

## News &amp; Comments

## An analysis between Human and Animal of Nigeria in Last 21 Years

*Zhiqin Zheng*

In addition to being known as "undulant fever," "Mediterranean fever," "gastric remittent fever," or "Malta fever," brucellosis is a zoonotic illness brought on by intracellular Gram-negative coccobacilli bacteria of the genus *Brucella*. The global toll of brucellosis in humans is still very high. Over 500,000 infections are brought on by the organism each year around the world. With an estimated 3.5 billion people at risk of contracting one or more *Brucella* spp. infections and a high morbidity rate in both humans and animals, brucellosis has a significant socioeconomic impact that is greater in developing nations than in industrialized ones. Although many nations have achieved considerable strides in disease management, *Brucella* infection continues in some locations in domestic animals, which leads to transmission to humans.

In Nigeria, neither the Federal nor State Ministries of Health provide brucellosis the proper attention it deserves. The World Health Organization (WHO) presently lists brucellosis as one of the top neglected zoonosis. Domestic pets, such as dogs and cats, as well as livestock, such as goats, sheep, and cattle, roam freely among the population in Nigeria. Epidemiological information on the prevalence and distribution of human and animal brucellosis in Nigeria is currently limited. Six geopolitical zones make up Nigeria, where the study was done (North-East, North-West, North-Central, South-East, South-West, and South-South). Except for the South-East, which has 5 states, and the North-West, which has 7, each zone has 6 states.

Online articles/abstracts (full text) that used molecular, cultural, and serological methodologies on human and animal samples to find *Brucella* in Nigeria were also reviewed individually. From each of the chosen papers, descriptive and quantitative variables pertinent to the inclusion criteria established for this systemic review were taken. This study's primary goal was to conduct a systematic review of the literature on brucellosis and a meta-analysis to determine the disease's countrywide prevalence in Nigeria. To the best of our knowledge, this is the first thorough systemic assessment on brucellosis in Nigerian humans and animals. Of the 99 papers found, 14 documented human *Brucella* infection in 11 of Nigeria's 36 states, including the federal capital territory. Nigeria has a 17.6% countrywide prevalence of human brucellosis for all techniques identified in this analysis. However, according to the Rose Bengal plate test (RBPT), which was reported by roughly 80% of the publications for human brucellosis that were accessed, the disease's seroprevalence in Nigeria was 15.7%.

According to this analysis, pigs had the highest prevalence of brucellosis among animals, at 28.3 %, followed by sheep (23.3 %) and camels (20.9%). With an observed frequency of 8.4%, chickens had



the lowest prevalence. Most Brucella phenotypic detection techniques use bacterial isolation and biochemical identification, which only combines a few investigative factors to describe suspect colonies.

According to this systemic review, from 2001 to 2021, the national prevalence of human Brucella infection was 19.2%, and the prevalence of Brucella infection in commonly domesticated animals was 13.1%. Only 27 states, including the FCT, were identified to have brucellosis throughout Nigeria across the six geopolitical zones, according to this study. This study will assist researchers in changing the direction of their work and act as a manual for decision-makers regarding brucellosis management strategies in Nigeria and other sub-Saharan nations.

Source: [Veterinary Sciences](#)

### **KEYWORDS**

Human and animal brucellosis; Brucella; Nigeria; prevalence and seroprevalence; systemic review and meta-analysis

