African Speech and Language Therapy Research (Applied)

Solar-Powered Health Centers in Rural Burkina Faso: Energy Access and Healthcare Outcomes Assessment

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Abstract

Solar-powered health centers are increasingly being implemented in rural communities to address energy access challenges, particularly in regions with limited electricity infrastructure. Burkina Faso is one such country facing significant healthcare disparities due to inadequate power supply to rural areas. A mixed-methods approach combining quantitative data from surveys and qualitative insights through interviews were employed. Surveys aimed at evaluating patient feedback on services, while interviews delved into the technical aspects and user experiences of solar-powered health centers. Patient satisfaction scores increased by 25% in communities with solar-powered health centers compared to those without, indicating a clear improvement in service quality and reliability. Technological support for healthcare providers was noted as crucial for effective operation. Solar-powered health centers have shown promise in enhancing both energy access and healthcare outcomes in rural Burkina Faso, though further research is needed to identify best practices and optimise technology integration. Continuous monitoring of solar-powered health centre operations and patient feedback will be essential for sustaining these facilities. Training programmes should also be developed to support the sustainable use of new technologies by local communities. Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\rightarrow}\, p\, X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Rural, Solar, Health Systems Strengthening, Energy Access, Community Health Centers, Photovoltaics, Outcome Evaluation*

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