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A Data Descriptor on the diagnostic accuracy of a smartphone-attached microscope for tuberculosis in sputum samples from a South African township

J, a, m, e, s, o, n, v, a, n, d, e, r, M, e, r, w, e, ,, N, o, m, s, a, D, l, a, m, i, n, i, ,, L, e, r, a, t, o, N, k, o, s, i

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Abstract

This study addresses a current research gap in Physics concerning Accuracy of a smartphone-attached microscope for diagnosing tuberculosis in sputum samples at primary health centers in the Khayelitsha township, South Africa in South Africa. The objective is to clarify key debates, identify practical implications, and outline a focused agenda for scholarship and policy. A qualitative approach was used, drawing on recent literature and policy sources to frame the analysis. The analysis indicates persistent structural constraints alongside emerging local innovations; however, evidence remains uneven across contexts and sectors. The paper argues for context-specific approaches and stronger empirical foundations in future research. Stakeholders should prioritise inclusive, locally grounded strategies and improve data transparency. Accuracy of a smartphone-attached microscope for diagnosing tuberculosis in sputum samples at primary health centers in the Khayelitsha township, South Africa, South Africa, Africa, Physics, data descriptor This structured abstract provides a standardised summary to support rapid screening, indexing, and assessment of scholarly contribution.