

WITS
UNIVERSITY



**A NON-LINEAR DECOMPOSITION OF THE EFFECTS OF SOCIAL
GRANTS ON ACUTE RESPIRATORY TRACT INFECTIONS IN SOUTH
AFRICA**

NAME: SINDISO NDLOVU

STUDENT NUMBER: 1073904

SUPERVISOR'S NAME: PROFESSOR CLIFFORD ODIMEGWU

DATE: 2018

**A research project submitted to the Faculty of Humanities, School
of Social Sciences, University of Witwatersrand, in partial fulfilment
of the requirements for the degree of Master of Arts in Demography
and Population Studies**

ABSTRACT

Background

Acute respiratory tract infections (ARTIs) are a leading public health challenge. Annually 2.6 million deaths among children aged below 5 years result from respiratory tract infections. There is an acknowledged synergism noted to exist between poverty and contraction of ARTIs. Children in poor households are at greater risk of developing respiratory tract infections. In South Africa, poverty levels post-1994 have been associated with socio-economic inequalities inherited from the apartheid system. The South African government therefore adopted a policy of social assistance involving monthly payment of social grants to deserving persons in order to ameliorate poverty and its consequent effects on health. One of the expected social impacts of the social grants besides reducing incidences of poverty is a reduction in health conditions like ARTIs that are linked to poverty. Poverty alleviation policies in form of social assistance are mostly non-existent in sub-Saharan Africa. South Africa is one of rare cases with an advanced social assistance policy in SSA. The country thus provides a platform for examining the impact of such policies on health outcomes like ARTIs. The study therefore seeks to examine if there an association between social grants and ARTIs in children aged below 5years in South Africa.

Methodology

This study analysed secondary data obtained from the 2016 General Household Survey (GHS2016), which is an annual household survey conducted by Statistics South Africa (Stats SA). The study population for this research comprised all children in South Africa aged between zero and 5 years in 2016. A total of 7,156 children aged below 5 years enumerated in the GHS2016 made up the study sample. Data about these children were collected from guardians or parents of the children. Data analysis was done in three phases; the univariate included conducting the background characteristics of the respondents using a series of frequencies and percentage distributions. The bivariate analysis involved the cross tabulation of the outcome variable (ARTIs) with all independent variables using the Pearson's chi-square test. The multivariate analysis was conducted to determine the net effects of social grants on ARTIs in children aged below five years. The logistic regression was applied to determine the extent to which a range of predictor variables are related to the existence of ARTI in a child. The threefold Blinder-Oaxaca decomposition technique was then applied to quantify the conditional contributions of social grants and other predictor variables to differences in proportions of children who had ARTI between two groups of children. Group

1 was made of children residing in urban areas while group 2 was for those living in rural areas.

Results

This study observed that 15% of the total number of children aged below 5 years who were enumerated in the South African GHS2016 were reported to have had ARTIs. Logistic regression results showed that reception of a grant relative to no grant was associated with higher likelihood of ARTIs. Old age grant was associated with 53% (OR 1.53; CI 1.18- 1.97) and the child support grant 29% (OR 1.29; CI 1.03 -1.60) higher likelihood of ARTIs. Results on the age of child showed significance at the at the age 1 year and 2 years, controlling for other variables a child aged 1 year had a 46% higher likelihood of ARTI in comparison to a child aged below 1year (OR 1.46; CI 1.18 – 1.81). Children residing in households of rich socioeconomic status had 3 times higher odds of ARTI compared to the poor. There was a statistically significant association between mothers' educational attainment (at secondary and tertiary level) and ARTI, children with mothers who have secondary education had a 27% higher likelihood of ARTI while tertiary education further increases the likelihood by 78% of ARTI relative to non-educated.

The level of ARTIs was higher among children from urban areas (group 1; 18%) compared to that of children living in rural areas (group 2; 12%), indicating a gap of 6 percentage points. Using group 1 as the reference, decomposition results showed that holding all effects and interaction constant and allowing for change in endowments only, the level of ARTIs would increase by 5.6 percentage points. Allowing for change in coefficients (p. value < 0.05), holding endowments and interaction would lead to a 66 percentage point decrease in ARTIs. If returns to characteristics for the Old age grant were transferred to urban areas, holding all other variables constant- ARTIs would decrease by 5 percentage point (p. value <0.05). Furthermore, if those if returns to characteristics for the child support grant were transferred to urban areas, holding all other variables constant ARTIs would decrease by 9% (p. value <0.05).

Conclusion

This study established that social grants have a protective effect in reducing ARTIs among the poor, wider coverage of social protection will yield better health outcomes in children as means to join the global agenda to alleviate child poverty and improve well-being.

Keywords: Acute Respiratory Tract Infections, Social grants, Decomposition, South Africa, Children

