
Adolescent Fertility Is Lower than Expected in Rural Areas: Results from 10 African HDSS

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Adolescent fertility in Sub-Saharan Africa

- Has gone down over the last 50 years, like all world regions
 - Remains strikingly higher in sub-Saharan Africa
- ⇒ 104 births per 1000 women aged 15-19 in 2015-2019 (WPP 2019)



Data to measure adolescent fertility

- Demographic and Health Surveys (DHS): main source of data on ABR
 - Quality deemed acceptable to excellent, and improving (Pullum and Becker 2014)
- ⇒ If anything, biases all tend to underestimate fertility rates (Schoumaker 2014)



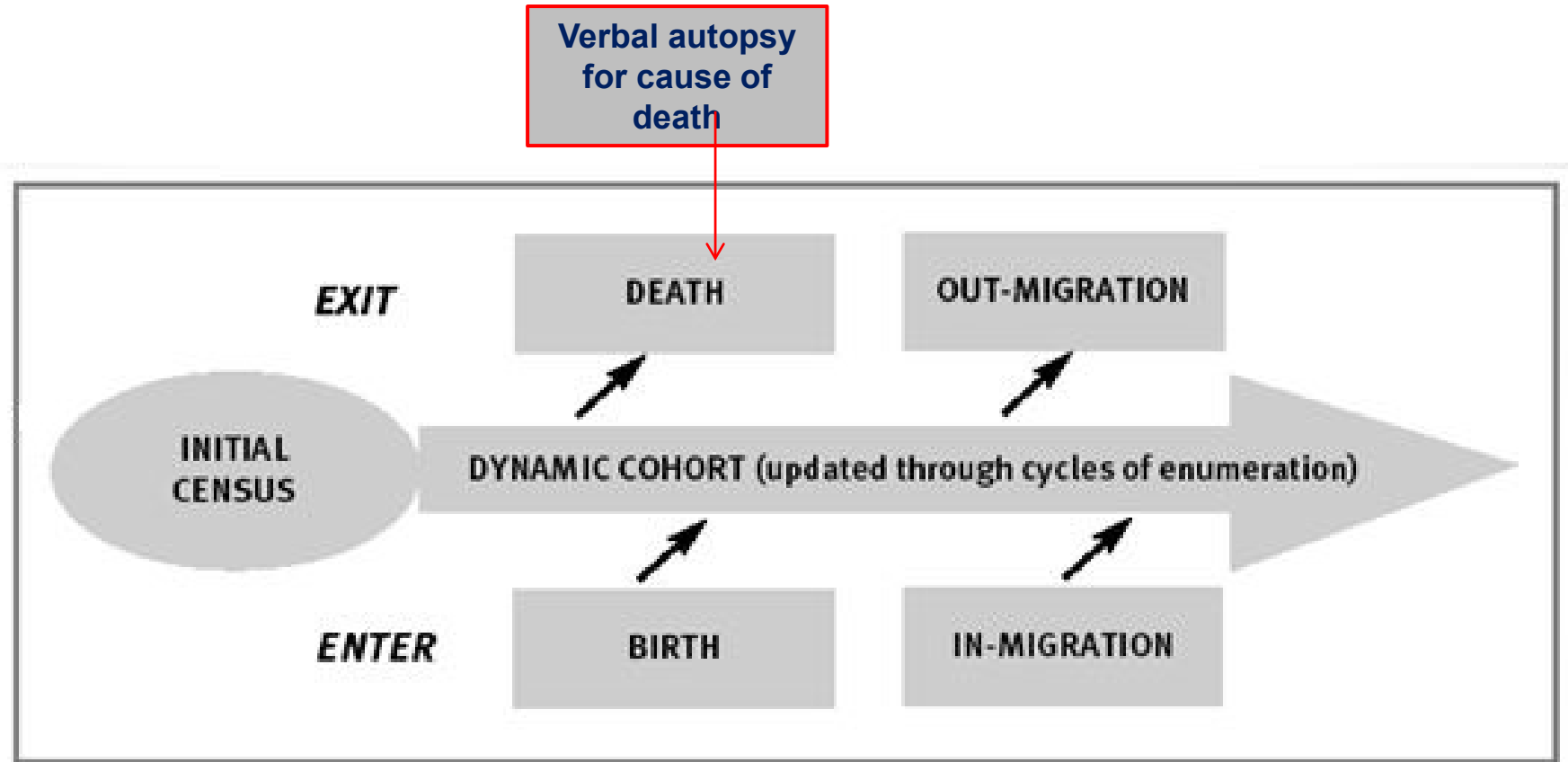
INDEPTH sites: an alternative source of data

- The INDEPTH network: 52 Health and Demographic Surveillance Systems HDSS, 39 in SSA (www.indepth-network.org)
- HDSS sites usually outperform other local sources of data, used as a benchmark (Garenne et al. 2016) (Helleringer et al, 2014)



HDSS Data: Prospective Monitoring

RURAL - URBAN



Measure characteristics of environment or household members (e.g. SES, vaccines, HIV, nutrition)

Capturing episodes of disease and hospital admission; clinical, molecular-genomic level



Study objective: accuracy of HDSS ABR and access to data

1) Concordance with DHS?.....

⇒ two high quality sources

..... Or lower ABR in HDSS ?

⇒ Senegalese HDSS data compared to census (Ndiaye et al. 2018)

2) How easy is it to obtain and work with HDSS data?



Participants at workshop in Accra, May 2-6 2016



- 18 HDSSs represented from 8 African countries; West & East equally
- Population covered: ~1.2 million: from 8,500 (Mlomp) to 160,000 (Navrongo)
- TFR: ranging from replacement level (Nairobi) to ~6 for Kyamulibwa, Karonga & Niakhar



INDEPTH Network

Better Health Information for Better Health Policy

⇒ On the model of "cause of death" (Streatfield et al. 2014)

10 HDSS sites in six African countries, and last DHS in their region

	Starting year	Population 2014	Location	DHS year and region
Senegal				2014
Bandafassi	1970	13 000	rural	Kedougou
Niakhar	1962	43 000	rural	Fatick
Mlomp	1985	8 200	rural	Ziguinchor
Burkina Faso				2010
Nouna	1992	93 000	rural	Bouche de Mouhoun
Nanoro	2009	54 780	rural	Center West
Ouagadougou	2009	82 387	urban	Ouagadougou
Côte d'Ivoire				2011-12
Taabo	2008	45 766	rural	Sud sans Abijan
Ethiopia				2011
Kilite	2009	65 848	rural	Tigray
Kenya				2014
Nairobi	2003	61 695	urban	Nairobi
Malawi				2010
Karonga	2002-04	35 730	rural	Northern



Comparing ABR in HDSS and DHS

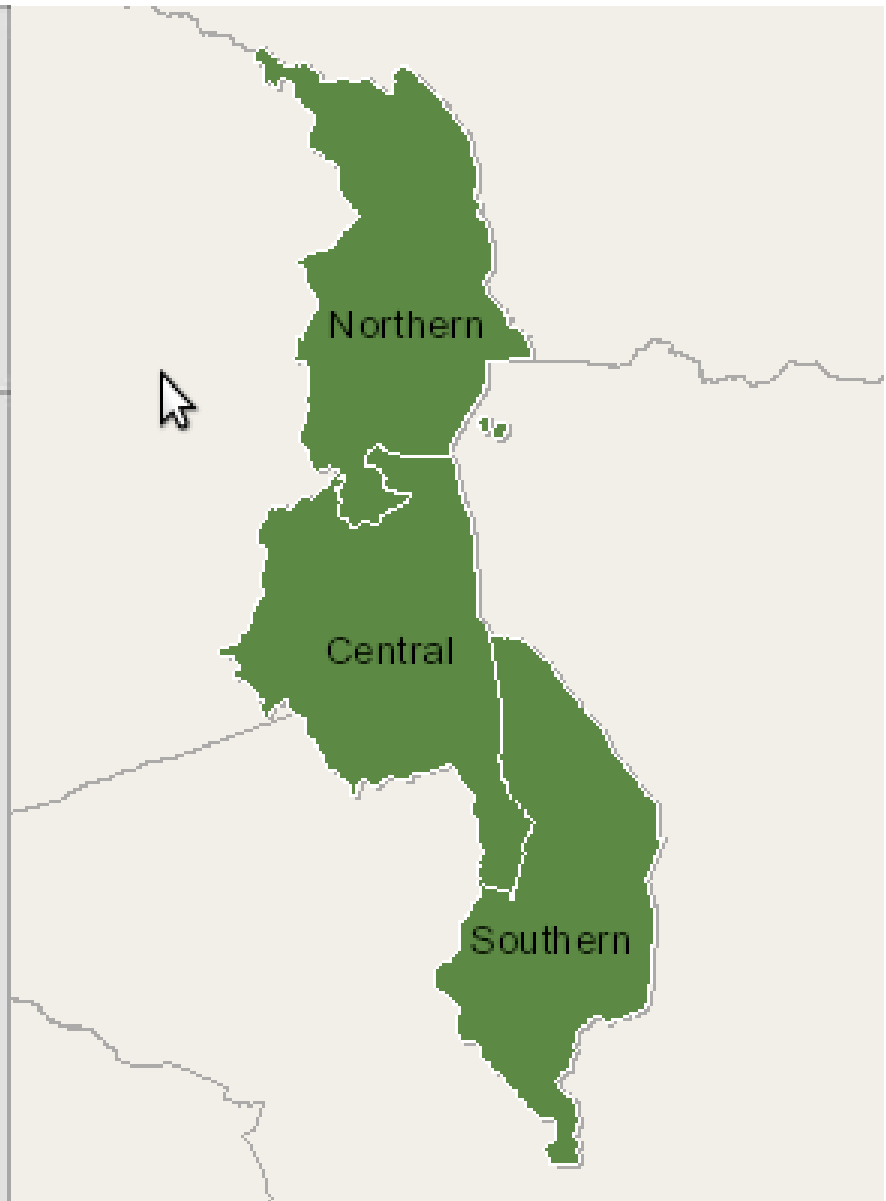
- HDSS cover small areas
- HDSS often (but not always) located in poorer, more remote parts of regions



Karonga HDSS



DHS regions in Malawi



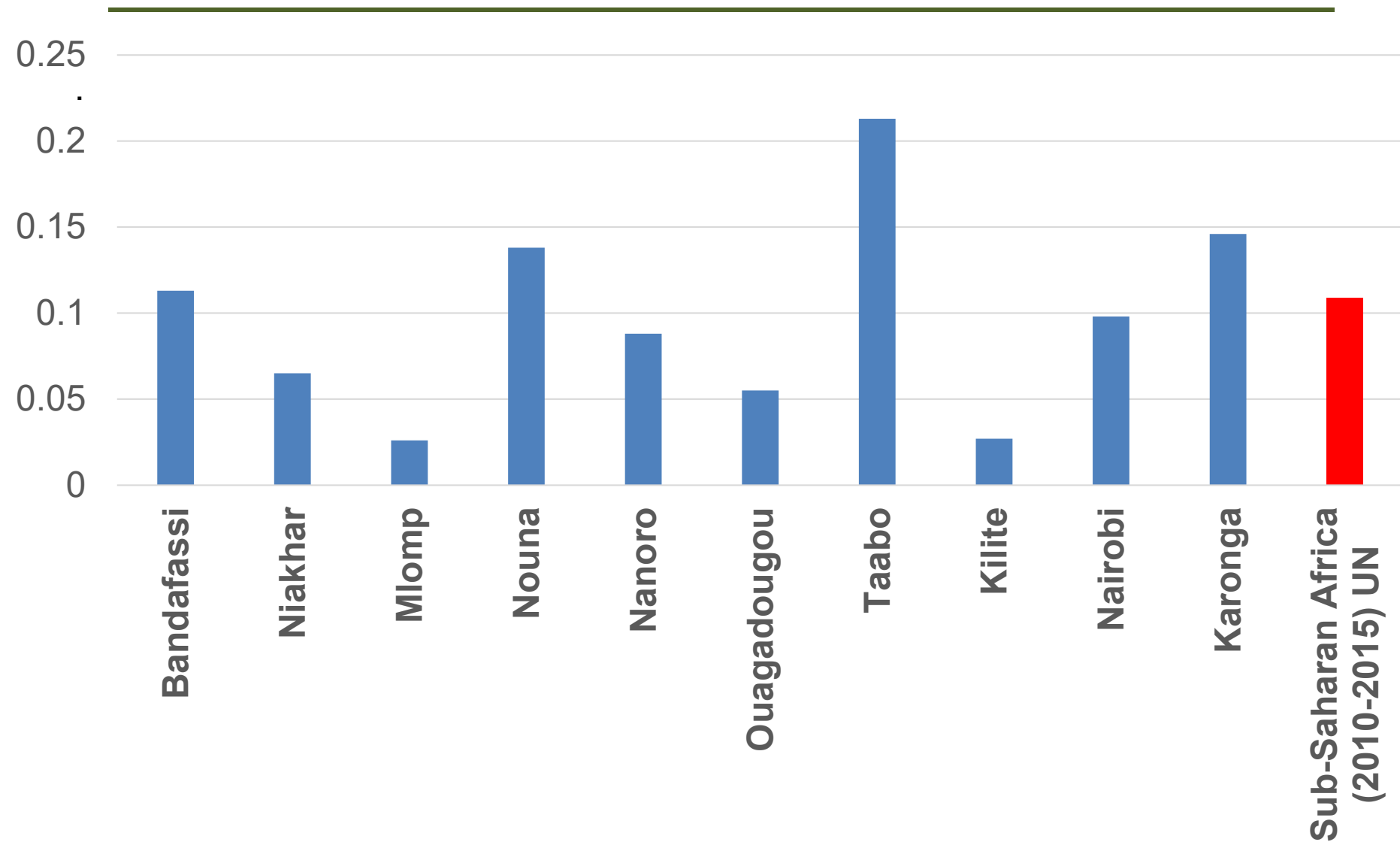
Data and methods

- Year DHS survey -2 for comparisons
- HDSS ABRs standardized by education in DHS region
- DHS ABRs for the 10 regions (rural / urban) with tfr2 (Schoumaker 2013); weights

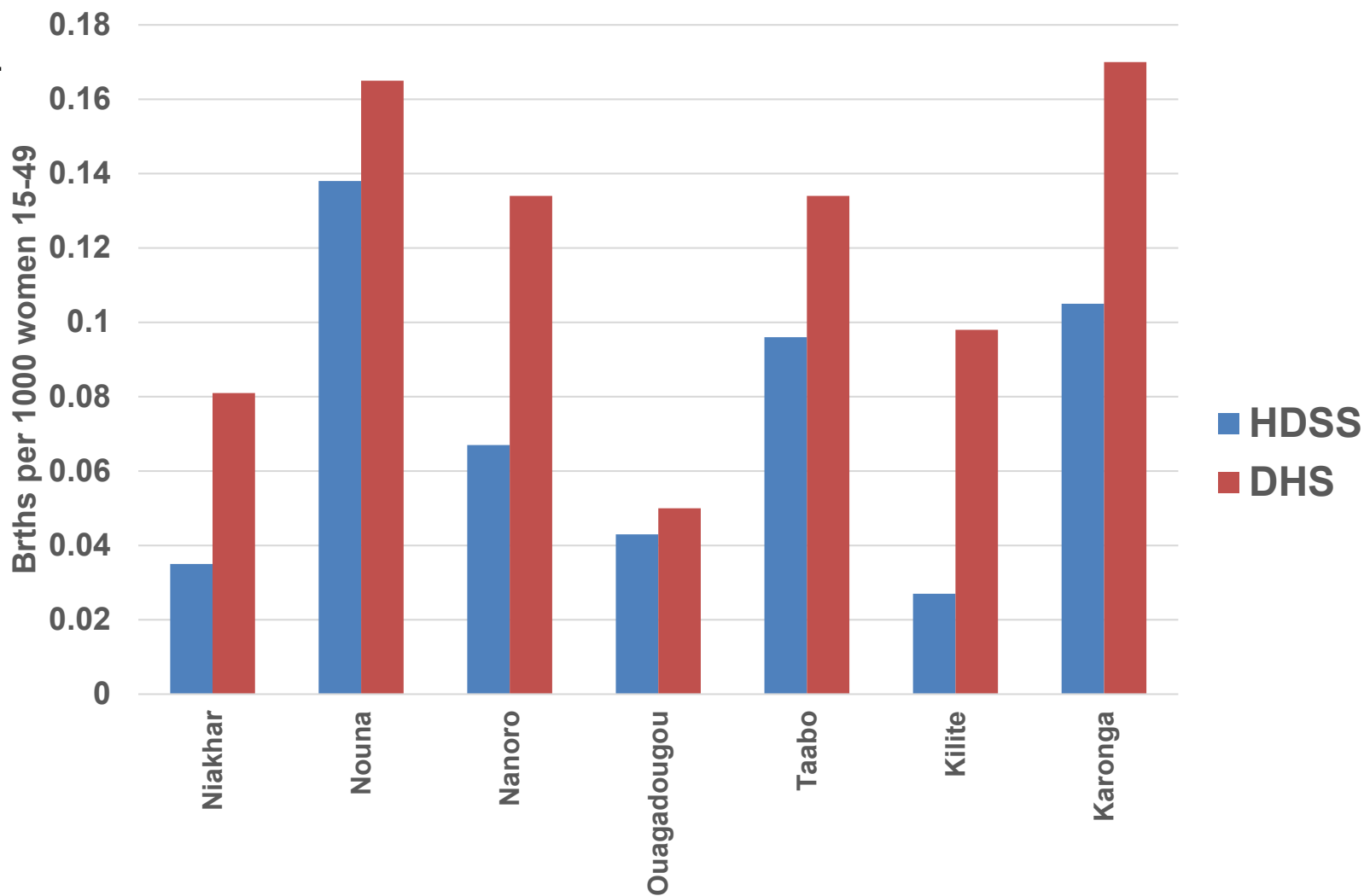
⇒ Limitations: not on the same area / period. Only a first indication



Adolescent birth rate in 10 HDSS sites in SSA, 2009-2012



ABR in HDSS sites and DHS region, SSA, 2009-2012, standardizing for education / residence



Much lower ABR in rural HDSS

- One exception: the urban site (Ouaga)
- ABR 44% lower in rural HDSS than in the corresponding DHS region, after standardizing by education / residence

⇒ why this mismatch, and why only in rural sites?



Further investigations in two sites: highly mobile rural youth

TABLE 3 Fertility rates of adolescent women who are visitors, present residents and absent resident in the Niakhar HDSS (2012) and the Ouagadougou HDSS (2009)

Women aged 15–19	Niakhar HDSS (2012)				Ouagadougou HDSS (2009)			
	Visitors*	Present resident	Absent resident**	Total	Visitors [#]	Resident	Absent resident ^{##}	Total
Distribution January 1st	-	92.0%	8.0%	100%	5.6%	84.7%	9.7%	100%
		2081	182	2263	283	4284	488	5055
Distribution July 1st	-	82.5%	17.5%	100%	20.3%	69.3%	10.4%	100%
		1840	389	2229	1169	3988	597	5754
ABR	-	93.3	18.01	58.57	5.62	4.93	5.54	

*Not monitored in Niakhar.

** Who were gone for more than one month that year and returned # who have resided for less than 6 months ## gone for less than six month and returned.

Only 7%
in DHS
region

Only 2%
in DHS
region



Conclusion

- Same definition of residence
- Temporarily absent residents (< 6 months) better captured in HDSS
 - ⇒ Many young women leave temporarily in rural areas
- Non mobile youth have high fertility rates
- Cross-sectional data collection seem to over estimate rural ABR and rural-urban differences
 - ⇒ Limitation of the comparison: needs to be confirmed
 - ⇒ No impact on national ABR



Conclusion

- Many HDSS sites do not collect sociodemographic variables routinely
⇒ at the moment, limited application for fertility analysis
- Workshop format: a lukewarm success
- Great places to test interventions to improve on the SRH of young women!



Thank you for your attention!

Rossier Clémentine et al. (2020) “Adolescent fertility is lower than expected in rural areas: results from 10 African HDSS” *Studies in Family Planning* 51(2) 177-192

