Gmail Pratya Nuankaewc~ <nuankaew.p@gmail.com>

[JADS] #1042 - Round 1 Review Decision

JADS Edi editor@bright-journal.org> Sat, Oct 4, 2025 at 9:42 PM
To: supaporn.y168@gmail.com, wongpanya.nu@up.ac.th, thapanapong.sa@up.ac.th, pratya.nu@up.ac.th

JADS JOURNAL OF APPLIED DATA SCIENCES
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Dear Dr. Pratya NUANKAEW,

We are writing to inform you that your paper, entitled **"Utilization of K-means Clustering for Classifying Diabetes Risk Populations According to Health Behaviors and 3Es-2Ss Health Literacy"** submitted with the identification number **#1042**, has successfully completed a rigorous double-blind review process by the esteemed Journal of Applied Data Sciences (JADS) Peer Review. Please accept our sincere appreciation for your contribution to the field of daata sciences through your submission. We are pleased to inform you that your manuscript is **Revision Required**. To facilitate this process, we kindly request that you carefully review the comments and suggestions provided by the reviewers. You are given a period of **7 days to finalize the revisions (otherwise your submission process will be postponed)** and ensure that the concerns raised are adequately addressed. The successful completion of these revisions will greatly contribute to the editorial decision-making process.

Upon receipt of your revised paper, our team will require approximately 2-7 days to thoroughly assess the modifications made. Subsequently, you will be promptly notified of the next decision regarding your manuscript. We advise you to focus on verifying the accuracy of metadata and ensuring the completeness of the revisions in order to minimize the likelihood of re-entering the review stage. We would like to extend our gratitude once again foar choosing the Journal of Applied Data Sciences (JADS) as the venue for your scholarly work. Should you require any assistance or guidance during the revision or resubmission process, please do not hesitate to reach out to us. Our team is dedicated to providing the necessary support to facilitate a smooth and successful publication experience for you.

Thank you for your cooperation, and we look forward to the potential publication of your paper in the Journal of Applied Data Sciences (JADS).

Sincerely,

Ibrahiem M. M. El Emary
Editor-in-Chief
Journal of Applied Data Sciences (JADS)
Email: editor@bright-journal.org

---------- - IMPORTANT - ----------

------ - Content Writing - ------

Abstract: Please craft a concise abstract within a 250 to 300 word limit. Summarize the contributions, ideas, findings, or results of your paper and discuss their implications. Do not include abbreviations, footnotes, references, mathematical equations, diagrams, or tables. We suggest structuring your abstract as follows:

1. Clearly state the primary objective of your paper.
2. Highlight the virtues or contributions of your research.
3. Provide a conceptual description of your methodology.
4. Describe the research figure, tables and procedures employed, such as simulation, experimentation, or survey methods.
5. If the figure or table is in a non-English language, please provide a translated version of the table or a detailed explanation.
6. Present the main outcomes or results of your study, along with any relevant conclusions.
7. If applicable, discuss the implications of your findings for future research or practical applications.

Please note that this journal exclusively publishes high-quality papers. A high-quality paper should include the following elements:

1. A well-defined statement of the problem being addressed.
2. Proposed solution(s) to the problem.
3. Obtained results, accompanied by a clear description of any previous work on the topic and the novelty of your research.

Ensure that your discussion section is appropriate. In the "Results and Discussion" section, emphasize the most significant findings and provide a thorough analysis of the results.

The title of your paper should succinctly summarize the main ideas of your study. It should serve as a comprehensive and descriptive representation of your research. Use abbreviations and acronyms sparingly unless they are widely recognized.

SUBMISSION: **#1042**

TITLE: **Utilization of K-means Clustering for Classifying Diabetes Risk Populations According to Health Behaviors and 3Es-2Ss Health Literacy**

---------- REVIEW 1 ----------

---------- Overall evaluation ----------

Decision: Revision Required

----- Comment:

The abstract states that “field-based survey data included demographic and clinical variables,” but it does not specify how missing values, inconsistencies, or biases were managed, leaving concerns about data reliability.

The introduction mentions “traditional analysis may not accurately identify sub-at-risk populations,” but it does not define what “traditional analysis” refers to (e.g., logistic regression, descriptive statistics), which makes the contrast with K-means vague.

The description of the 3Es–2Ss framework assumes reader familiarity and only briefly lists its components. It lacks an explanation of why these five dimensions are particularly relevant for diabetes prevention compared to other models.

The sample size of 126 participants is very small given the study population of nearly 19,000 at-risk individuals. The justification for why this number is statistically adequate for clustering is missing.

The purposive sampling method is described, but it is unclear whether this creates selection bias, especially since only four subdistricts were included. The representativeness of the clusters is therefore questionable.

In the research instruments section, the questionnaire validity is attributed to “subject matter experts,” but no information is provided about the validation process, reliability scores, or pilot testing results.

---------- REVIEW 2 ----------

---------- Overall evaluation ----------

Decision: Revision Required

----- Comment:

The description of K-means clustering mentions Euclidean distance but does not consider whether other distance metrics (e.g., Manhattan, cosine) were tested, which could affect subgrouping in multidimensional health data.

The use of the elbow method is justified, but the text does not mention complementary indices like silhouette scores or Davies–Bouldin index, which are commonly recommended for validating cluster robustness.

In Table 1, the extreme monthly income value of 90,000 baht stands out as a clear outlier, but the text does not explain whether this was treated, normalized, or removed before clustering.

Cluster 1 only contains two members, yet the results treat it as a meaningful subgroup. This raises doubts about its interpretive validity and whether it should be considered noise rather than a real cluster.

The results highlight knowledge gaps in emotional regulation and stress management, but the discussion does not connect these findings with existing interventions or policy recommendations on mental health.

Health literacy levels are reported as “low to moderate” in many domains, but no statistical comparison (e.g., correlations with FBS, income, or education) is provided to quantify these relationships.

---------- REVIEW 3 ----------

---------- Overall evaluation ----------

Decision: Revision Required

----- Comment:

In the discussion, socioeconomic factors are linked to health literacy, but the directionality of the relationship (cause versus effect) is not analyzed, leaving the interpretation somewhat superficial.

The conclusion emphasizes healthcare system inequities, but this interpretation is only loosely supported by the data from a small, localized sample in one district, making the generalization to Thailand as a whole weak.

The limitations section notes sensitivity of K-means to outliers, but the study does not report whether techniques like trimming, winsorizing, or robust clustering alternatives were attempted.

Although the study suggests future research with hierarchical or model-based clustering, it does not acknowledge the possibility of using ensemble methods or hybrid clustering that might overcome K-means’ weaknesses.

The claim that the study provides a “decision-support tool” for public health planning seems overstated, as the findings remain exploratory and context-specific without an implemented policy framework.

The literature review integrates global studies, but it lacks critical comparison with regional Southeast Asian research that could provide more culturally aligned evidence for the Thai context.

Ethical approval details are reported, but the paper does not describe how informed consent ensured comprehension among low health literacy participants, which seems especially relevant given the study’s focus.

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