

ABSTRACT

SETTING:

City Council Chest Clinic, Nairobi, Kenya.

OBJECTIVE:

To determine to what extent the performance of smear microscopy is responsible for sex differences in notification rates.

METHODOLOGY:

Three sputum samples from TB suspects were subjected to smear microscopy with Ziehl-Neelsen (ZN) and auramine (FM) staining. Lowenstein-Jensen culture was used as the gold standard.

RESULTS:

Of 998 suspects, 600 (60%) were men and 398 (40%) women. The odds of detecting culture-positive patients with ZN was lower for women (OR 0.67). By examining the first spot specimen, ZN detected 35% of culture-positive males and 26% of culture-positive females. These proportions increased to respectively 63% and 53% when examining three specimens, and to 79% and 74% when using FM. The sex difference reduced and became non-significant ($P = 0.19$) when adjusted for HIV; however, the numbers involved for HIV stratification were low.

CONCLUSION:

The performance of a diagnostic tool contributes to sex differences in notification rates and influences male/female ratios. Women were less likely to be diagnosed ($P = 0.08$), and when ZN was used they were less likely to be labelled as smear-positive TB ($P < 0.01$). The application of more sensitive diagnostic tools such as FM is to the advantage of women.