Development of a screening checklist to diagnose functional memory symptoms: a Delphi study

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Introduction

Functional cognitive disorder (FCD) is one of the most common causes of non-neurodegenerative memory complaints.

The clinical diagnosis of FCD is challenging because there is a striking overlap with symptoms of neurodegenerative dementia.

FCD presents with attention and concentration deficit, and memory lapses, usually manifesting in the form of amnestic blocks for overlearned information, word-finding difficulties or inability to follow conversations or finish tasks

A clearcut reliable diagnostic test or clinical profile is yet to be identified.

Schmidtke et al. developed a scale to identify FCD as a 10-item questionnaire based on assessments for working memory and concentration; this obtained a specificity close to 100% to identify FCD, but over-detects FCD in healthy controls and failed to discriminate between this population and FCD.

Aim

We hypothesize that this bedside questionnaire focusing on key clinical differentiating factors constitutes a simple clinical tool to improve diagnostic accuracy, both in primary care and memory clinics.

We **aimed to develop a bedside screening tool** to differentiate between FCD and neurodegenerative causes of memory complaints.

We also sought to **explore if the diagnosis is concordant across different countries and treatment settings**.

In a subsequent study we will explore the validity and discriminative power of this new scale and validate the new instrument against another published scale that aimed to identify FCD.

Methods

- Experts, with an interest and experience in cognitive disorders were invited to participate.
- The literature was reviewed to identify clinical characteristics, language and behavioral profiles that are typical of FCD, to inform the survey development.
- The first and second rounds included both clinical vignettes to be appraised and a list of diagnostic clinical signs favoring a FCD diagnosis, to be ranked using a 7-point Likert scale. Qualitative (thematic analysis) and quantitative (median, IQR and % of consensus) analysis were undertaken.
- Experts reviewed the component items for which consensus had been achieved and provided recommendations for modifications.

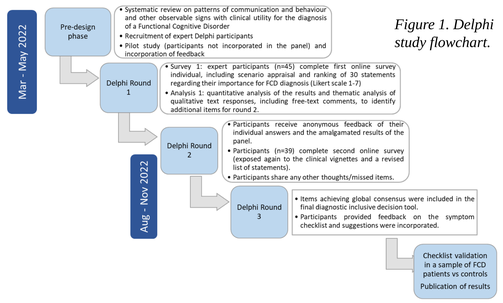

Figure 1. Delphi study flowchart.

Consensus criteria adopted according to the percent of answers in a 7-point Likert scale (≥6 meaning important/extremely important)

Level of consensus	Scoring
Strong	>80% of scores ≤2 or ≥6
Moderate	66-80% of scores ≤2 or ≥6
Low	50-65% of scores ≤2 or ≥6
No consensus	<50% of scores ≤2 or ≥6

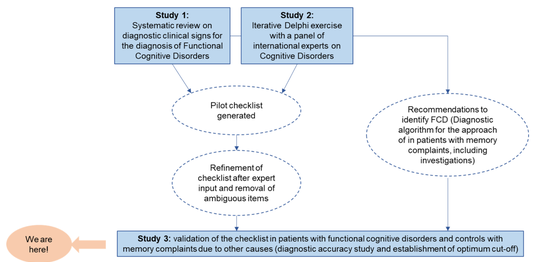

Figure 2. Schematic representation of scale development.

Results

Characteristic	N(%)
Age (median, range)	44(29-71)
Female gender	14(31.8)
Years of experience assessing patients with cognitive disorders (median, range)	13(2-45)
Country	
Australia	2(4.4)
Croatia	1(2.2)
Denmark	5(11.1)
France	1(2.2)
Germany	1(2.2)
Ireland	1(2.2)
Italy	5(11.1)
Portugal	6(13.3)
Serbia	1(2.2)
Switzerland	1(2.2)
United Kingdom	17(37.8)
United States of America	4(8.9)
Specialty	
Neurology§¶	36(80)
Psychiatry§	10(22.2)
Neuropsychiatry	3(6.7)
Old Age Psychiatry	5(11.1)
Neuropsychology¶	2(4.4)

§Two participants are specialists in both Neurology and Psychiatry.

¶One participant is specialist in Neurology and Neuropsychology.

Table 1. Delphi study participants (N=45).

Clinical experience domain		N(%)
Recognizing the term FCD		43(96)
Patients with a functional cognitive disorder seen in the last year		
	Less than 10	11(24)
	10-50	21(47)
	Over 50	10(22)
	Over 100	2(4)
	Other (1 patient)	1(2)
Proportion of patients with FCD amongst the patients with memory complaints seen in the clinic		
	<5%	3(7)
	5-30%	31(69)
	30-50%	3(7)
	>50%	7(16)
	Not applicable	1(2)
Commonest age group of FCD patients		
	<30 yo	-
	30-45 yo	16(36)
	45-65 yo	24(53)
	>65 yo	1(2)
	Not applicable	4(9)
Using a self-help or remote treatment (e.g. app, chatbot, book, website) for patients with FCD		8(18)
Willingness to try remote interventions in FCD		42(93)

Table 2. Experience in caring for patients with FCD and other cognitive disorders among the 45 clinicians who responded to the survey.

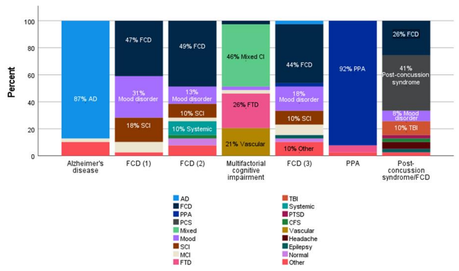

Figure 3. Diagnostic labels for each clinical scenario.

AD – Alzheimer's disease; CFS – chronic fatigue syndrome; FCD – functional cognitive disorder; FTD – frontotemporal dementia; MCI – mild cognitive impairment; PCS – 'post-concussion syndrome'; PPA – primary progressive aphasia; PTSD – post-traumatic stress disorder; SCI – subjective cognitive impairment; TBI – traumatic brain injury.

Cognitive Syndrome	Strength of agreement (Fleiss Kappa, 95% CI)
Alzheimer's disease	.461(.445-.470)
FCD (1)	.347(.332-.363)
FCD (2)	.314(.298-.329)
Multifactorial cognitive impairment	.447(.431-.462)
FCD (3)	.309(.295-.324)
PPA	.495(.480-.510)
Post-concussion/FCD	.320(.305-.336)

Table 3. Inter-rater agreement matching the operationalized definition for each clinical scenario.

Clinical Items	Score
Part A/core criteria (two points)	
1. Is there a **discrepancy** between the level of symptoms reported and observed/reported everyday functioning*?	
2. Is the patient able to detail his/her/their **memory complaints** (e.g. providing **specific examples**)?	
3. Are the cognitive symptoms **distractible** and/or **fluctuating** (e.g., variable in different situations)?	
Part B/supportive criteria (one point)	
4. Is the patient able to detail the list of prescribed drugs and/or **recall** previous interactions with other doctors (e.g., prior diagnoses and investigations)?	
5. Is there a history of a **non-cognitive functional neurological disorder** and/or functional **somatic** disorders (pain, fatigue, dissociation…)?	
6. Is the **patient more aware** of the cognitive changes than others (consider if the patient was self-referred)?	
7. Is the **cognitive performance normal** or does it show an **incongruent** pattern (e.g., worse on immediate recall than delayed recall, stronger performance repeating digits backward compared to digits forward, approximate answers)?§	
8. Are the memory symptoms **stable** or **improved** over time?§	
9. Is the patient able to **date the symptom onset** with precision?	
10. Is there an obvious **psychological stressor?**	
11. Is the patient able to **answer compound questions**?	
Total score	

§Answering YES to either one or both options means 1 point in the score.

***Prototype** of FCD vs dementia diagnostic instrument. Cut-off scores to distinguish between the two will be determined in the validation study.*

FIND-fcd

Conclusion

This 11-item checklist was developed based on a set of key clinical diagnostic domains, using a consensus process and exploration of experts' views on the diagnosis of FCD, supported by a literature review

It is a quick complementary clinical tool to a more comprehensive assessment, aiming to improve reliability and consistency of FCD identification, thereby increasing diagnostic accuracy and helping direct patients to early post-diagnostic treatment.

We expect that this assessment tool to be used in a standardized way to ensure that these individuals are correctly identified both in clinical grounds and in future research studies.

Acknowledgements

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