Reviewer comment -1

This manuscript addresses a highly important, underrecognized, and timely topic: the mental health burden among adults living with sickle cell disease (SCD). The authors provide an expansive narrative synthesis covering prevalence, psychosocial stressors, health system gaps, social determinants of health, coping and resilience, and emerging interventions. The scope is ambitious and largely successful, and the paper demonstrates strong command of the literature, particularly in linking mental health outcomes with structural inequities, stigma, and fragmented care.

However, despite its strengths, the manuscript requires substantial revision before it can be considered for publication. The primary concerns relate to methodological clarity, structural redundancy, overextension beyond a narrative review, and editorial consistency. With focused revisions, this manuscript has strong potential to make a meaningful contribution to the SCD and behavioral health literature.

Major Strengths

1. **Topical importance and relevance**
    - Mental health in adult SCD populations is critically understudied, and this review directly addresses a major gap in clinical and public health discourse.
    - The integration of stigma, systemic racism, and social determinants of health strengthens the manuscript's conceptual relevance.

2. Comprehensive scope

- The review effectively synthesizes evidence on depression, anxiety, substance use, cognitive impairment, health system barriers, and emerging psychosocial interventions.
- The discussion of telehealth, digital CBT, and integrated care models is especially timely and clinically relevant.

3. Strong practice and policy implications

- The manuscript offers clear, actionable recommendations for clinicians, health systems, and policymakers. o Emphasis on culturally responsive care and equity-oriented approaches is a notable strength.

4. Balanced Perspective

- The paper appropriately highlights resilience, coping strategies, and protective factors, avoiding an exclusively deficit-focused narrative.

Major Concerns (requiring revision)

1. Narrative Review Methodology Needs Clarification and Tightening

• Although labeled a narrative review, the manuscript includes many elements resembling a systematic review (e.g., databases searched, inclusion criteria, screening steps), yet lacks sufficient rigor and transparency to meet systematic standards.
• Key issues: The total number of included studies is missing ("A total of studies meeting inclusion criteria…"). No PRISMA-style flow description or justification for inclusion decisions. Screening and synthesis processes are described too briefly to ensure reproducibility.
• Recommendation: Clearly position this as a non-systematic narrative review, simplifying and tightening the Methods section; or strengthen methodological rigor (e.g., specify number of studies, screening process, reasons for exclusion).

2. Substantial Redundancy Across Sections There is considerable overlap between:

• Literature Review

• Results and Discussion

• Psychosocial Stressors

• Social Determinants of Health

• Health System Barriers

Several prevalence figures, themes (stigma, pain, transition to adult care), and conclusions are repeated nearly verbatim.

Recommendation: Consolidate overlapping sections, reduce repetition of prevalence statistics and conceptual arguments, and consider merging "literature review" with "results and discussion" for a more streamlined narrative.

Overextension Beyond the Scope of a Narrative Review

• The manuscript sometimes reads as a policy paper, an intervention review, and as a clinical guideline, all within the same document. While this may important, this breadth occasionally dilutes focus and coherence.

• Recommendation: Clarify the primary aim: synthesis of evidence on mental health challenges. Condense detailed intervention descriptions (e.g., specific trials) or move them into a focused subsection.

4. Structural and Editorial Issues

• Section numbering is inconsistent (e.g., Methods labeled as “2.1” after earlier sections).

• Minor grammatical errors, punctuation inconsistencies, and formatting issues appear throughout.

• Some references are cited out of sequence or inconsistently.

Recommendation: Conduct a thorough editorial and formatting revision. This will ensure consistent section numbering, citation style, and terminology. 5. Global Representation Remains Limited

• Although acknowledged as a limitation, the manuscript relies heavily on U.S.-based studies despite global framing in the introduction.

• Recommendation: Either expand discussion of global contexts where data exist, or narrow claims to reflect the predominantly high-income-country evidence base.

Minor Comments

• Clarify whether cognitive impairment is a primary focus or a secondary consideration, as it receives substantial attention.

• Consider adding a concise conceptual framework (e.g., biopsychosocial or syndemic model) to anchor the narrative synthesis.

• Reduce the length of the “Emerging Interventions” section to improve balance across sections.

The topic is important, the literature coverage is strong, and the policy relevance is clear. However, major revisions are required to improve methodological clarity, reduce redundancy, sharpen focus, and enhance structural coherence. With these revisions, the manuscript has strong potential for publication. All these major revisions delineated above should be substantially included if this manuscript should be published to the highest level of rigor.