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Burden and Awareness of Zoonotic Tuberculosis in Africa: A Systematic Review and Meta-analysis

Inhalt

Zoonotic tuberculosis (zTB), caused by animal-associated members of the *Mycobacterium tuberculosis* complex (MTBC), remains a public health problem in Africa. Understanding both the burden of zTB and community awareness is essential for zTB interventions.

Systematic reviews and meta-analyses were conducted following PRISMA guidelines. Studies reporting laboratory-confirmed MTBC species were included to estimate the proportion of zTB among confirmed TB cases, while studies reporting awareness of zTB were included to assess knowledge levels. Random-effects models were used to pool proportions, and subgroup analyses were performed by region and population group.

Fifty-seven studies were included in the proportion review and 38 studies in the awareness review. The pooled proportion of zTB among confirmed TB cases was 2.8% (95% CI: 1.8–4.3; $I^2=88.8\%$). Higher proportions were observed in Northern Africa (15%) and occupationally exposed populations (11.8%) than in hospital-based populations (2.4%). Pooled awareness of zTB was 25.8% (95% CI: 16.7–37.7; $I^2=96.7\%$). Awareness was highest among abattoir workers (57.5%) and lower among herdsmen (22.7%), smallholder farmers (20.9%), and pastoralists (18.0%). Regional awareness ranged from 12.9% in Southern Africa to 34.4% in Western Africa.

The coexistence of measurable zTB burden and low awareness among high-risk populations highlights the need for public education, strengthened surveillance, and improved species-level diagnostics.

Keywords

Zoonotic tuberculosis; *Mycobacterium bovis*; awareness; One Health; Africa; meta-analysis.

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Yes, I am a Junior Scientist.

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