compensatory strategy use

- Alternately, some of the informants did not live with the participants, which may have limited their observation of compensatory strategy use

- The lower accuracy for reports of keeping medications in a "visible location" may be due to a lack of a clear operational definition of what this means

REFERENCES

Pasina, L., Brucato, A., Falcone, C., Cucchi, E., Bresciani, A., Sottocorno, M., & ... Nobili, A. (2014). Medication Non-Adherence Among Elderly Patients Newly Discharged and Receiving Polypharmacy. *Drugs & Aging*, 31(4), 283-289. doi:10.1007/s40266-014-0163-7

METHODS

Five common compensatory strategies used to manage medication that were evaluated in the current study:
- The use of a pill box to organize medication
- The use of notes or alarms to remember to take medication
- Using routine to remember to take medication
- Keeping medications in a visible location to help as a reminder to take them
- Having a strategy to assist with knowing when medication has been taken

Session One		Session Two	
Self-Report	**Informant Report**	**Task-Based Performance**	**Video Observation**
In session one, all participants completed a compensatory strategy questionnaire, which included a section on medication management. Participants were asked to rate on a 5-point Likert scale how often they used each of the above strategies	Knowledgeable informant similarly reported on their perception of the participant's use of the same compensatory strategies via questionnaire packet sent in the mail	In session two, participants walked a research assistant through their daily medication routine in their home, showing the research assistant where their medications were kept, and how they were organized. Research assistants also elicited information from the participants regarding how they remembered to take their medications, and how they knew their medications had been taken. This in-home session was video-recorded	Videos of the in-home task-based performance assessment were observed, and the use of the five common strategies for medication management were coded either as "observed" (1) or "not observed" (0) for each participant

Analysis - Cramer's V Analyses were used to measure the consistency of agreement between:

Full sample (N = 45):
- Self-report and Video Observation of the task based-performance

Sub Sample (N = 22):
- Self-report and Video Observation of the task based-performance
- Knowledgeable Informant report and Video Observation of the task-based performance
- Self-report and Knowledgeable Informant report

RESULTS

	(Full Sample N = 45) Self-Report and Video Observation	(Sub Sample N = 22) Self-Report and Video Observation	(Sub Sample N = 22) Informant Report and Video Observation	Steiger's Z test for significance of the difference between self-report/video observation and informant-report/video observation correlations	(Sub Sample N = 22) Self-Report and Informant Report
Pill Box	.843	.899	.592	z = -2.735, p = .006	.474
Notes/Alarm	.643	.671	.350	z = -1.557, p = .012	.332
Routine	.558	.671	.796	z = 0.974, p = .320	.509
Visible	.272	.420	.488	z = 0.247, p = .784	.171
Know	.516	.444	.488	z = 0.270, p = .787	.661

KEY | Strong Association: 0.5 to 1.0 | Moderate Association: 0.3 to 0.5 | Low Association: 0.1 to 0.3 | Little to No Association: 0.0 to 0.1

FUTURE STUDIES

- Future studies could employ the use of real-time tracking technology (sensors, Estimote stickers) to identify the participant's true medication routine
  - We can use this information to identify how participants true routine relates to their intended routine seen in video observation, their self-report, and their knowledgeable informant report (if available)
  - This would move us closer to being able to capture complex constructs such as medication adherence
- Future studies could evaluate variables that may be associated with the use of compensatory strategies, such as self-awareness

WORK PARTIALLY SUPPORTED BY THE FOLLOWING:

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