ABSTRACT

Stunting is a serious problem that makes children vulnerable to disease, has impaired cognitive development, and reduces productivity. The results of the Survei Kesehatan Indonesia (2023) show that the prevalence of stunting in Indonesia in 2023 reached 21,5%, so the 2020-2024 Rencana Pembangunan Jangka Menengah Nasional (RPJMN) target of 14% and the World Health Organization (WHO) standard of below 20% have not been achieved. Based on data from the Survei Kesehatan Indonesia (2023), the prevalence of stunting in Central Java Province in 2023 only decreased slightly by 0,1% from 2022 to 20,7%. This condition indicates that Central Java Province needs more intensive handling to accelerate the reduction in stunting prevalence. Evaluation of the acceleration of stunting handling can be done by achieving more focused and targeted indicators of the Indeks Khusus Penanganan *Stunting* (IKPS), one of which is through clustering analysis. The data used is the indicators IKPS of districts/cities in Central Java Province from the official website of the Badan Pusat Statistik (BPS). The data contains outliers because the acceleration rate of stunting reduction varies in each region. Fuzzy Possibilistic C-Means algorithm with optimal membership of Fuzzy C-Means which is able to handle outlier data, is used in this research. The clustering results using the algorithm will be validated using the Davies Bouldin Index (DBI) to find the most optimal cluster. The validated shows the optimal cluster with 5 clusters and a DBI value of 1,520291.

Keywords: Stunting, Indeks Khusus Penanganan Stunting, Clustering, Fuzzy Possibilistic C-Means, Fuzy C-Means, Davies Bouldin Index