

**INFANT AND CHILD HEALTH:
EVIDENCE FROM FOUR SUB-
SAHARAN AFRICAN COUNTRIES**

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1. INTRODUCTION

- Sub-Saharan Africa has the highest levels of infant, child and under-five mortality in the world,
- Health of infants and children is of critical importance both as a reflection of current health status of a large segment of the population and as a predictor of health of the next generation,
- Good infant and child health will facilitate achievement of Millennium Development Goal of reducing by two-thirds the mortality rate of children under-five between 1990 and 2015.

OBJECTIVES OF THE WORK ARE:

- to describe infant and child health inequalities in Ghana, Nigeria, Kenya and Tanzania,
- to examine some of the factors affecting receipt of medical treatment for diarrhoea and fever/cough in each country.

2. DATA AND METHODS

2.1 SOURCES OF DATA

- 1998 Ghana Demographic and Health Survey
- 1999 Nigerian Demographic and Health Survey
- 1998 Kenya Demographic and Health Survey
- 1999 Tanzania Reproductive and Child Health Survey

❖ Detailed information collected from women aged 15-49 and questions on the following topics:

- background characteristics
- reproductive history
- pregnancy and breastfeeding
- childhood immunization and health
- nutritional status of children and mothers

2. DATA AND METHODS (Contd.)

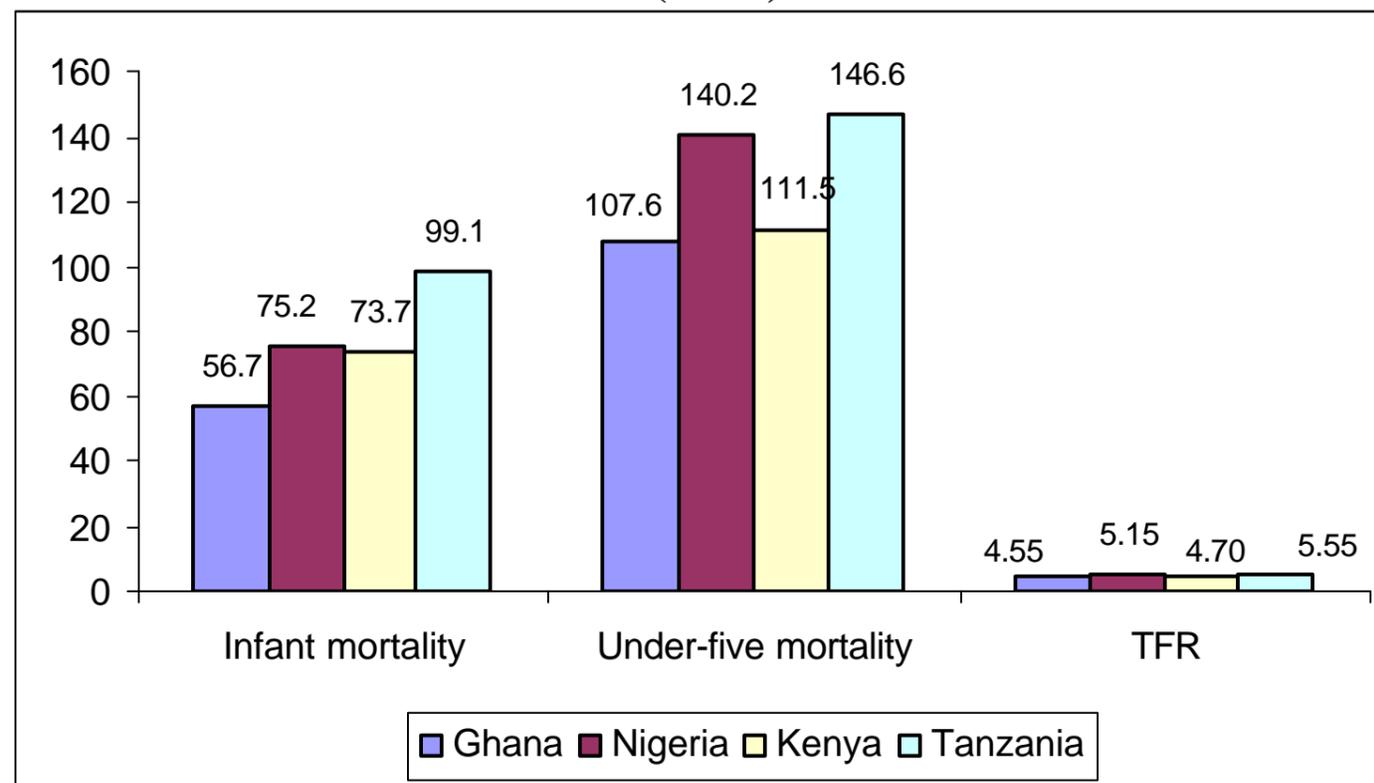
2.2 METHODS

- ❖ Bivariate analyses employed to describe:
 - Childhood vaccination coverage
 - Breastfeeding practices
 - Nutritional status
 - Prevalence and treatment of acute respiratory infection (ARI)
 - Prevalence and treatment of fever/cough
 - Prevalence and treatment of diarrhoea

- ❖ Two stepwise logistic regression models developed for each country to examine:
 - Factors affecting medical treatment of diarrhoea
 - Factors affecting medical treatment of fever/cough

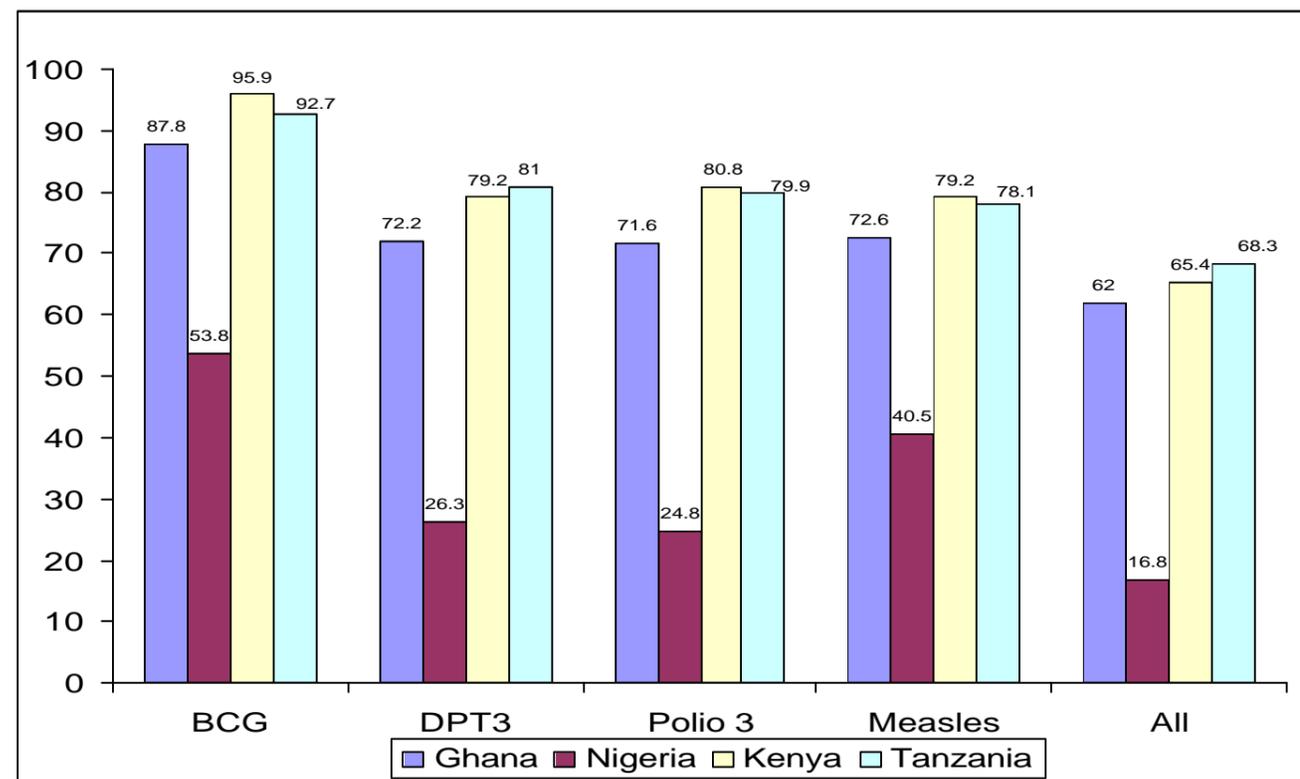
3. RESULTS

FIGURE 1 INFANT, UNDER-FIVE MORTALITY AND TOTAL FERTILITY RATE (TFR) BY COUNTRY



Note: Rates relate to 0-4 years before the survey

FIGURE 2 PERCENTAGE OF CHILDREN 12-23 MONTHS WHO HAD RECEIVED SPECIFIC VACCINES BY THE TIME OF THE SURVEY BY COUNTRY



Note: All means fully vaccinated

FIGURE 3 MEDIAN DURATION IN MONTHS OF ANY BREASTFEEDING, EXCLUSIVE BREASTFEEDING AND FULL BREASTFEEDING AMONG CHILDREN UNDER THREE YEARS OF AGE BY COUNTRY

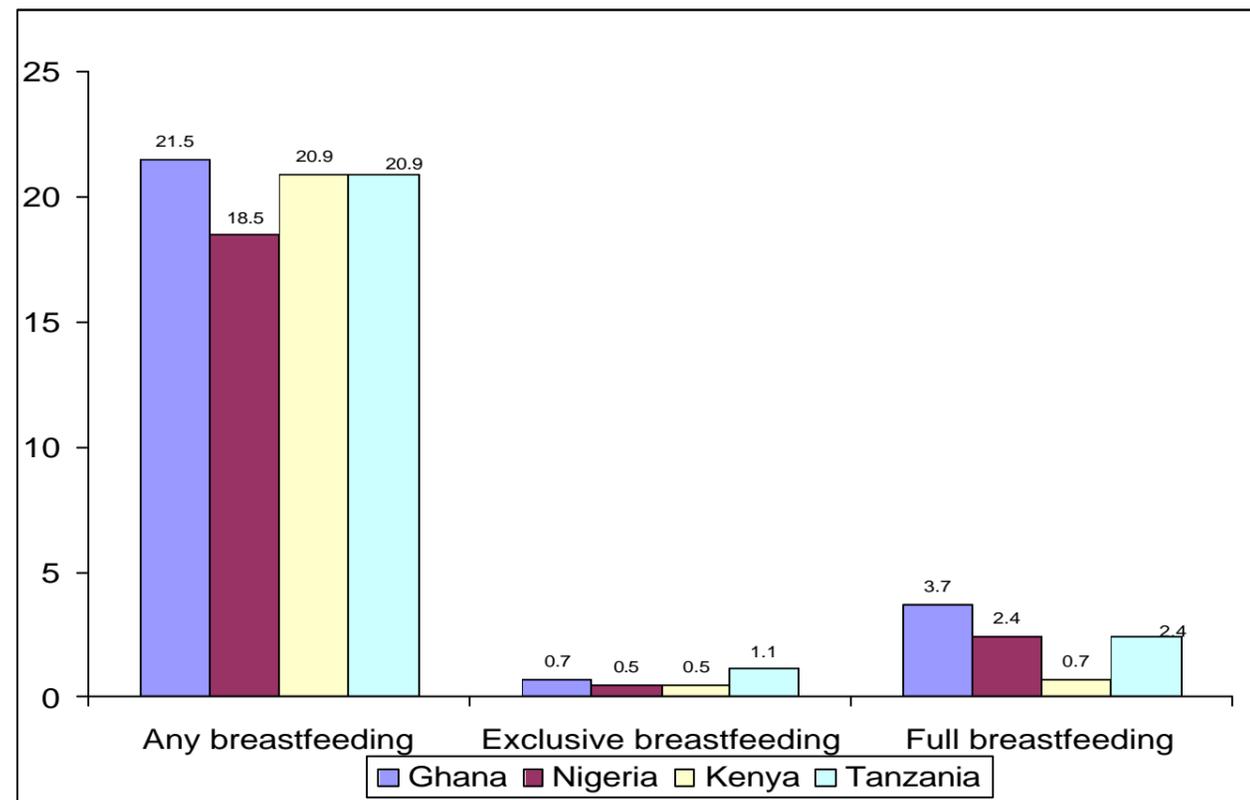
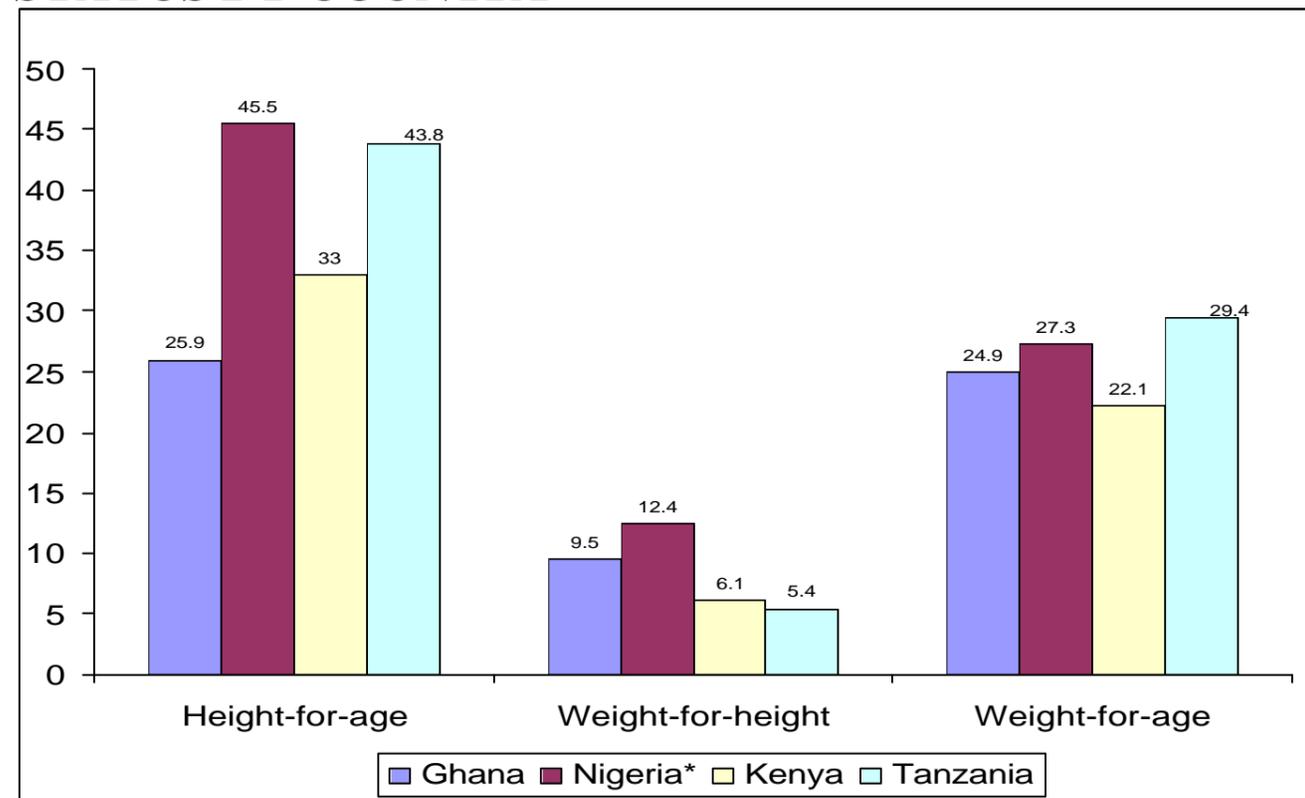


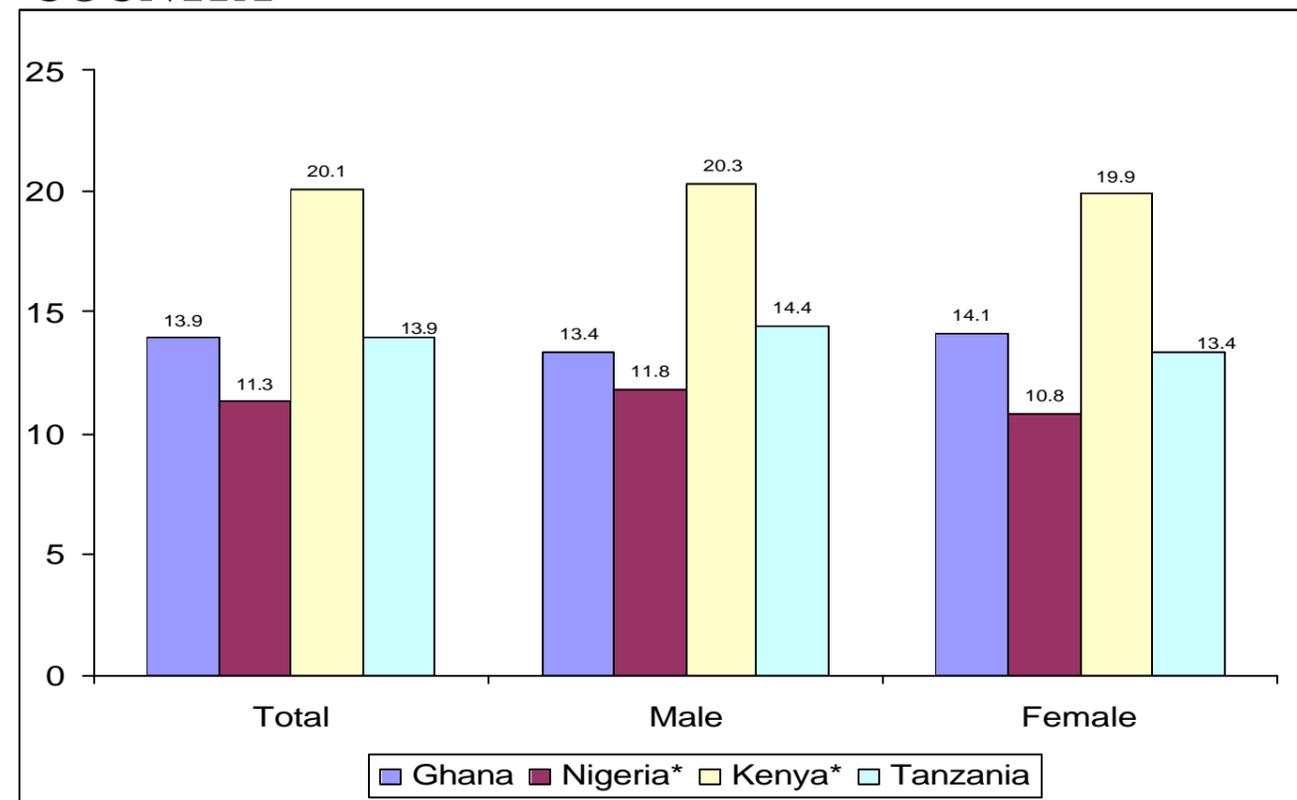
FIGURE 4 PERCENTAGE OF CHILDREN UNDER FIVE YEARS OF AGE WHO ARE CLASSIFIED AS MALNOURISHED ACCORDING TO THREE ANTHROPOMETRIC INDICES OF NUTRITIONAL STATUS BY COUNTRY



Note: Percentage below – 2 standard deviations.

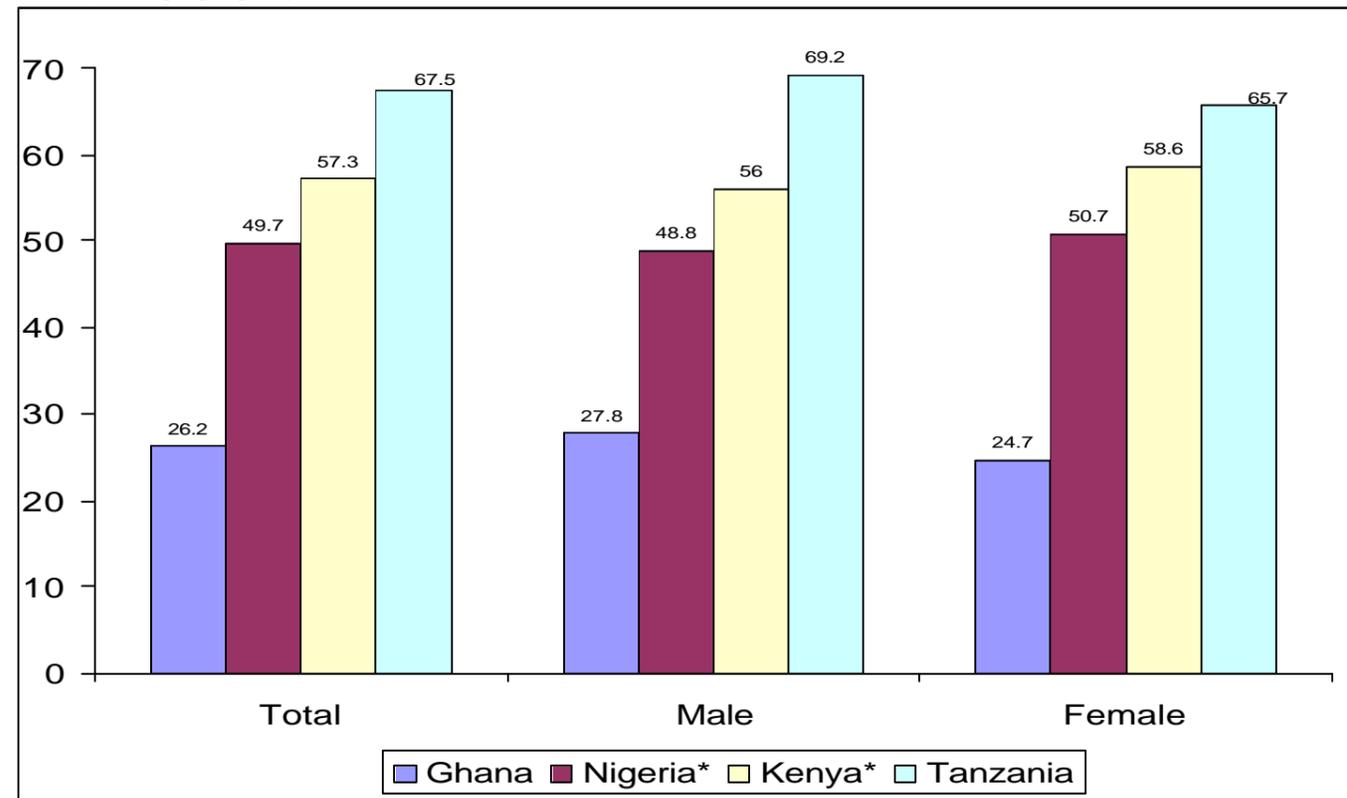
*** Figures relate to children under three years.**

FIGURE 5 PERCENTAGE OF CHILDREN UNDER FIVE YEARS WHO WERE ILL WITH COUGH ACCOMPANIED BY FAST BREATHING DURING THE TWO WEEKS PRECEDING THE SURVEY BY SEX AND COUNTRY



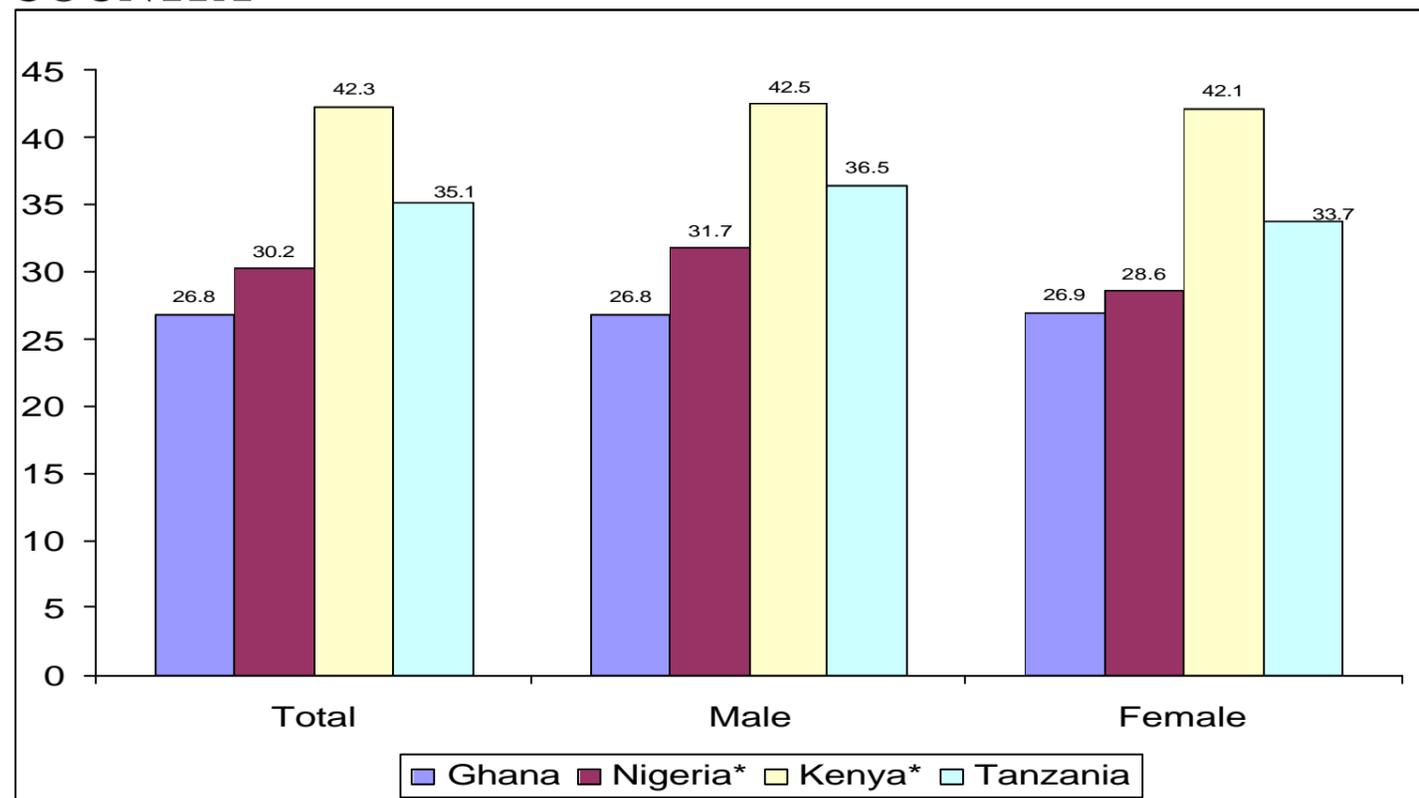
*** Figures relate to children under three years.**

FIGURE 6 PERCENTAGE OF CHILDREN UNDER FIVE YEARS TAKEN TO A HEALTH FACILITY OR PROVIDER FOR TREATMENT FOR SYMPTONS OF ACUTE RESPIRATORY INFECTION (ARI) DURING THE TWO WEEKS PRECEDING THE SURVEY BY SEX AND COUNTRY



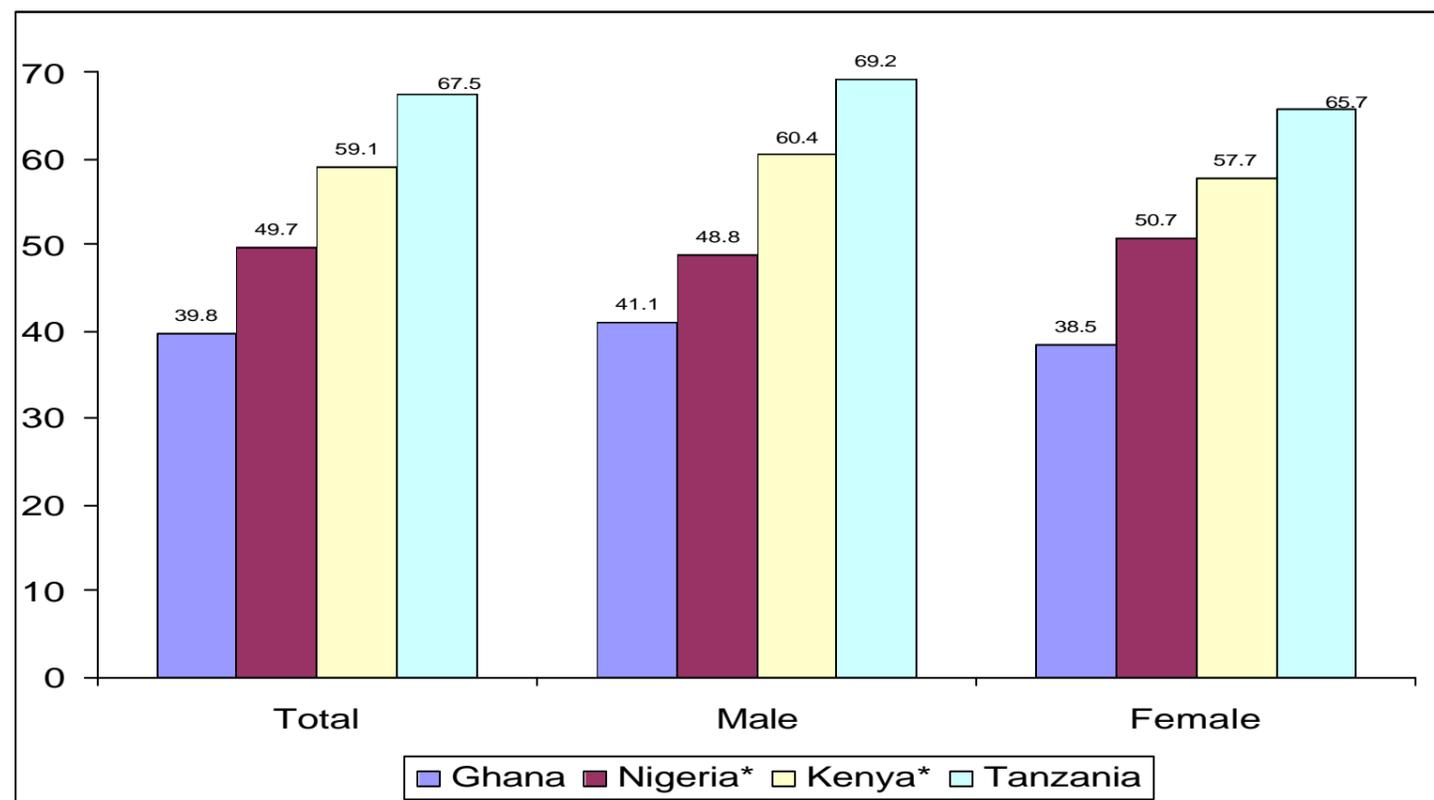
*** Figures relate to children under three years.**

FIGURE 7 PERCENTAGE OF CHILDREN UNDER FIVE YEARS WHO WERE ILL WITH FEVER DURING THE TWO WEEKS PRECEDING THE SURVEY BY SEX AND COUNTRY



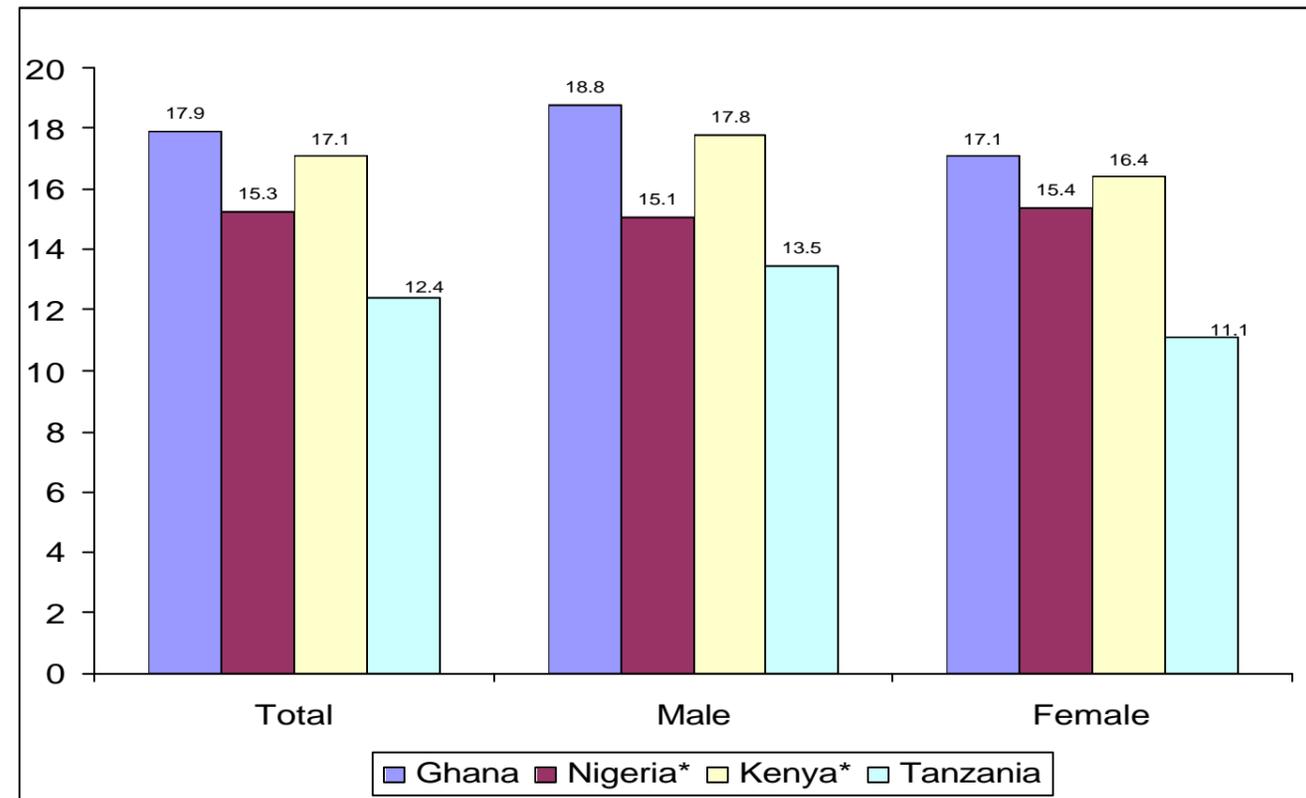
*** Figures relate to children under three years.**

FIGURE 8 PERCENTAGE OF CHILDREN UNDER FIVE YEARS TAKEN TO A HEALTH FACILITY OR PROVIDER FOR TREATMENT FOR SYMPTONS OF FEVER BY SEX AND COUNTRY



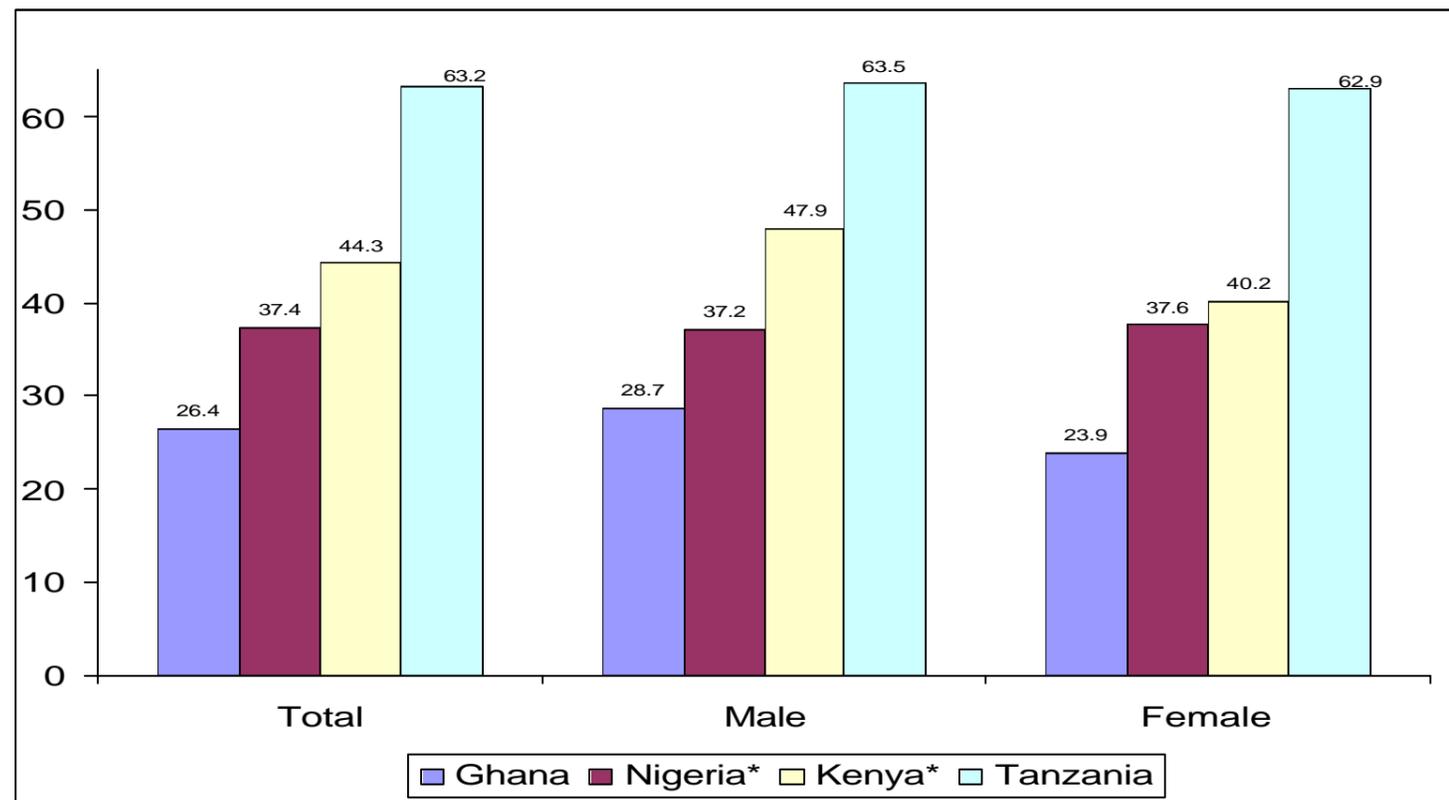
*** Figures relate to children under three years.**

FIGURE 9 PERCENTAGE OF CHILDREN UNDER FIVE YEARS WITH DIARRHOEA DURING THE TWO WEEKS PRECEDING THE SURVEY BY SEX AND COUNTRY



*** Figures relate to children under three years.**

FIGURE 10 PERCENTAGE OF CHILDREN UNDER FIVE YEARS TAKEN TO A HEALTH FACILITY OR PROVIDER FOR TREATMENT FOR SYMPTOMS OF DIARRHOEA BY SEX AND COUNTRY



*** Figures relate to children under three years.**

4. CONCLUSION

- Variations exist in child survival, vaccination coverage, breastfeeding practices, nutritional status, prevalence of and treatment-seeking for ARI, fever and diarrhoea in Ghana, Nigeria, Kenya and Tanzania,
- A comparison of under-five mortality and total fertility rates in the four countries strongly suggests that “family planning saves lives”,
- Special policy and programme efforts can make a world of difference in improving infant and child health,
- Targeted breastfeeding promotion and the expanded programme on immunization should be vigorously pursued by the four countries.

TABLE 1 LOGISTIC REGRESSION OF RECEIVING MEDICAL TREATMENT FOR DIARRHOEA BY SELECTED CHARACTERISTICS OF WOMEN AND COUNTRY

Ghana 1998			
Characteristic	Logistic coefficient	Odds ratio	P value
Region			
Western	0.128	1.136	0.741
Central	- 0.037	0.964	0.929
Greater Accra	0.078	1.080	0.860
Volta	- 0.255	0.775	0.570
Eastern	- 1.041	0.353	0.046
Ashanti	- 0.242	0.785	0.515
Brong Ahafo	- 0.632	0.531	0.185
Northern (RC)		1.000	
Upper West	0.313	1.367	0.591
Upper East	1.431	4.183	0.001
Constant	-0.975		
Model X ²	29.797		
Df	9		
N	563 (unweighted)		
Nigeria 1999			
Region			
North East (RC)		1.000	
North West	- 0.664	0.514	0.013
South East	- 0.066	0.936	0.842
South West	- 0.271	0.762	0.470
Central	0.290	1.336	0.306
Level of education			
No education (RC)		1.000	
Primary	0.905	2.472	0.001
Secondary	0.796	2.217	0.007
Higher	0.313	6.168	0.020
Constant	-0.009		
Model X ²	38.789		
Df	7		
N	475 (unweighted)		

TABLE 1 (CONT.)

Kenya 1998			
Characteristic	Logistic coefficient	Odds ratio	P value
Province			
Nairobi	0.814	2.256	0.067
Central	0.320	1.378	0.458
Coast	1.054	2.869	0.006
Eastern	0.001	1.001	0.997
Nyanza (RC)		1.000	
Rift Valley	0.684	1.982	0.007
Western	-0.183	0.833	0.548
<hr/>			
Constant	-0.526		
Model X ²	21.772		
Df	6		
N	533 (unweighted)		
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Tanzania 1999			
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Birth order			
1	0.817	2.264	0.009
2-3 (RC)		1.000	
4-5	0.518	1.677	0.081
6+	0.823	2.277	0.010
<hr/>			
Constant	0.133		
Model X ²	10.109		
Df	3		
N	341 (unweighted)		
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TABLE 2 LOGISTIC REGRESSION OF RECEIVING MEDICAL TREATMENT FOR FEVER/COUGH BY SELECTED CHARACTERISTICS OF WOMEN AND COUNTRY

Ghana 1998			
Characteristic	Logistic coefficient	Odds ratio	P value
Region			
Western	0.495	1.640	0.211
Central	0.140	1.151	0.715
Greater Accra	0.646	1.908	0.092
Volta	- 0.507	0.602	0.226
Eastern	- 0.450	0.638	0.273
Ashanti	0.250	1.284	0.525
Brong Ahafo	- 0.360	0.698	0.466
Northern (RC)		1.000	
Upper West	0.477	1.612	0.380
Upper East	1.427	4.166	0.001
Constant	-1.301		
Model X ²	37.488		
Df	9		
N	775 (unweighted)		
Nigeria 1999			
Region			
North East (RC)		1.000	
North West	0.711	2.036	0.014
South East	- 0.244	0.784	0.404
South West	0.365	1.441	0.199
Central	0.711	2.035	0.009
Type of place of residence			
Urban	0.709	2.032	0.000
Rural (RC)		1.000	
Level of education			
No education (RC)		1.000	
Primary	0.803	2.233	0.001
Secondary	0.779	2.180	0.002
Higher	1.507	4.512	0.001
Birth order			
1	0.270	1.310	0.229
2-3 (RC)		1.000	
4-5	0.380	1.463	0.092
6+	0.654	1.923	0.005
Constant	- 1.709		
Model X ²	66.639		
Df	11		
N	700 (unweighted)		

TABLE 2 (CONT.)

Kenya 1998			
Characteristic	Logistic coefficient	Odds ratio	P value
Province			
Nairobi	- 0.183	0.834	0.593
Central	0.757	2.133	0.012
Coast	0.639	1.894	0.029
Eastern	0.354	1.425	0.065
Nyanza (RC)		1.000	
Rift Valley	0.320	1.377	0.073
Western	- 0.340	0.712	0.115
Level of education			
No education (RC)		1.000	
Primary	- 0.309	0.734	0.165
Secondary	0.150	1.161	0.554
Higher	0.330	1.391	0.540
Type of place of residence			
Urban	0.615	1.850	0.003
Rural (RC)		1.000	
Birth order			
1	- 0.308	0.735	0.056
2-3 (RC)		1.000	
4-5	0.104	1.109	0.535
6+	- 0.317	0.729	0.072
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Constant	- 0.159		
Model X ²	61.247		
Df	13		
N	1224 (unweighted)		
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Tanzania 1999			
Type of place of residence			
Urban	0.668	1.951	0.000
Rural (RC)		1.000	
Level of education			
No education (RC)		1.000	
Primary	0.599	1.820	0.000
Secondary	1.157	3.181	0.142
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Constant	0.340		
Model X ²	47.026		
Df	3		
N	1368 (unweighted)		

TABLE 3 BACKGROUND INFORMATION

Country	Human Development Index Rank	Life expectancy at birth 2001	Adult literacy rate (% age 15 and above)	Combined primary, secondary and tertiary gross enrolment ratio (%) 2000-2001	GDP per capita (PPP US\$) 2001
Ghana	129	57.7	72.7	46	2,250
Kenya	146	46.4	83.3	52	980
Nigeria	152	51.8	65.4	45	850
Tanzania	160	44.0	76.0	31	520
Sub-saharan Africa		46.5	62.4	44	1,831

Source: United Nations Development Programme 2003. Human Development Report 2003. Oxford University Press. Inc. New York, New York.