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Multilevel Regression Analysis to Evaluate Adoption Rates of Community Health Centre Systems in Senegal

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Abstract

Community health centre systems in Senegal have been established to improve access to healthcare services, particularly for rural and underserved populations. Multilevel regression analysis was employed to assess adoption rates of community health centre systems in Senegal. The model included variables such as socio-economic status, geographic location, and healthcare infrastructure. Findings revealed that a significant proportion (25%) of the population had adopted these centres by providing robust standard errors for the coefficients representing demographic factors. Multilevel regression analysis provided insights into the adoption patterns of community health centre systems in Senegal, highlighting key drivers and areas needing further attention. Recommendation is to tailor interventions based on identified socio-economic determinants for enhancing the adoption rates of community health centres. Treatment effect was estimated with $text\{logit\}(\pi)=beta0+\beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, regression analysis, multilevel models, geographical variation, healthcare access, community participation, epidemiology*

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