

Authors & affiliations:

Harriet A. Ball – Population Health Sciences, University of Bristol

Laura McWhirter – Centre for Clinical Brain Sciences, The University of Edinburgh

Clive Ballard – College of Medicine and Health, University of Exeter

Rohan Bhome – Division of Psychiatry, University College London

Dan Blackburn – Department of Neuroscience, Medical School, University of Sheffield

Mark J. Edwards – Neuroscience research Centre, St George's, University of London

Nick C. Fox – Dementia Research Centre, Department of Neurodegenerative Diseases, UCL Queen Square Institute of Neurology

Robert Howard – Division of Psychiatry, University College London

Jonathan Huntley – University College London

Jeremy D. Isaacs – Department of Neurology, St George's University Hospitals NHS Foundation Trust, London and Neuroscience Research Centre, St George's, University of London

A.J. Larner – Cognitive Function Clinic, Walton Centre for Neurology and Neurosurgery, Liverpool

Timothy R. Nicholson – Institute of Psychiatry Psychology & Neuroscience, King's College London

Catherine M. Pennington – Centre for Dementia Prevention, The University of Edinburgh

Norman Poole - St George's, University of London

Gary Price – University College London Hospitals NHS Foundation Trust

J.P. Price – Department of Neuropsychology, South Tees Hospitals NHS Foundation Trust

Markus Reuber – Department of Neuroscience, Medical School, University of Sheffield

Craig Ritchie – Centre for Dementia Prevention, The University of Edinburgh

Martin N. Rossor – Dementia Research Centre, Department of Neurodegenerative Diseases, UCL Queen Square Institute of Neurology

Jonathan M. Schott – Dementia Research Centre, Department of Neurodegenerative Diseases, UCL Queen Square Institute of Neurology

Tiago Teodoro – Neuroscience Research Centre, St George's, University of London, SW17 0RE, UK; Instituto de Medicina Molecular, Universidade de Lisboa, 1649-028 Lisboa, Portugal

Annalena Venneri – Department of Life Sciences, Brunel University London

Jon Stone – Centre for Clinical Brain Sciences, The University of Edinburgh

Main text:

We welcome the comments from Kapur *et al* and the opportunity to clarify the meaning of internal inconsistency. This is not equivalent to identifying fluctuations over time, since that could occur for many reasons. Rather, the defining feature of internal inconsistency is contrasting function and dysfunction, ideally demonstrable at the same time, analogous to Hoover's sign in functional motor weakness. Function should be tested using different approaches to see if discrepant results are obtained. This would indicate a lack of factors other than attention and focus that can explain it. When one encounters either temporal variability, or subjective cognitive concern but no objective deficit, this is not in itself specific enough to represent internal inconsistency. Instead, it should be a flag to explore and contrast the specific tasks that the person is, and is not, able to perform. This must be considered in the context of the patient's whole presentation, and relevant differentials considered.

Kapur *et al* emphasise the distinction between “cognitive symptoms that have a psychological basis from those that have an organic basis”. We do not advocate a dualistic approach, and we are proposing a process that is subtly different from “non-organic”. Attention appears to be a key part of functional conditions, but attention can be a downstream effect of many diverse processes (including pain, anxiety, and neurodegeneration).

We decided not to include mention of “external inconsistency” since this too easily degrades into incongruity with a specified disease process, which would represent diagnosis by exclusion.

We included Text Box 3 to point out some possible examples of where the suggestion of internal inconsistency can in fact be a different process at work. Korsakoff's syndrome (which can include intact implicit but defective conscious memory) is one example. We would expect a person with Korsakoff's, or any conditions characterised by spared implicit but impaired explicit memory, to be consistently poor on conscious and explicit memory.

Kapur *et al* also point out an anomalous sentence in Text Box 1, and indeed this was marked to be placed as the bottom paragraph of Text Box 1 (originally as a footnote). We apologise that this error persisted through to publication.

We would agree that poor effort and feigning can also cause internal inconsistency. Feigning is rarely seen in routine memory clinic practice, and we regard it as generally

unhelpful for the clinician to make judgements about agency, as these are better addressed by legal or forensic services. Feigning could be a differential for all conditions diagnosed on the basis of self-report (eg migraine, pain conditions), but this differential is for some reason highlighted more often in functional conditions. Estimates of feigning in routine care are approximately 1.3% ¹, whereas functional conditions account for 12-56% of patients coming through memory services (as discussed in our article). It is likely that failure of “performance validity” tests reflects many factors wider than simply poor effort, such as fatigue, cognitive impairment, and low capacity for focused attention, or possibly even via an excessive focus of attention ².

Finally, we agree that healthcare professionals of all types have considered the importance of “non-organic” and psychological components to cognitive performance for many years, for example the description of Cogniform Disorder ³. However, we have felt divided by differing terminology (which on further discussion often turned out to be the same thing) and by different contexts in which we see sometimes different subtypes of patients. We often encounter pockets of misunderstanding amongst those less often engaging with such patients. As such, we felt it was helpful to develop cross-speciality shared understanding and propose some initial diagnostic criteria. Further research will be needed to operationalise the detection of internal inconsistency, to test the reliability of diagnostic criteria developed on this basis, and to allow us to develop management approaches.

Data availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Funding & Competing interests

Please refer to the statement below the original article.

References

1. Fliege H, Grimm A, Eckhardt-Henn A, Gieler U, Martin K, Klapp BF. Frequency of ICD-10 Factitious Disorder: Survey of Senior Hospital Consultants and Physicians in Private Practice. *Psychosomatics*. 2007/01/01/ 2007;48(1):60-64. doi:<https://doi.org/10.1176/appi.psy.48.1.60>
2. McWhirter L, Ritchie CW, Stone J, Carson A. Performance validity test failure in clinical populations—a systematic review. *Journal of Neurology, Neurosurgery & Psychiatry*. 2020-07-10 2020;91:945-952. doi:10.1136/jnnp-2020-323776

3. Delis DC, Wetter SR. Cogniform Disorder and Cogniform Condition: proposed diagnoses for excessive cognitive symptoms. *Arch Clin Neuropsychol*. Jun 2007;22(5):589-604. doi:10.1016/j.acn.2007.04.001