Reviewer's report

Title: Detecting dementia in patients with normal neuropsychological screening by test of smell and palmomental reflex: an observational study

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Reviewer: Shameka Cody

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Detecting dementia in patients with normal neuropsychological screening by test of smell and palmomental reflex: an observational study
Sven Streit, Andreas Limacher, Andreas Zeller and Markus Bürge

Thank you in advance for allowing me to review this article. I feel that evidence-based measures for early detection of dementia are essential for improving health outcomes and quality of life for older adults.

Suggested major revisions

# Pg. 3, lines 24-28: This part of the sentence sounds awkward “but we chose to examine SIT and PMR because they turn pathological early in …..” and line 28: “early deficient…” consider reversing these terms to read “deficient early…”
# Pg. 4, lines 7-10: “…..especially is they are practical and easy to perform. It is unclear if you are referring to the patients or the neurological tests. Please consider reconstructing this sentence.
# Pg. 6, lines 14 & 15: Try to avoid using vague words such as “them.” If the admitting GP had not ordered them before…… What is “them” referring to? Before when?
# Pg. 6, lines 21-24: Please revise this sentence for clarity to read, “The simple SIT was considered abnormal if, with their eyes closed, patients could not identify the smell of coffee…..”
# Pg. 6, line 25: Briefly define “thenar” for readers. It is easy to assume every reader is a nurse or medical professional who knows this term, but that is not always the case.
# Pg. 7, line 16 (statistical analysis): the phrase “independent residents screening 42 consecutive patient…..” sounds awkward, consider revising for clarity. I was lost at this point.
# Pg. 10, line 23 (limitations): This sentence is confusing. Both SIT and PMR….. Did you mean lower scores on these tests may be more common as one ages?
# Limitations: I know you examined age differences as it relates to tests performance. Did you consider gender differences, especially given the literature shows women have a more keen sense of smell than men. This may affect performance on SIT. Consider addressing gender which is important given a little
over half of your sample consisted of women.

# Last, please consider adding a table to show differences in scores on SIT and PMR and/or mean scores for these tests. The percentage of those with abnormal results is important; however, it would help to see and compare mean scores on the SIT and PMR for those with and without dementia who had normal MMSE and CDT.

Minor essential revisions
# Pg. 2, line 3 (abstract): Here you use the term neurologic and on pg. 10, line 7 (discussion) you use neurological. It makes sense use one term to be consistent.
# Pg. 2, line 9 (abstract): Insert “in” after Geriatrics.
# Pg. 2, line 11 (abstract): Insert “the” after to
# Pg. 2, line 12 & 13 (abstract): “We used SIT and PMR……” There is no need to say SIT and PMR twice. Instead revise sentence to read, “We used the SIT and PMR to evaluate their accuracy in detecting dementia.
# Pg. 3, line 11: Insert “The” before CDT.
# Pg. 3, line 14: There are two consecutive commas after relatives. Delete one of these.
# Pg. 3, line 15: Replace colon after challenging with a period.
# Pg. 3, line 18: Delete “still” and I think “lead” should be “led”
# Pg. 5, line 8 (methods): Delete “of” after Because
# Pg. 5, line 14 (methods): Delete “returned” after have
# Pg. 5, line 15 (methods): Insert “who” after patients
# Pg. 5, line 25 (General assessment): Please double-check this, I think the first letter in general internal medicine and geriatrics should be lowercase.
# Pg. 6, line 2: To be consistent with the abstract, insert “the” after by and change “standard” to “standardized.”
# Pg. 6, line 9: Use the comma series. Interviewers…..medical problems, family medical history, and social history.
# Pg. 6, line 10: BADL is not a common abbreviation. Please write it out, as this often creates cognitive stress for the reader.
# Pg. 6, line 12: Replace “used” with “included”
# Pg. 6, line 13: Consider capitalizing the “p” in palmomental and the “r” in reflex and add “Test” after Reflex.
# Pg. 6, lines 18 & 19: The use of “neuropsychological tests” is redundant.
# Pg. 7, line 19 (statistical analysis): Again, acronyms can be stressful for readers. Please write out ROC.
# Pg. 8, line 9 (baseline characteristics): Delete the common after study. Delete one “had”
# Pg. 8, line 27 (diagnostic performance of SIT and PMR): Delete “had an”
Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.