

I am very happy to endorse this submission. The study is very important. As the authors say, there has been a lot of research on domain-general cognitive deficits in Parkinson's disease, but much less on specific numerical deficits. It is important that these should be investigated; and the study to test this is very well designed and well planned.

It is also important to study the extent to which any differences in numerical cognition between individuals with Parkinson's disease and others are truly domain-specific or secondary to deficits in executive functions. This is now seen as an important issue in many other areas of numerical cognition: e.g. in typical development; in children born preterm; in children and adults with mathematical difficulties; in individuals with developmental disorders such as ADHD and ASD. It is clearly important to study this issue in people with Parkinson's disease; and the authors have designed their study very well for this purpose.

I am very impressed by the authors' literature review, which is clear, comprehensive, and embeds the study very well in the previous research background.

The planned statistical analyses appear highly appropriate and suitable tests of the findings.

My only real criticism is in fact of the title! I think that the term 'acalculia' could be replaced by 'specific numerical deficits' or similar; as it is not certain that the study will find deficits of the severity usually described as 'acalculia', and the findings are likely to be interesting and important even if they do not.