

REVIEWER'S REPORT

Manuscript No.: IJAR-59551

Title: Rewriting the Addiction Narrative through Artificial Intelligence in the Prediction, Screening, and Treatment of Substance Use Disorders and Behavioural Addiction

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's ID: JPR- **098**

Detailed Reviewer's Report

Decision: Accept after Major Revision

Major Revisions

1. Strengthen the systematic review methodology. The manuscript states that it follows PRISMA guidelines, but the search and selection procedures are not described in sufficient detail. Provide a reproducible review protocol, specify the review questions, and explain each stage of study identification, screening, eligibility assessment, and inclusion.
2. Improve the database selection and search strategy. The methods list ScienceDirect, Wiley, Springer Nature, ResearchGate, Lancet, National Library of Medicine, and Elsevier. Clarify the exact databases and platforms searched, provide the complete search strings for each database, and explain the selection of sources. Include the final search date and any filters applied.
3. Resolve inconsistencies in the PRISMA flow diagram. The diagram reports 85 records identified, 10 duplicates removed, 75 records screened, 57 records

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retained after an initial exclusion stage, 48 full texts assessed, and 45 studies included. Explain all exclusion counts and ensure that the numbers reconcile at every stage. Report full-text exclusion reasons separately.

4. Provide a formal quality appraisal of included studies. The methods mention standardized quality-assessment tools but do not clearly identify them or present their results. Name the appropriate appraisal tools, explain how they were applied, and summarize the quality or risk-of-bias findings for the included studies.

5. Present a structured summary of the included studies. The literature review mainly describes studies individually in narrative form. Add a comprehensive evidence table covering authors, publication year, study design, population or dataset, AI technique, application, key outcomes, limitations, and relevance to addiction prediction, screening, or treatment.

6. Strengthen the critical synthesis of evidence. The discussion frequently repeats the claim that AI can improve prediction, diagnosis, personalization, and relapse prevention. Compare the findings across studies, distinguish consistent evidence from conflicting results, and explain why performance varies across populations, datasets, algorithms, and clinical settings.

7. Distinguish predictive performance from demonstrated clinical effectiveness. The manuscript sometimes moves from promising model performance to claims of improved treatment or recovery. Clearly separate technical metrics, clinical utility, patient outcomes, and real-world implementation evidence. Avoid implying that a model reduces relapse unless the cited study actually demonstrates that outcome.

8. Clarify the scope and diagnostic terminology of behavioural addiction. Gambling disorder, gaming-related problems, compulsive buying, and social media use are discussed together. Define which conditions meet recognized

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diagnostic criteria and distinguish clinically established disorders from emerging or debated constructs. Update the discussion of diagnostic classifications and avoid treating all excessive behaviours as established addictions.

9. Expand the analysis of bias, ethics, privacy, and generalizability. Although these issues are mentioned, they require deeper evaluation. Discuss population representation, demographic subgroup performance, informed consent, sensitive-data protection, false-positive consequences, explainability, clinical accountability, and the risks of surveillance-based monitoring.

10. Reorganize the discussion and conclusion around explicit research gaps. Identify what existing studies have established, what remains uncertain, and which questions need further investigation. Develop specific recommendations for external validation, prospective clinical studies, long-term follow-up, and responsible clinical implementation. Ensure that each conclusion is directly supported by the reviewed evidence.

Minor revisions

1. Correct grammatical and typographical errors. The manuscript contains numerous spelling mistakes, missing spaces, duplicated words, and awkward sentence structures. Examples include "Behaivior" instead of "Behavior," "addition" instead of "addiction," and "aresignificant" instead of "are significant."

2. Standardize terminology throughout the manuscript. Use "artificial intelligence (AI)," "machine learning (ML)," and "substance use disorder(s) (SUD/SUDs)" consistently. Select either British or American English spelling and apply it uniformly, particularly for "behavioural/behavioral" and "personalisation/personalization."

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3. Revise the abstract for clarity and completeness. Organize it into Background, Objective, Methods, Results, and Conclusion. State the actual review period, number of included studies, principal findings, and major limitations. Avoid vague statements such as “promising but heterogeneous results” without supporting detail.
4. Correct the review-period dates. The methods state that studies published between 1 January 2015 and 31 February 2026 were considered. February 2026 has only 28 days. Correct the date and report the actual final search date.
5. Improve the title for precision and readability. Consider revising the title to: Artificial Intelligence in the Prediction, Screening, and Treatment of Substance Use Disorders and Behavioural Addictions: A Systematic Review.
6. Improve the introduction and research rationale. Reduce repetitive background information about addiction and explain more clearly why a new review is needed. State the specific research questions and distinguish this review from previously published reviews.
7. Improve the presentation of the PRISMA flowchart. Ensure that all labels are readable, aligned, and consistently formatted. Use standard PRISMA terminology and provide a figure number and descriptive caption.
8. Standardize in-text citations and the reference list. Several references appear inconsistently formatted, and some author–year citations are incomplete or difficult to match with the bibliography. Adopt the journal's required referencing style and verify author names, years, article titles, journal names, page ranges, and DOI information.

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9. Remove repetition and improve paragraph organization. Similar descriptions of AI-based prediction, wearable monitoring, personalized treatment, and ethical concerns recur in the literature review, discussion, and conclusion. Consolidate overlapping material and use clear subheadings to improve readability.

10. Improve formatting and presentation quality. Standardize heading levels, spacing, indentation, capitalization, abbreviations, and bullet points. Check tables and figures for consistency, and ensure the final manuscript follows the target journal's formatting and word-limit requirements.