**ABSTRACT**

**Background**: The spread of tuberculosis (TB) is a major health problem that needs to be monitored. Health care workers (HCWs) who perform the services patients in hospital are high risk of *Mycobacterium tuberculosis* infection especially among nurses who spend a majority of time with patients.

**Objective**: To determine TB infection rate and relationship between TB and intention to leave (ITL) in nursing career.

**Methods**: This study utilized data from the baseline survey of the Thai Nurse Cohort Study (TNCS) database. It was a mailed survey conducted in September 2009 involving a total of 18,756 respondents who were then become members of the Cohort. The primary outcomes of this study were tuberculosis (TB) infection in nurses during operation that reported by registered nurses (RNs) and reporting intention to leave (ITL) a nursing career within 1-2 years. Effects of tuberculosis were quantified by prevalence rate, odds ratio (ORs) and its 95%CI using multiple logistic regression.

**Results**: Among a total of 18,756, there were 16,797 had work in nursing career, 96.8% were female, with a mean age of 43.2 ± 9.4 years old. The rate of TB infection during the operation that reported by RNs and its 95% confidence interval (CI) was 3.5% (3.3% to 3.8%). TB rates were highest in group whose relatives have been infected with TB 6.5% (95%CI: 5.2% to 7.8%). Factors that associated with ITL, presented as odds ratio (ORs) and 95%CI, included TB (OR = 1.2; 95%CI: 0.8 to 1.8; p-value = 0.420), age between 52 to 65 years old (OR = 3.6; 95%. CI: 2.4 to 5.4; p-value < 0.001), male nurses (OR = 1.9; 95% CI: 1.3 to 2.9; p-value = 0.001), and single nurses (OR = 1.7; 95% CI: 1.3 to 2.5; p-value < 0.001).

**Conclusions**: TB infection rate was high in nurses whose relatives have been TB infected, but TB was not associated with ITL in nursing career. However, this study shows that TB infection rates remain high and remains a health problem that needs to be burned. Especially, in medical personals who closes to patients.

**Key words**: tuberculosis, intention to leave, rate, prevalence, factors, associated, nurse