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Characterizing Cognition in Everyday Life of Older Adults With Subjective Cognitive Decline

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Abstract

Subjective cognitive decline (SCD), the subjective experience of worsening cognition with no objective cognitive impairment, poses a heightened risk for dementia. This study aimed to characterize cognition in the everyday life of people with SCD, is crucial for understanding and preventing further functional and cognitive decline. One hundred and thirty-five older adults (age 70.7±6.7) with SCD were assessed using functional-cognition measures: Multifactorial Memory Questionnaire (MMQ), Behavior Rating Inventory of Executive Function–Adult version (BRIEF-A), and Multiple Errands Test (MET). The resulted showed that older adults with SCD reported lower memory satisfaction (Hedges's $g = 0.41$) on the MMQ, and worse metacognition on the BRIEF-A (Hedges's $g = 0.63$) compared with published normative data. They completed an average of only 6/12 required tasks on the MET. The findings show functional difficulties related to SCD and inform the development of occupational therapy intervention for this population.

Keywords

assessment, cognition, daily living, executive function, older adults

Introduction

Subjective cognitive decline (SCD) is the self-reported decline in cognitive functions with no evidence for objective cognitive impairments (Jessen et al., 2020), determined by a score within age- and education norms on neuropsychological tests. SCD is found in 25% to 50% of older adults (commonly defined in the literature as individuals aged 65 or over) (Si et al., 2020). Older adults with SCD are at an increased risk of developing mild cognitive impairment (MCI) or dementia (Liew, 2020). A meta-analysis of prospective longitudinal studies showed that the risk of developing dementia was doubled in people with SCD compared with those who did not report experiencing cognitive decline (Wang et al., 2021). Given there are currently no effective drug treatments for dementia, research and clinical care efforts are focused on risk reduction and early intervention (Livingston et al., 2020). Thus, there is growing interest in better understanding the characteristics of SCD (Jessen et al., 2020; Si et al., 2020).

SCD, MCI, and dementia can be seen as three health conditions on a trajectory of cognitive and functional decline (Menéndez González, 2014). However, while dementia and MCI are examined in the literature in terms of both cognitive and functional decline, the literature on SCD rarely examines everyday functioning. Dementia is marked by cognitive impairment that leads to loss of functional independence (American Psychiatric Association, 2013). MCI is characterized by a modest cognitive decline that does not interfere with capacity for independence in everyday activities (American Psychiatric Association, 2013). Nonetheless, people with MCI encounter difficulty in complex instrumental activities of daily living (IADL), such as financial management (Goldberg et al., 2010; Marshall et al., 2011). Although SCD is a possible preclinical indicator of MCI and dementia, both involving functional difficulties of varying levels, functional changes are not discussed by researchers characterizing SCD (Jessen et al., 2020). More research is required to examine functional changes in people with SCD.

The small body of literature on everyday functioning in older adults with SCD shows that while they are significantly more independent in IADL than those with MCI and dementia (Stogmann et al., 2016), they are also more likely to develop difficulties in IADL functioning over a 1-year period compared with older adults reporting no cognitive problems (Chen et al., 2017). This might be explained as part of the broad trajectory of cognitive and functional decline, as the

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conversion rate from SCD to dementia is significantly higher in those with SCD and concurrent impairments in IADL (Roehr et al., 2018). Community dwelling older adults with SCD withdrew from 16% to 38% of IADL, social and leisure activities they had performed 5 to 10 years prior (Rotenberg et al., 2020), and identified occupational performance issues in these occupational domains (Rotenberg et al., 2021). This is disconcerting because participation in social and leisure activities is significantly associated with improved cognitive functioning and physical health, enhanced mood, and better overall well-being in aging (Chang et al., 2014; Wang et al., 2019).

The reasons for occupational withdrawal and occupational performance issues among older adults with SCD are not fully understood. It is possible that although their cognitive decline is undetectable by standardized neuropsychological tests, it does manifest in daily life, leading to the subjective experience of worsening cognitive functions. A qualitative content analysis of occupational performance issues identified by older adults with SCD suggests that both memory and executive functions may play a role in functional challenges—34% of the issues were related to memory problems (e.g., remember where place items), and 32% were related to executive functioning (e.g., organize errands; time management) (Rotenberg et al., 2021).

Characterizing the experience of cognitive changes in everyday life in SCD is crucial to obtain a better understanding of the trajectory of functional-cognitive decline in SCD, MCI, and dementia and informing the design of preventive interventions for older adults with SCD. Standardized neuropsychological tests often lack ecological validity and are limited in their ability to capture the implications of subtle cognitive deficits on everyday life (Marcotte et al., 2010; Robertson & Schmitter-Edgecombe, 2017). A functional-cognition approach to evaluation asserts that occupational performance cannot be explained solely by objective cognitive functioning (Rotenberg & Maeir, 2019). To assess the implications of cognition on everyday life, occupational therapists examine not only cognitive factors, but also their clients' observed or reported behaviors during performance of daily activities in their lived environments (Rotenberg & Maeir, 2019). In this study, we examined the extent to which standardized self-report and observation-based functional-cognition measures capture the experience of cognitive decline in people with SCD. The specific study objectives were to: (a) describe self-reported memory and executive functions in daily life in older adults with SCD, using the Multifactorial Memory Questionnaire (MMQ; Troyer & Rich, 2018) and the Behavior Rating Inventory of Executive Function–Adult version (BRIEF-A; Roth et al., 2005); and (b) describe their performance on the Multiple Errands Test (MET), designed to capture the effect of executive dysfunction in a complex task performed in a real-world environment (Dawson et al., 2009).

Method

Design

This is an exploratory descriptive study, using baseline data collected for a randomized controlled trial (NCT03495037), examining the effectiveness of a metacognitive strategy-based intervention in improving daily functioning of community-dwelling older adults. The study was approved by the Research Ethics Board—removed for anonymization, and all participants provided informed, written consent.

Participants

Participants were older adults who were classified as having SCD as part of the parent study and who completed the pre-training assessment. Participants were eligible if they were community-dwelling, age 60 and 85; fluent in English; had no current depression (Patient Health Questionnaire score $\leq$9, indicating low levels of depressive symptoms [Kroenke et al., 2001]); no self-reported neurological or psychiatric history, or substance abuse; and not currently receiving chemotherapy. SCD was determined if: (a) participants self-reported having cognitive problems, defined by confirming at least one of the following questions: "Do you feel that you have problems with your memory or cognition?" and "Do you feel that your memory has become worse?" (see Jessen et al., 2020); and (b) cognitive functions were determined to be within age and education norms. For this, participants completed a set of neuropsychological tests of memory and executive functions. Normal cognition was determined through a consensus discussion between two licensed clinical neuropsychologists, based on neuropsychological test scores, participant-reported medical history, and demographic characteristics such as current age, years of education, and age of acquiring the English language if it was not their first language.

Measures

Demographic information was collected using a self-report questionnaire. Cognition in everyday life was measured using two self-report questionnaires, MMQ and BRIEF-A; and the MET, an observation-based assessment.

Multifactorial Memory Questionnaire. The MMQ consists of three metamemory scales, rated on a 5-point Likert-type scale: (a) memory satisfaction, captures contentment, concern, and overall appraisal of one's memory; (b) memory ability, the reported frequency of memory mistakes in everyday life; and (c) strategy use, the reported frequency of use of practical memory strategies and aids in daily life (Troyer & Rich, 2018). Higher scores on all three scales indicate better subjective memory ability. MMQ raw scores were converted to standardized *T*-scores, which are transformation of

individual raw scores into a standard form with a mean of 50 and a standard deviation of 10, based on the distribution of a normative sample, to allow meaningful interpretation of the scores (Brock, n.d.). As per the MMQ manual, *T*-scores ranging between 40 and 60 were classified as "average," and scores below 40 were interpreted as below average (Troyer & Rich, 2018). The MMQ scales were shown to have good internal consistency (Cronbach's $\alpha = .83–.93$), excellent content validity (83%–100% agreement between raters), and moderate to strong convergent validity ($r = .43–.89$) with other subjective memory questionnaires in clinical and non-clinical older adult populations (Troyer & Rich, 2018).

BRIEF-A. The BRIEF-A is a self-report questionnaire that measures emotional, behavioral, and metacognitive aspects of executive functions in adults and older adults (ages 18–90). It contains 75 items scored on a 3-point Likert-type scale, and yields an overall score, the Global Executive Composite, comprised of two index scores: Behavioral Regulation Index and Metacognitive Index. The Behavioral Regulation Index encompassed four clinical scales: Inhibit, Shift, Emotional Control, and Self-Monitor. The Metacognitive Index includes five clinical scales: Initiate, Working Memory, Plan/Organize, Task Monitor, and Organization of Materials (Roth et al., 2005). BRIEF-A scores were converted to *T*-scores. Higher scores indicate greater executive difficulty in daily life, and a *T*-score ≥ 65 reflects a clinically meaningful impairment (Roth et al., 2005). The BRIEF-A scales have demonstrated sensitivity to executive function deficits in various clinical populations, including older adults with SCD, MCI, and Alzheimer's disease (Rabin et al., 2006; Roth et al., 2005). The BRIEF-A also has three validity scales, Negativity, Infrequency, and Inconsistency, that identify negative, atypical, or inconsistent responses. Participants who scored above the cut-off score on any of the three validity scales were excluded.

Multiple Errands Test. The MET, originally developed by Shallice and Burgess (1991), is a naturalistic, performance-based test of executive dysfunction in everyday life. We used the previously published—removed for anonymization—MET version (Dawson et al., 2009), in which participants were required to complete 12 real-life tasks (e.g., purchase items, collect information) while following 10 predefined rules (e.g., refrain from going back to a place already visited, spend as little money as possible), within the shopping area of—removed for anonymization—a large hospital building—removed for anonymization. We documented the number of tasks completed fully, partially (i.e., task completed with error), or omitted (i.e., no attempts were made to complete the task), and the number and frequency of rules broken.

Data Analyses

Descriptive statistics were used to portray the demographic characteristics, and distribution of scores on the MMQ, BRIEF-A, and MET. Raw MMQ and BRIEF-A scores were compared with measures of central tendency (*M, SD*) of published data, using independent sample *t*-tests, calculated using the Omni calculator (Omni Calculator, n.d.). Between-group effect sizes were calculated using Hedges's *g*, a measure of effect size weighted according to the relative size of the two samples (Fritz et al., 2012), calculated using Microsoft Excel® software. Normative data for the MMQ and BRIEF-A were attained from their respective manuals (see Roth et al., 2005; Troyer & Rich, 2018). Comparative MET data were attained from a published manuscript establishing the validity of the—removed for anonymization—MET (Dawson et al., 2009). Statistical significance was set at p-value ≤ 0.05.

To understand our sample characteristics, we compared the percentage of participants with a *T*-score indicating impairment on the MMQ and BRIEF-A to the expected percentage of cases within that *T*-score category in a normal curve distribution. For reference, in a normal curve distribution, 68.26% of the cases lie within the *T*-score range of 40 to 60, the MMQ "average" category, and 15.87% fall below a *T*-score of 40 (i.e., 1 *SD* below the average; Brock, n.d.). For the BRIEF-A classification, a *T*-score of 65 (i.e., 1.5 *SD* above average) falls under the 93rd percentile, meaning that 7% of cases lie at 65 or above it (Brock, n.d.).

Results

Sample Demographics

A total of 141 older adults met the inclusion criteria. Six participants were excluded because they scored above the cutoff scores on the BRIEF-A infrequency ($n = 5$) or inconsistency ($n = 1$) scales. The final sample of 135 participants included 97 (71.9%) women, and 38 (28.1%) men, with a mean age of 70.7 ± 6.7 years (range: 60–85), and average of 17.1 ± 2.8 years of education (range: 8–26). One hundred twenty-two (90.4%) participants identified as Caucasian, and other ethnic groups included Asian ($n = 9$, 6.7%), Black ($n = 2$, 1.5%), and native ($n = 2$, 1.5%).

Multifactorial Memory Questionnaire

Raw scores for the three MMQ scales are presented in Table 1 (Troyer & Rich, 2018), as well as between-group comparisons. Our study sample of older adults with SCD reported significantly lower levels of memory satisfaction on the MMQ-satisfaction scale compared with the normative sample, with a medium effect size. No significant between-group differences were found on the MMQ-Ability and MMQ-Strategy use scales. The *T*-score distribution of the study sample on the three MMQ scales, presented in Figure 1, shows that the percentage of participants with *T*-scores below average on the MMQ Satisfaction, Ability, and Strategy scales was 28%, 16%, and 14%, respectively, compared with 15.87% in a normal curve distribution. This

Table 1. Multifactorial Memory Questionnaire: Raw Scores and Between-Group Comparison.

MMQ Scale (possible range)[a]	Raw scores ($M \pm SD$)		Between-group comparison		
	SCD ($n = 135$)	Normative sample[b] ($n = 401$)	t	df	Hedges's g
Satisfaction (0–72)	38.4 ± 11.9	43.9 ± 13.7	−4.47***	245	−0.41
Ability (0–80)	50.5 ± 10.0	48.8 ± 11.2	1.66	242	0.16
Strategy (0–76)	38.8 ± 11.0	37.3 ± 10.4	1.39	225	0.14

Note. MMQ = Multifactorial memory Questionnaire; SCD = Subjective cognitive decline.
[a]Higher scores reflect better self-reported functioning. [b]Normative sample characteristics: age 71.4 ± 8.9 (range: 39–91) from Troyer and Rich (2018).
***$p < .001$.

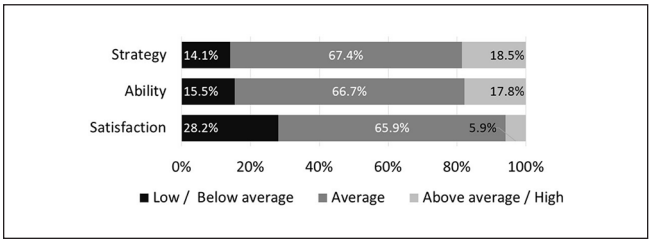

Figure 1. Multifactorial Memory Questionnaire: *T*-score distribution.

suggests that the proportion of older adults with SCD who are dissatisfied with their memory is substantially larger than in a normative sample, although a similar proportion of people report below-average memory ability or strategy use as the normative data.

BRIEF-A

Table 2 presents the BRIEF-A raw scores and group comparison. Compared with a normative sample, the study sample reported significantly more executive problems in everyday life on the Global Executive Composite, the Metacognitive Index, and the five scales that comprise it, with medium to large effect sizes. No significant between-group differences were found on the Behavioral Regulation Index, but our sample rated two of its subscales, Shift and Emotional Control, significantly worse than the normative sample, with a medium effect size.

The *T*-score distributions on the BRIEF-A indexes and scales are presented in Figure 2. The proportion of older adults with SCD with a *T*-score of 65 or above, reflecting clinically significant impairments, was higher than the 7% found in the normative sample on the Global Executive Composite, Behavioral Regulation Index, Metacognitive Index, and seven of the nine BRIEF-A scales. The proportion of participants with *T*-scores indicating a clinically meaningful impairment was higher in the Metacognitive Index than the Behavioral Regulation Index and Global Executive Composite, and highest in the working memory subscale.

Multiple Errands Test

The study participants completed, on average, only 6.3 of the 12 MET tasks, and broke 2.9 of the 10 rules. A comparison of the MET scores between the study sample and two comparator samples of healthy adults and adults with stroke, presented in Table 3, reveal that older adults with SCD completed significantly less, and omitted significantly more tasks compared with a sample of healthy adults, but their performance did not significantly differ from that of adults poststroke. 22.2% of the participants completed fewer than 40% of tasks (i.e., completes 4 or less of the 12 tasks), compared with 28.6% in adults poststroke, and 0 in health adults (Dawson et al., 2009).

Discussion

This study examined the changes in everyday life functioning of older adults with SCD, using functional-cognition measures. We found that, compared with normative samples, older adults with SCD reported significantly less satisfaction with their memory functioning, significantly more difficulties with everyday life tasks involving meta-cognition, particularly in relation to working memory, and exhibited substantially worse performance on a complex daily-life task. These findings suggest that although older adults with SCD do not have objective cognitive impairments, they are experiencing changes in everyday life that suggest overall declining function and may warrant intervention.

Our findings on metamemory highlight the importance of examining and addressing memory-related beliefs and concerns in older adults with SCD. The proportion of participants who rated their memory satisfaction as below average (28%) surpassed the percentage of participants who perceived their memory ability as worse than average (15%) as well as the expected percentage in a normal distribution (16%). This is concerning because the MMQ-Satisfaction scale reflects memory-related concerns, which are known to be associated with depressive symptoms (Zlatar et al., 2018), functional changes in social, work, and leisure activities (Shaikh et al., 2021), and have been shown to be predictive of future cognitive decline (Jessen et al., 2020; Mendonça et al., 2016). Although nonpharmacological interventions for

Table 2. BRIEF-A: Raw Scores and Between-Group Comparison.

	Raw scores ($M \pm SD$)		Between-group comparison		
BRIEF-A Scale (possible range)[a]	SCD ($n = 135$)	Normative sample[b] ($n = 120$)	t	df	Hedges's g
Global executive composite (70–210)	101.6 ± 17.2	93.53 ±17.95	3.65***	248	0.46
Behavioral regulation index (30–90)	41.5 ± 7.9	40.43 ± 8.3	1.05	247	0.13
Metacognitive index (40–120)	60.1 ± 11.6	53.11 ± 10.65	5.02***	251	0.63
Inhibit (8–24)	10.4 ± 1.8	10.68 ± 2.25	−1.09	240	−0.14
Shift (6–18)	8.8 ± 1.9	8.12 ± 2.13	2.68**	245	0.34
Emotional control (10–30)	14.2 ± 3.8	13 ± 3.29	2.70**	252	0.34
Self-monitoring (6–18)	8.2 ± 2.0	8.63 ± 2.07	−1.68	248	−0.21
Initiate (8–24)	11.7 ± 2.8	10.68 ± 2.41	3.13**	252	0.85
Working memory (8–24)	12.9 ± 2.8	10.49 ± 2.5	7.26***	252	0.90
Plan/organize (10–30)	14.1 ± 3.3	12.87 ± 2.89	3.17**	252	0.40
Task monitor (6–18)	9.5 ± 2.0	8.45 ± 1.85	4.35***	251	0.54
Organization of materials (8–24)	12.0 ± 2.9	10.63 ± 2.66	3.93***	251	0.49

Note. BRIEF-A = Behavior Rating Inventory of Executive Function–Adult version; SCD = subjective cognitive decline.
[a]Higher scores reflect worse self-reported functioning. [b]Normative data, age 70 to 79 (from BRIEF-A manual).
**$p < .01$. ***$p < .001$.

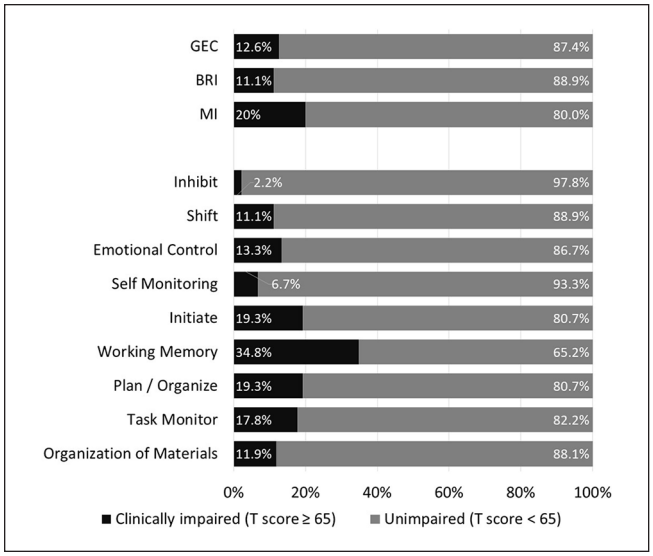

Figure 2. Behavior Rating Inventory of Executive Function–Adult version: *T*-score distribution.

people with SCD have primarily focused on improving subjective and/or objective memory performance (Sheng et al., 2020), our findings suggest that more attention should be given to addressing the core issue of negative memory beliefs in people with SCD.

The SCD-Initiative Working Group has called for expanding SCD research to include cognitive domains other than memory, including executive functions (Molinuevo et al., 2017), that have been shown to decline in healthy aging (Maldonado et al., 2020). The MET and BRIEF-A results expand this body of literature and demonstrate that executive functions play a part in the daily life challenges they experience. Our findings align with previous studies using the BRIEF-A with older adults with SCD, which showed significantly more daily life challenges on the Global Executive Composite and the Meta-Cognitive Index compared with healthy older adults with no SCD, and that working memory was the most impaired BRIEF-A scale in people with SCD (Carmasin et al., 2021; Rabin et al., 2006).

This is the first study to examine the performance of older adults with SCD on the MET. Their performance was strikingly poor, and they completed, on average, only half of the 12 MET tasks. The performance of older adults with SCD on the MET was inferior to previously reported performance of healthy adults using the same MET version, and similar to the performance of adults poststroke (Dawson et al., 2009). This is alarming, as older adults with SCD, by definition, have no objective cognitive impairment (Jessen et al., 2020). Our findings on the BREIF-A might explain the poor performance of older adults with SCD on the MET. *Working memory* is defined as holding information in mind and mentally working with it in goal-oriented behavior (Diamond & Ling, 2016). This aspect of metacognition is crucial for successful performance on the MET, which requires *monitoring task performance, planning* the next steps, *initiating* responses and behaviors to achieve the plan, and maintaining *organization of materials* (e.g., binder, money, items purchased) throughout the test.

Our findings differ from two previous studies that reported that healthy older adults completed ~11 of the 12 MET tasks (Lai et al., 2020; Torralva et al., 2009). These differences may be related to the sample characteristics because the two studies included older adults with no objective cognitive impairment but did not use SCD as an eligibility criterion. As a result, some of their samples likely did not meet criteria for SCD. In addition, a systematic review of the measurement properties of the MET showed that site-specific adaptations of the MET resulted in significant variability in task demands, and it is possible that the version used in this study was more cognitively demanding than those used by Lai et al. (2020)

Table 3. Multiple Errands Test Raw Scores and Between-Group Comparison.

	Raw scores ($M \pm SD$)			Between-group comparison					
				SCD—stroke			SCD—healthy adults		
MET score	SCD ($n = 135$)	Stroke[a] ($n = 14$)	Healthy adults[a] ($n = 13$)	t	df	Hedges's g	T	df	Hedges's g
Tasks completed accurately (of 12)	6.3 ± 2.2	6.5 ± 2.2	8.3 ± 2.1	−0.32	15	−0.09	−3.27**	14	−0.91
Tasks omitted (of 12)	1.4 ± 1.9	1.1 ± 1.3	0.7 + 0.8	0.73	16	0.16	2.54*	18	0.38
Rules broken (of 10)	2.9 ± 1.1	NA[b]	NA[b]						
Frequency of rule break	5.2 ± 3.0	NA[b]	NA[b]						

Note. MET = Multiple Errands Test; SCD = subjective cognitive decline.
[a]Stroke, mean age = 59.0 ± 14.2, range = 33–80; healthy adult controls, $n = 13$; mean age = 56.7 ± 15.8, range = 27 to 81 (Dawson et al., 2009).
[b]Data regarding rule breaks could not be compared with other samples because the number of MET rules was different between the two studies.
*$p < .05$. **$p < .01$.

and Torralva et al. (2009), due to environmental layout and accessibility of retail items or information. It is important for future studies to compare the performance of older adults with SCD to that of older adults who do not experience cognitive decline on one MET version.

The reported and observed challenges in executive functions in everyday life of older adults with SCD are concerning and may contribute to the reported withdrawal from IADL, social, and leisure activities previously reported (Rotenberg et al., 2021). This hypothesis is supported by a qualitative content analysis showing that older adults with SCD identified executive dysfunctions as underlying daily challenges they reported in meaningful activities (e.g., difficulty hosting a meal due to challenges with organizing, planning, and managing time) (Rotenberg et al., 2021).

This study has implications for occupational therapy evaluation and treatment of older adults with SCD. First, the findings suggest that self-report and performance-based assessments of occupational performance can capture the implications of subjective cognitive changes in people with SCD, which are not identified through standardized neuropsychological tests. The findings support the need to incorporate a functional-cognition approach as part of the routine health evaluation of older adults reporting cognitive decline. This study also contributes new evidence to support the understanding of SCD, MCI, and dementia as three health conditions on a trajectory of not only cognitive, but also functional decline, and highlights the need for early intervention aimed at the everyday life implications reported by people with SCD.

This study provides direction for the future development of interventions for older adults with SCD. The findings suggest that older adults with SCD may benefit from metacognitive interventions, providing support for initiation (through goal setting), planning, monitoring, and organization, to diminish their impact on daily activities. Preliminary work suggests that this approach can have real-world benefits. Dawson et al. (2014) have shown that an occupation-based metacognitive strategy training, combined with education about self-management and successful aging, resulted in an improvement of occupational performance of older adults with SCD. Further studies exploring such approaches are warranted. Our findings also suggest functional working memory difficulties, which can be mediated through metacognitive strategies such as self-talk (Hatzigeorgiadis & Galanis, 2017). Studies on working memory training for older adults have yielded mixed results, and this literature is too heterogeneous to draw conclusions for clinical practice (Ophey et al., 2020). Our findings further suggest that older adults with SCD would benefit from a treatment approach that aims to improve memory-related beliefs.

Study Limitations

The results should be interpreted in the context of study limitations. First, the participants had a high level of education on average and were relatively ethnicity homogeneous, thus limiting generalizability. Second, the data on older adults with SCD were compared with normative data taken from the literature. Thus, between-group differences were calculated based on measures of central tendency and not a full data set, and sampling was not designed to ensure similarity in demographic characteristics between the compared groups, and the groups may differ in demographic characteristics. Data obtained from a control group would have been preferable. Third, our inclusion criteria used a dichotomous (y/n) approach to determine the presence of subjective experience of cognitive decline but a continuous approach (e.g., Likert-type scale) would have been more sensitive, has been suggested in recent literature (Jutten et al., 2022). Finally, because of the subjective nature of SCD, the role of memory self-efficacy should have been considered. We did not measure memory self-efficacy and suggest that future studies take this important factor into account.

Conclusion

This study found that standardized self-report and observation-based measures of the effects of cognition on everyday life show significant difficulties in adults with SCD. We

found that older adults with SCD report low satisfaction with their memory, challenges in metacognition in everyday life, and difficulty performing a complex real-world task. The study highlights the importance of increasing research and clinical attention to the evaluation of everyday life issues in people with SCD, and the development of interventions to improve the performance of older adults with SCD in meaningful occupations. Improving occupational engagement in people with SCD may promote their health and well-being and may delay future cognitive and functional decline.

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Declaration of Conflicting Interests

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Ethics Statement

The study was approved by the Research Ethics Board of Baycrest Health Sciences, Toronto, Ontario, Canada.

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