Extended Abstract

Title of research project: Trends and Determinants of comprehensive knowledge of HIV/AIDS among unmarried adolescents in Nigeria

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Background:

In a quest to meeting the sexual health needs of young people in Nigeria, the National agency for the Control of AIDS (NACA) established "My Question" database in 2005 with an integration of the web component in 2007. MyQuestion is a platform that allows young people to ask sexual and reproductive health (SRH) questions via text messages, email and voice calls. Study revealed that HIV/AIDS is the most commonly referenced sexual and reproductive health topic among young people in Nigeria which shows their eagerness to understand the subject of HIV that affects their wellbeing (Blanc *et al.* 2016). This programmatic intervention was deemed necessary as adolescents and young people bear 60% burden of new HIV infection in Nigeria (NACA, 2014). Despite, this strategic intervention, comprehensive knowledge of HIV/AIDS among this group is unacceptably low (Allen, et al. 2003; NACA, 2014). There is dearth of information and research on the trends and determinants of comprehensive knowledge of HIV after eleven years of establishment of My Question database.

Previous studies (Ochako *et al*. 2011; Gebregergish, 2015; Khanal, 2013; Oljira *et al.* 2013; Yadav *et al.* 2015) have shown that comprehensive knowledge of HIV/AIDS has a correlation with education, place of residence, wealth index, marital status, gender, age and religion. However, there is still limited information on community and state level factors that influence comprehensive knowledge of HIV. Also, none of these studies were conducted in West Africa let alone Nigeria. Hence, the need to consider a study in West Africa precisely Nigeria that will address this gap. Given that Nigeria is the largest HIV burden country in the world after South Africa (UNFPA, 2014).

Few studies addressing adolescent sexual health in Nigeria (Oginni *et al.* 2015; Okezie, *et al.* 2010; Oyedokun 2007) have only examined the determinants of unmet need for family planning services among adolescents with limited study on comprehensive knowledge of HIV/AIDS among adolescents who bear the greatest burden of HIV/AIDS in Nigeria. Therefore, this study uses an ecological framework to examine the trends and determinants of comprehensive knowledge of HIV/AIDS among unmarried adolescents in Nigeria. This is on the premise that comprehensive knowledge of HIV/AIDS arguably reduces social stigmatisation, leads to risk behaviour modification, increases contraceptive use, increases HIV testing and counselling, reduction in new HIV transmission and influence positively attitudinal change and behaviour related to HIV markedly (Coates *et al.* 2008; Parkers 2004; Teshome, 2016).

Methods: This study used data from the Nigeria Demographic Health Survey (NDHS) 2003, 2008 and 2013. The Demographic Health surveys are nationally-representative household surveys that provide up-to-date information on background characteristics of the respondents. Specifically, information amidst other issues are collected on respondents' awareness, knowledge and attitudes regarding HIV/AIDS. The target groups in the NDHS were women and men age 15-49 in randomly selected households across Nigeria. The study focuses on unmarried adolescents aged 15-19 with a pooled sample size of 6664 and 11591 for both male and female participants. The study used individual data from the 2003, 2008 and 2013 to provide trends in comprehensive knowledge of HIV and AIDS among unmarried adolescent in Nigeria and uses a Bivariate and multilevel logistic regression analysis to determine individual, community and state level factors that influence comprehensive knowledge of HIV and AIDS among unmarried adolescents. The multilevel analysis was undertaken in MLwiN.

Results

Preliminary results based on bivariate analysis show a significant increase in comprehensive knowledge of HIV among unmarried adolescents from 19.3% to 30.7% and 18.8% to 35.6% between 2003 and 2008 for female and male adolescents respectively (Table1). There was no appreciable increase of comprehensive

knowledge of HIV for both male and female adolescent since 2008. The proportion of adolescent female aged 15-19 with comprehensive knowledge increased by 0.3% from 2008 to 2013 while their male counterparts declined by 0.5%. The analysis of the pooled dataset revealed that adolescent males have more comprehensive knowledge of HIV than their female counterparts. The bivariate analysis shows Comprehensive knowledge of HIV among adolescent female is highest in South-South at 34.5% and lowest in South-West at 27.9% (p<0.001). While their male counterpart is highest in North-West and lowest in North-Central at 42.6% and 26.6% respectively. As expected female adolescent in Urban area have more comprehensive knowledge of HIV (33%) than their rural counterparts (29.8%). The was sharp declined in comprehensive knowledge of HIV among male and female adolescents who are catholic as compared to other Christians and Islam (Table 2). Comprehensive knowledge of HIV increases with increase in level of education and wealth index in both groups (p<0.001). Male and female adolescents who have been tested for HIV have more comprehensive knowledge of HIV and AIDS (Table 2 & 3). There is no significance between Knowing someone who has, or is suspected of having HIV with having comprehensive knowledge of HIV.

Further analysis based on multilevel modelling will examine the role of contextual community and state level factors in influencing comprehensive knowledge of HIV/AIDS among adolescents.

Policy relevance/Recommendation: The findings of this study would assist the National Agency for the Control of AIDS (NACA) to consider other pragmatic approaches to improve adolescent and young people comprehensive knowledge of HIV. This should be integrated with "My Question platform". The evidence from the study shows that My Question database alone would not produce the appreciable outcome for comprehensive knowledge of HIV among young people in Nigeria. The Family Life and HIV education in Nigeria should be reconsidered with strong backing of all key public health actors at the national level.

Key word: Determinants, Comprehensive knowledge of HIV/AIDS, adolescents, Nigeria

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Appendix

Table 1: Trends in Percentage of adolescents with comprehensive knowledge of HIV and AIDS

Time scale	Male (%)	No of Cases	Female (%)	No of Cases
2003	18.8	399	19.3	3494
2008	35.6	2210	30.7	3951
2013	35.1	3262	31.0	5278

Table 2: Percentage distribution of comprehensive knowledge of HIV among female adolescents by demographic factors

Characteristics		2003 (%)	No of cases	2008 (%)	No of cases	2013 (%)	No of cases
Region							
	North Central	13.4	179	32.9	736	38.0	908
	North East	34.9	172	25.5	494	38.7	617
	North West	20.5	336	34.5	293	32.6	768
	South East	13.7	844	27.0	700	12.9	830
	South West	27.2	1104	24.6	874	30.9	1000
	South South	15.1	850	39.8	854	33.4	1155
Type of place of residence							

Characteristics		2003 (%)	No of cases	2008 (%)	No of cases	2013 (%)	No of cases
	Urban	29.9	1717	36.1	1586	32.8	2754
	Rural	17.2	1778	27.1	2365	29.0	2524
Educational level							
	No education	10.3	146	17.0	171	20.6	350
	Primary	10.9	549	18.7	540	25.1	514
	Secondary	21.0	2704	33.1	3172	32.0	4288
	Tertiary	57.3	96	51.5	68	50.0	126
Religion							
	Catholic	18.1	829	27.1	238	23.5	762
	Islam	24.3	834	27.1	947	33.3	1693
	Other Christians	16.0	1083	33.0	2333	31.7	2787
Wealth Index							
	Poorest	14.9	346	18.2	363	20.7	333
	Poorer	11.3	408	21.8	619	24.0	734
	Middle	18.0	602	27.4	908	29.2	1275
	Richer	19.7	824	33.9	1058	31.9	1494
	Richest	25.7	1225	40.3	1003	37.7	1442
Knows someone who has died or has AIDS							
	Yes	19.0	1079	29.6	423	36.8	690
	No	20.7	2385	30.8	3505	30.2	4556
Ever been tested for HIV							
	Yes	29.1	105	49.5	96	38.3	462
	No	19.9	3390	29.7	3744	30.3	4811

Table 3: Percentage distribution of comprehensive knowledge of HIV among male adolescents by demographic factors

Characteristics		2003 (%)	No of cases	2008 (%)	No of cases	2013 (%)	No of cases
Region							
	North Central	12.5	72	38	492	16.8	453
	North East	12.2	49	29.1	337	28.5	498
	North West	12.5	88	38.3	370	48.2	774

	South East	10.7	56	34.7	225	32.1	396
	South West	40.8	76	33.2	385	30.7	508
	South South	20.7	58	38.2	411	43.0	633
Type of place of residence						
	Urban	21.5	177	42.3	770	39.1	1431
	Rural	16.7	222	31.9	1440	32.0	1831
Educational level						
	No education	4.0	32	12.1	207	27.5	386
	Primary	10.3	87	23.8	357	27.7	386
	Secondary	23.2	276	40.7	1618	37.0	2441
	Tertiary	50.0	4	60.7	28	61.0	49
Religion						
	Catholic	13.8	80	38.4	302	32.5	435
	Islam	19.7	173	31.1	849	35.2	1426
	Other Christians	26.7	86	38.3	1042	36.2	1378
Wealth Index						
	Poorest	8.7	69	21.7	327	26.5	461
	Poorer	9.0	67	28.1	409	33.7	526
	Middle	17.5	80	35.5	493	33.1	768
	Richer	20.0	100	41.6	570	36.5	825
	Richest	34.9	83	45.7	411	42.8	682
Knows someone who has died or has AIDS						
	Yes	14.8	42	35.4	398	35.0	488
	No	21.0	257	35.6	1800	35.0	2751
Ever been tested for HIV						
	Yes	31.6	19	51.0	102	42.3	168
	No	18.2	380	35.0	2108	34.7	3094