ISSN(O): 2320-5407 | ISSN(P): 3107-4928

ISSN NO. 2320-5407

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

www.journalijar.com

REVIEWER'S REPORT

Manuscript No.: IJAR-56826

Title: Multidomain Lifestyle Interventions for Dementia Prevention: From Mechanisms to Clinical Implementation A Narrative Review,

Recommendation:
Accept as it is .....
Accept after minor revision.....
Accept after major revision .....YES
Do not accept *(Reasons below)*

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

Reviewer's ID: JPR-094

Detailed Reviewer's Report

**1. Strengths**

1. **Comprehensive Coverage**

The manuscript provides an extensive and well-structured overview of multidomain interventions, integrating epidemiology, biological mechanisms, and clinical trials. Key landmark studies such as the FINGER trial, MAPT trial, and preDIVA trial are appropriately discussed.

2. **Strong Theoretical Framework**

The discussion is well anchored in the Lancet Commission on Dementia framework, particularly the life-course model and modifiable risk factors.

3. **Integration of Mechanisms and Clinical Evidence**

The manuscript successfully links biological mechanisms (BDNF, neuroinflammation, vascular pathways, epigenetics) with clinical outcomes, enhancing scientific depth.

4. **Inclusion of Recent Literature (up to 2025)**

The review incorporates up-to-date studies, including emerging concepts such as precision prevention and digital health interventions.

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

5. **Clear Organization and Logical Flow**

The manuscript is well structured, moving from background → mechanisms → trials → implementation → future directions.

**2. Weaknesses**

1. **Limited Novelty**

The manuscript largely summarizes existing literature without offering a distinctly new conceptual framework. Similar narrative reviews already exist (e.g., FINGER-to-WW-FINGERS reviews).

2. **Narrative Review Methodology**

*** Search strategy lacks rigor (no PRISMA flow diagram, inclusion/exclusion criteria not clearly defined)**

*** Potential for selection bias**

*** No quality assessment of included studies**

3. **Lack of Critical Appraisal**

The manuscript describes trials but does not critically evaluate:

*** Methodological limitations**

*** Risk of bias**

*** Effect size interpretation**

*** Contradictions between trials**

4. **Overemphasis on Positive Findings**

*** The FINGER trial is highlighted strongly**

*** Neutral/negative findings (e.g., preDIVA trial) are not sufficiently critiqued**

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

5. **Lack of Quantitative Synthesis**

No meta-analysis or pooled estimates are provided, limiting scientific rigor.

6. **Insufficient Clinical Translation**

Although "clinical implementation" is in the title, practical guidance is limited:

*** No clear protocols for clinicians**

*** No cost-effectiveness or feasibility discussion in real-world settings**

7. **Geographical Bias**

Evidence is heavily based on European trials; limited discussion of low- and middle-income countries (LMICs), including India.

8. **Redundancy and Length Issues**

Some sections (mechanisms and trials) are overly detailed and repetitive, reducing readability.

**3. Key Points**

*** Multidomain interventions target **multiple modifiable risk factors simultaneously****

*** Evidence is primarily derived from:**

*** FINGER trial (positive outcome)**

*** MAPT trial (subgroup benefit)**

*** preDIVA trial (neutral outcome)**

*** Mechanisms include:**

*** Neuroplasticity (BDNF)**

*** Anti-inflammatory effects**

*** Vascular improvement**

*** Dietary neuroprotection**

*** Emerging directions:**

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

*** Precision prevention (biomarkers)**

*** Digital health delivery**

*** Combined lifestyle + pharmacological approaches**

*** Major barriers:**

*** Adherence**

*** Heterogeneity**

*** Implementation challenges**

**4. Significance**

*** The topic is **highly relevant and important** given the global burden of dementia.**

*** The manuscript reinforces the importance of **preventive strategies over purely pharmacological approaches**.**

*** It contributes to **translational understanding** by connecting biological mechanisms with clinical trials.**

However:

*** The **incremental contribution is moderate**, as similar reviews already exist.**

*** The manuscript would have greater impact if it provided:**

*** A novel framework**

*** Regional insights**

*** Implementation models**

**5. Recommendation**

**Decision: MAJOR REVISION**

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

**6. Specific Suggestions for Improvement**

1. **Improve Methodology**

*** Convert to systematic or scoping review (PRISMA guidelines)**
*** Clearly define inclusion/exclusion criteria**

2. **Enhance Novelty**

*** Add a new conceptual model OR**
*** Focus on LMIC/Indian context OR**
*** Develop a clinical implementation framework**

3. **Add Critical Analysis**

*** Compare trials systematically (table format)**
*** Discuss limitations and inconsistencies**

4. **Strengthen Clinical Relevance**

*** Provide actionable recommendations for clinicians**
*** Include cost-effectiveness and feasibility**

5. **Include Visual Elements**

*** Summary tables (trial comparison)**
*** Mechanism diagrams**
*** Implementation pathway model**

6. **Reduce Redundancy**

*** Condense mechanistic explanations**
*** Avoid repetition across sections**

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

**7. Final Comment**

The manuscript is **scientifically sound and well-written, but currently functions as a **descriptive narrative review with limited novelty**. With substantial revision—particularly in methodology, critical analysis, and practical application—it has the potential to become a **valuable contribution to the field**.**

**Justification for MAJOR REVISION **

**TITLE (Lines 1–2)**

****Issue:****

*** Title claims **"clinical implementation"**, but the manuscript provides **limited actionable clinical guidance**.**

****Why Major Revision:****

*** Misalignment between title and content reduces scientific credibility and scope clarity.**

**ABSTRACT**

**Background (Lines 7–13)**

****Issue:****

*** Overgeneralized statements; lacks citation precision and critical nuance despite referencing the Lancet Commission on Dementia.**

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

****Why Major Revision:****

*** Needs clearer differentiation between **established evidence vs interpretation**.**

**Methods (Lines 14–21)**

****Issues:****

1. Narrative review lacks:

  *** Defined inclusion/exclusion criteria**
  *** Search strategy details (dates, filters, language)**
  *** No PRISMA flow diagram**

2. No quality assessment of included studies

****Why Major Revision:****

*** Methodological weakness undermines reproducibility and scientific rigor.**
*** Journals increasingly expect **systematic/scoping review standards**.**

**Results (Lines 22–34)**

****Issues:****

1. Overemphasis on positive findings from the FINGER trial
2. Insufficient critical interpretation of:

  *** MAPT trial (mixed results)**
  *** preDIVA trial (neutral outcome)**

3. Effect sizes presented without context (clinical vs statistical significance)

****Why Major Revision:****

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

*** Results are **descriptive, not analytical**, leading to bias.**

**Conclusion (Lines 35–42)**

****Issues:****

*** Overstated claim: "most evidence-based strategy" without balanced comparison**
*** Lacks acknowledgment of conflicting evidence**

****Why Major Revision:****

*** Conclusions must be **proportionate to evidence strength****

**INTRODUCTION (Lines 47–77)**

****Issues:****

1. Largely **background-heavy and generic**
2. Limited identification of **research gap**
3. Similar framing already exists in prior reviews

****Why Major Revision:****

*** Weak novelty positioning → major concern for publication**

**SECTION 2: RISK FACTORS (Lines 78–110)**

****Issues:****

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

*** Descriptive repetition of Lancet Commission on Dementia**

*** No new synthesis or reinterpretation**

*** No quantitative or comparative analysis**

****Why Major Revision:****

*** Section lacks originality; reads like a textbook summary**

**SECTION 3: BIOLOGICAL MECHANISMS (Lines 110–180)**

****Issues:****

1. Excessive detail → **overly long and unfocused**

2. Mechanisms not clearly linked to clinical outcomes

3. Heavy reliance on preclinical/animal data

4. No hierarchy of evidence

****Why Major Revision:****

*** Needs **critical synthesis**, not descriptive expansion**

*** Must distinguish **clinical relevance vs theoretical mechanisms****

**SECTION 4: CLINICAL TRIALS (Lines 181–253)**

General Issues:

1. Descriptive rather than critical

2. No comparative table

3. No discussion of:

*** Bias**

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

*** Adherence issues**

*** External validity**

**FINGER Trial Section (Lines 182–213)**

****Issue:****

*** Overemphasized as "proof of concept" without limitations**

****Why Major Revision:****

*** Creates **positive bias****

**MAPT Trial (Lines 214–230)**

****Issue:****

*** Subgroup findings presented without caution**

**preDIVA Trial (Lines 231–244)**

****Issue:****

*** Neutral findings under-discussed**

**Comparative Synthesis (Lines 245–253)**

****Issue:****

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

*** Superficial comparison**

*** No structured synthesis**

****Why Major Revision:****

*** Core evidence section lacks **critical appraisal and synthesis****

**SECTION 5: GLOBAL ADAPTATION (Lines 254–278)**

****Issues:****

1. Descriptive listing of trials

2. No evaluation of:

  *** Outcomes**

  *** Effectiveness across regions**

3. No focus on LMICs (major gap)

****Why Major Revision:****

*** Weak analytical depth; lacks global health relevance**

**SECTION 6: DIGITAL & PRECISION APPROACHES (Lines 279–303)**

****Issues:****

*** Conceptual discussion only**

*** No supporting strong clinical evidence**

*** No evaluation of feasibility or cost**

****Why Major Revision:****

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

*** Section appears **speculative rather than evidence-based****

**SECTION 7: CHALLENGES (Lines 304–328)**

****Strength but Issue:****

*** Well-written but:**

*** Lacks prioritization of challenges**
*** No proposed solutions**
*** No linkage to earlier sections**

****Why Major Revision:****

*** Needs **problem → solution framework****

**SECTION 8: FUTURE DIRECTIONS (Lines 329–353)**

****Issues:****

*** Overly speculative (AI, biomarkers, drugs)**
*** Not clearly supported by strong clinical data**
*** No feasibility discussion**

****Why Major Revision:****

*** Needs realistic, evidence-based projections**

**CONCLUSION (Lines 354–366)**

ISSN(O): 2320-5407 | ISSN(P): 3107-4928
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com

REVIEWER'S REPORT

Issues:

1. Repetitive
2. Overgeneralized claims
3. No clear "take-home clinical message"

Why Major Revision:

* Weak impact for final section

REFERENCES (Lines 379–445)

Issues:

1. Good coverage but:

   * No citation of very recent systematic reviews (2024–2025 beyond few)
2. Heavy reliance on landmark trials only

Why Major Revision:

* Needs **balanced and updated referencing**

OVERALL CRITICAL JUSTIFICATION

Why NOT Minor Revision?

Because issues are **fundamental**, not superficial:

* □ Methodologyis weak (major issue)

ISSN(O): 2320-5407 | ISSN(P): 3107-4928

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

www.journalijar.com

REVIEWER'S REPORT

*** Lack of novelty (major issue)**

*** No critical appraisal (major issue)**

*** Limited clinical applicability (major issue)**

*** Structural imbalance (major issue)**

 # **FINAL EDITORIAL DECISION**

****Recommendation: MAJOR REVISION**

****Reason:****

The manuscript is **scientifically informative but currently descriptive, lacking methodological rigor, critical analysis, and novel contribution required for publication.**

 # **What Reviewer Expects Before Acceptance**

To move toward acceptance, authors must:

1. Upgrade to **systematic/scoping review (PRISMA)**

2. Add **critical comparative analysis of trials**

3. Provide **clinical implementation framework**

4. Improve **novelty (e.g., LMIC/India focus)**

5. Reduce redundancy and improve synthesis