

REVIEWER'S REPORT

Manuscript No.: IJAR-58869

Title: Uniform distributional benefit of community delivered social prescribing on hearing related intrinsic capacity in older adults: a quantile regression reanalysis of the HEARS trial.

Recommendation:

- Accept as it is
 ✓ Accept after minor revision.....
 Accept after major revision
 Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity		✓		
Significance		✓		

Reviewer Name: Dr S. K. Nath

Detailed Reviewer's Report

Strength of the study:

- The topic is relevant to healthy ageing and hearing care
- The study uses an interesting quantile regression approach
- The statistical methods are clearly described
- Synthetic data generation is transparently reported
- Repeated simulations assess stability of the findings
- Important limitations are openly acknowledged
- The manuscript avoids claiming that synthetic results represent original patient data

Weakness of the study:

- The analysis is based entirely on synthetic rather than original participant data
- The assumed baseline follow up correlation may strongly influence results
- The distributional assumptions may not reflect actual trial data
- HHIE S is treated as a continuous scale despite being bounded and discrete
- Clinical response rates are model derived rather than observed
- Equity claims cannot be adequately assessed from the available data
- Findings cannot confirm uniform benefit among individual participants

Reviewers Comments:

The manuscript presents an interesting secondary analysis exploring whether the benefit observed in the HEARS trial may be consistent across different parts of the outcome distribution. The use of quantile regression and repeated simulations is methodologically interesting, and the authors are appropriately transparent that the analysis uses synthetic data because individual participant data were unavailable. However, this is also the main limitation and substantially restricts the interpretation of the findings. The assumed baseline follow up correlation of 0.50 and truncated bivariate normal distribution may influence the observed quantile pattern. The clinical response rates and subgroup findings should therefore remain clearly described as simulated estimates. The manuscript appropriately acknowledges these limitations. Ethical clearance is not applicable because no new human participants or identifiable patient data were used. The writing is generally clear, although grammar, spacing and formatting need minor correction. Overall, the study is useful as an exploratory methodological analysis, but its conclusions should remain cautious and clearly separated from evidence based on original trial data.

Previously Published anywhere/Plagiarism check:

The manuscript is presented as a reanalysis of previously published HEARS trial results rather than a duplicate publication of the original trial. No clear evidence of duplicate publication is apparent from the submitted paper. However, a formal similarity check should be completed before publication, particularly because the analysis is based on previously published aggregate trial data.