

Changing Levels and Patterns of Under-Five Mortality in Nigeria: Empirical Evidence from Nigeria Demographic and Health Surveys

ONI, Gbolahan A. ¹ and ADETORO, Gbemisola W ²

Department of Econs & Development Studies

College of Development of Development Studies

Covenant University, Ota, Ogun State

[¹gbolahan.oni@covenantuniversity.edu.ng](mailto:gbolahan.oni@covenantuniversity.edu.ng) [²gbemisola.adetoro@covenantuniversity.edu.ng](mailto:gbemisola.adetoro@covenantuniversity.edu.ng)

EXTENDED ABSTRACT

Introduction

Global under-five mortality rate has dropped from 90 deaths per 1,000 live births to 48 deaths per 1,000 live births between 1990 and 2012 (United Nations Children's Fund, 2013). Many developing countries, including those in sub-Saharan Africa, have witnessed declines in their infant and child mortality rates in recent years. However, the under-five mortality rate remains relatively high in sub-Saharan Africa, when compared to other more developed regions of the world. Countries in sub-Saharan Africa that have made substantial progress are those that have rapidly expanded public health at the basic level and also developed intervention programs, such as immunization, nutrition (particularly breastfeeding), vitamin A supplementation, and safe drinking water (Policy Project Nigeria, 2002). In this study we examined the trends in the under-five mortality in Nigeria in relation to some socioeconomic and health services utilization behavior or practices. This was done in an attempt to explain some of the factors that may have contributed to any observed changes in the levels of under-five mortality.

Data Source and Methods

In this study we examined levels, trends and pattern of under-five mortality in Nigeria during a ten year period, that is, between 2003 and 2013. The data used were from the three National Demographic Health Surveys (NDHS) carried out in 2003, 2008 and 2013. The National Population Commission of Nigeria and ORC *Macro, USA* (NPC and ORC Macro, 2003, 2008 and 2013) conducted the surveys. In each of the surveys, the study samples were drawn using stratified two-stage sampling procedure. At each survey (i.e., 2003, 2008 and 2013), a total number of women interviewed were 7,620, 33,385 and 38,948 respectively. The data analysis was done using tables and graphical illustrations.

Results

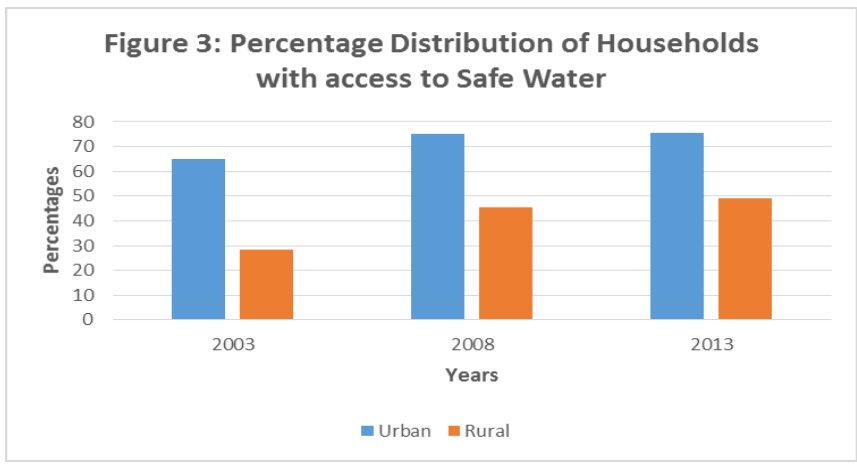
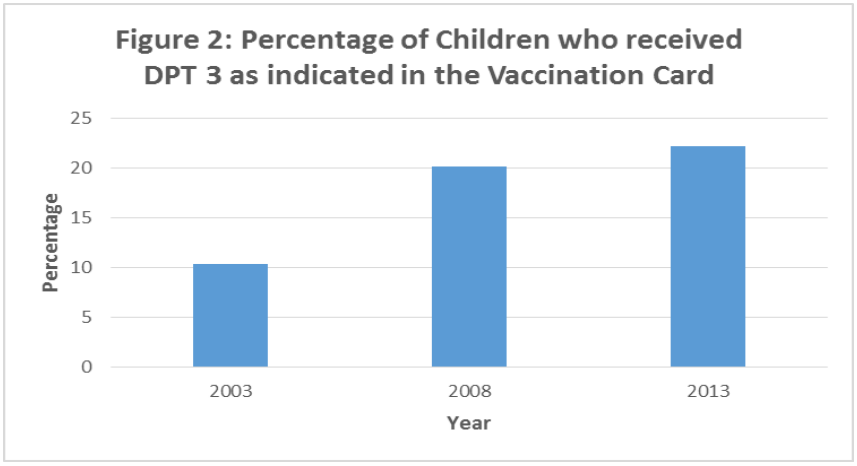
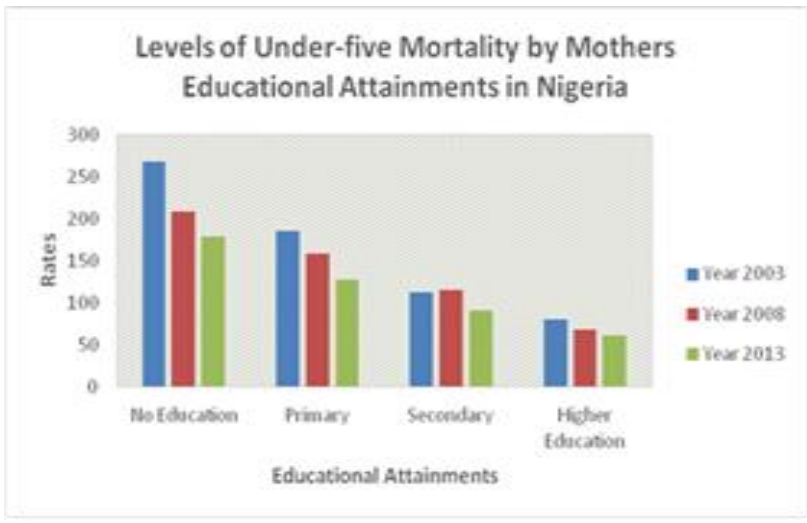
The total number of children born within the preceding five years of the surveys were 3,775, 18,028 and 20,192 for 2003, 2008 and 2013 respectively. Findings from this study revealed that under-five mortality has reduced by 32% between 2003 and 2013, from 187 deaths per 1,000 live births to 128 deaths per 1,000 live births respectively. Although, over the ten-year period, there had been a decline in the under-five mortality in the country, however the rate of decline is low when compared with what is required to achieve the Millennium Development Goal which called for a two-third reduction in child mortality by 2015.

Figure 1, shows the rates of under-five mortality by mothers' educational attainments. It shows that mothers with secondary and higher education reported lower rates of child deaths compared to those with primary and no education. Generally, there was a decline in childhood mortality across all the educational categories during the 10 year period, however, the decline is much greater among children of mothers with primary education or less than for those mothers who

Table 1: Under-five Mortality Rate by Mother's Education				
Mother's Education	YEARS			% Decline
	2003	2008	2013	
No Education	269	209	180	33.1%
Primary	186	159	128	31.2%
Secondary	113	116	91	19.5%
Higher Education	80	68	62	22.5%

Source: NDHS 2003-2013

Figure 1



had secondary or higher education. Between 2003 and 2013, under-five mortality declined by 33%, 32% and 20% for mothers with no education, primary education and secondary education respectively. Figure 2, shows that the percentage of children who received DPT3 (i.e., those who received the required 3 doses of DPT) increased over the 10 years period. There was an increase of 114% in DPT3 coverage between 2003 and 2013 (from 10.4% in 2003 to 22.2% in 2013. It can be deduced therefore, that the improvement in immunization coverage may have contributed to the decline of childhood mortality by reducing the exposure rate of to preventable diseases or illnesses. Figure 3 shows that households who drank from safe water sources (i.e., municipal tap or borehole) increased from 41.7% in 2003 to 60.6% in 2013. Also during the same period, two-week incidence of childhood diarrhea decreased from 18.8% in 2003 to 10.3% in 2013 (Figure not shown). The improvement in safe water source could have contributed to the decline in childhood diarrheal diseases.

Conclusion and Policy implications

From the findings we concluded that there was moderate decline in under-five mortality in Nigeria between 2003 and 2013. The decline may have resulted from improvements in childhood immunization coverage, improved source of drinkable water and reduction in the incidence of childhood diarrhea diseases – which is a major cause of under-five mortality. We therefore recommend that both the national and state governments of Nigeria intensify efforts to increase childhood immunization coverage, provide more communities and households with safe water in order to drastically reduce diarrhea diseases – a major cause of deaths in children. This will help to accelerate the decline in under-five mortality rate in the country

References

National Population Commission (NPC) [Nigeria] and ORC Macro. 2003-2013. *Nigeria Demographic and Health Survey 2003-2013*. Calverton, Maryland: National Population Commission and ORC Macro.

Policy Project/Nigeria, (2002). *Child Survival in Nigeria: Situation, Response, and Prospects*.

UNICEF, (2013). *Levels and Trends in Child Mortality: Report 2012*. Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation.