



# Quality of life, tuberculosis and treatment outcome; a case-control and nested cohort study

Sumona Datta<sup>1,2,3,4</sup>, Robert H. Gilman <sup>4</sup>, Rosario Montoya <sup>2,3</sup>, Luz Quevedo Cruz<sup>2,3</sup>, Teresa Valencia<sup>2,3</sup>, Doug Huff<sup>1,2,3</sup>, Matthew J. Saunders <sup>1,2,3</sup> and Carlton A. Evans<sup>1,2,3</sup>

**Affiliations:** <sup>1</sup>Dept of Infectious Disease, Imperial College London, London, UK. <sup>2</sup>IFHAD: Innovation for Health and Development, Laboratory for Research and Development, Universidad Peruana Cayetano Heredia, Lima, Peru. <sup>3</sup>IPSYD: Innovacion Por la Salud Y el Desarrollo, Asociación Benéfica Prisma, Lima, Peru. <sup>4</sup>Dept of International Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA.

**Correspondence:** Sumona Datta, Honorary Specialist Registrar, Section of Adult Infectious Disease, Imperial College London Hammersmith Hospital Campus, Commonwealth Building level 8, 150 Du Cane Road, London W12 0NN, UK. E-mail: [sumona.datta@ifhad.org](mailto:sumona.datta@ifhad.org)

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The brief EUROHIS quality-of-life questionnaire can be applied to assist in providing holistic, personalised care to TB-affected families, and guide multisystem interventions required to improve their wellbeing and TB treatment outcome <https://bit.ly/2VhDKFM>

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## ABSTRACT

**Background:** Global tuberculosis policy increasingly emphasises broad tuberculosis impacts and highlights the lack of evidence concerning tuberculosis-related quality of life (QOL).

**Methods:** Participants were recruited in 32 Peruvian communities between July 13, 2016 and February 24, 2018 and followed-up until November 8, 2019. Inclusion criteria were age  $\geq 15$  years for “patients” (n=1545) starting treatment for tuberculosis disease in health centres; “contacts” (n=3180) who shared a patient’s household for  $\geq 6$  h-week<sup>-1</sup>; and randomly selected “controls” (n=277). The EUROHIS-QOL questionnaire quantified satisfaction with QOL, health, energy, activities of daily living (ADL), self, relationships, money and living place.

**Findings:** Newly diagnosed tuberculosis was most strongly associated with lower QOL scores (p<0.001). Patients initially had lower QOL than controls for all EUROHIS-QOL questions (p $\leq$ 0.01), especially concerning health, ADL and self. Lower initial QOL in patients predicted adverse treatment outcomes and scores <13 points had 4.2-fold (95% CI 2.3–7.6) increased risk of death *versus* those with higher QOL scores (both p<0.001). Patient QOL was re-assessed 6 months later, and for patients with successful treatment QOL became similar to participants who had never had tuberculosis, whereas patients who did not complete treatment continued to have low QOL (p<0.001). Multidrug-resistant tuberculosis was associated with lower QOL before and during treatment (both p<0.001). Contacts had lower QOL if they lived with a patient who had low QOL score (p<0.0001) or were a caregiver for the patient (p<0.001).

**Conclusions:** Tuberculosis was associated with impaired psychosocioeconomic QOL which recovered with successful treatment. Low QOL scores predicted adverse treatment outcome. This brief EUROHIS-QOL eight-item questionnaire quantified the holistic needs of tuberculosis-affected people, potentially guiding patient-centred care.