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Longitudinal Analysis of the Relationship between Religion and Infectious and Non-Infectious Diseases: Evidence from the South African National Income Dynamics Study



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Abstract

Background: South Africa has been experiencing a complex health transition that is defined by a double burden of disease in a weak health system. Infectious and non-infectious diseases accounted for 31.1% and 57.4% of deaths in 2016, respectively. Tuberculosis and Diabetes Mellitus are two of the leading causes of death among South Africans. In South Africa, TB is the leading cause of death among individuals aged 15-44 years accounting for 11.2% of the deaths. Deaths attributable to non-infectious diseases have increased in South Africa from 53.3% in 1997 to 57.4% in 2016. South Africa has the highest prevalence of age-adjusted DM in adults aged 20-79 years (12.7%) and over 4 million people are living with diabetes. Disease rates in South Africa are largely shaped by behavioural risk factors such as smoking, unhealthy diet, physical inactivity, alcohol use and religion. This study therefore focuses on religion as a substantial influencer of behavioural risk factor to disease outcomes among the economically active (15-64 years) in South Africa.

Objectives: The objective of this study therefore was firstly to identify the prevalence of Tuberculosis and Diabetes Mellitus by religious affiliations in South Africa. Secondly, to describe disease outcomes of the economically active by religious affiliations and selected socio-economic and demographic factors. And lastly, to examine the relationship between religious affiliations and disease outcomes.

Methodology: The study used a retrospective longitudinal study design. The study used secondary data from the National Income Dynamic Study (NIDS) that has had five waves, from 2008 to 2017. The study population were economically active, aged 15-64 years, both males and females who have a religious affiliation. Total sample was 7895. Descriptive statistics measured the prevalence of infectious disease and

non-infectious diseases among the economically active that have a religious affiliation. A binary logistic regression model was used, after describing data, to assess the relationship between religion and infectious and non-infectious diseases in South Africa.

Results: The results show that Tuberculosis and Diabetes Mellitus prevalence was high amongst individuals affiliating with African Traditional Beliefs. Furthermore, smoking status [**OR:** 1.56 **CI**: 1.5470– 1.5785], and alcohol habits [**OR:** 1.41 **CI:** 1.3933– 1.4175] were associated with Tuberculosis. Whereas, Diabetes Mellitus was associated with race (coloured) [OR: 3.08 CI:3.0371 - 3.1191]**,** having secondary education [**OR:** 1.34 **CI:** 1.3237 - 1.3623] and residing in rural areas [**OR**: 1.42 **CI:** 1.4046 - 1.4318].

Conclusion: The study found that there is a relationship between religious affiliation and disease outcomes in South Africa. The results also showed that South Africans engage in risky behaviours and are left susceptible to disease acquisition. The results show that regardless of your religious affiliations and beliefs, your engagement in risky behaviour leaves you susceptible to the acquisition of disease.

Keywords: *Religious affiliation, tuberculosis, diabetes mellitus, economically active, longitudinal study*