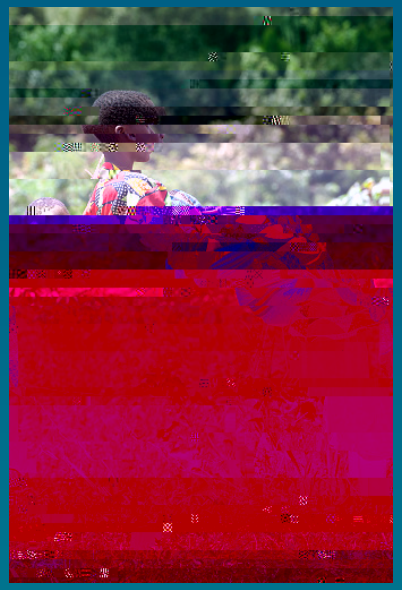
How reliable are reports of early adolescent pregnancy in Demographic and Health Surveys?



UN Population Division Expert Group meeting on the evaluation of adolescent fertility data and estimates 26th 27th October 2020

Dr Sarah Neal Department of Demography and Social Statistics University of Southampton

S.Neal@soton.ac.uk

Plan for presentation

- Introduction and a few reflections on how and why we measure early adolescent fertility
- Findings from 2015 paper on consistency of reporting of early adolescent SRH events from DHS
- Suggestions of what this means for estimating early adolescent motherhood

Why focus on early adolescents?

- Omitted under 15-19 year indicator
- Evidence of poorer health outcomes for younger adolescents for both maternal and child health compared to older adolescents, as well as ? social / economic outcomes
- Most concentrated amongst the poorest and rural populations (Neal et al. 2020)
- In some regions women who give birth in early adolescence drive overall adolescent fertility rates because of repeat births (see Garbett et al. 2020).
- May be an indication of abuse and coercion, and violations of rights

What do we mean by very early adolescent births?

-

How should we measure it?

- Fertility rate 10-14 years and 15-19 years:

Many of the denominator for the 10-14 year group will not be exposed to risk, so rate will be artificially low

Falls in ASFR 15-19 years may be driven by reductions in higher order births

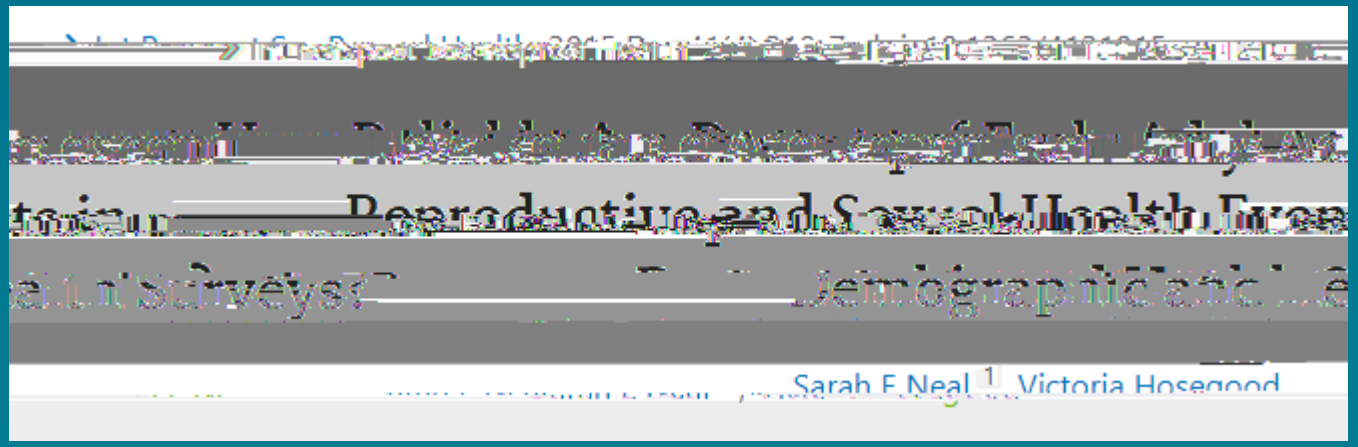
- % births before 15 years / 20 years avoid this

Other measures:

- % of all births <15 / <20 (Benova et al. 2018)
- Average number of births per woman in adolescence (Garbett et al. 2020)

Aim of the study

- To examine whether there is consistency across surveys in reports of age of sexual debut, marriage, and first birth when they occur during adolescence, with particular focus on very early adolescent events (under 15/16 years)



Methodology (cont)

- DHS does not observe the same individuals in different surveys but it is possible to examine the consistency of estimates from women at different ages in the same birth cohort using subsequent surveys.
- i.e. Women aged 15-19 in a survey in 2000 will be from the same birth cohort as those aged 20-24 in a survey in 2005, and estimates should be broadly comparable.

Table 1: Proportion of women who reported 1st birth by age 15, 16, and 19 years in the 15-19* year age group in the 1st DHS survey (column 2) and the 20-24 year age group 5 years later: Uganda and Senegal

1st birth			
Country	**15-19* cohort**	**20-24 cohort**	**% difference between cohorts**
Uganda	**2006**	**2011**	
<15	1.5	6.6	**371**
<16	4.6	12.3	**167**
<19	41.3	46.1	**12**
Senegal	**2005**	**2010/11**	
<15	2	5.8	**190**
<16	5.7	9.3	**63**
<19	30.6	28.5	**-7**

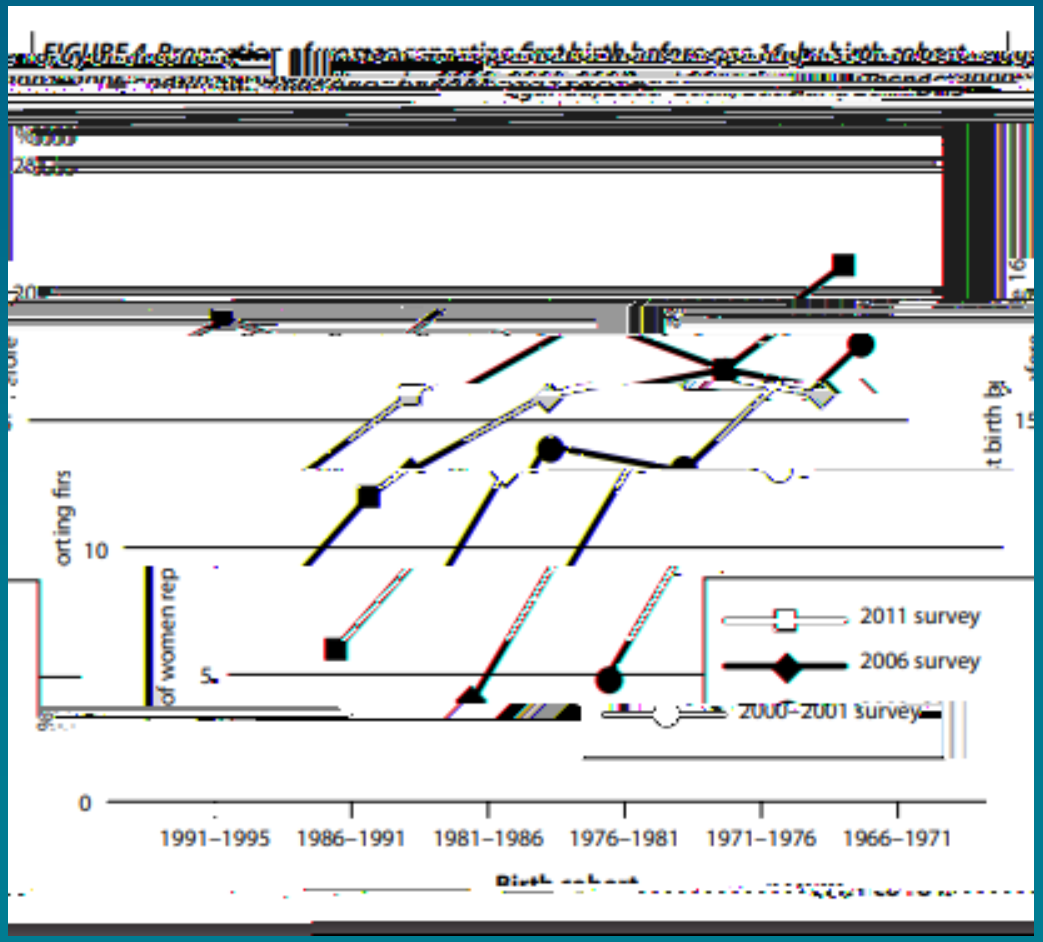
*For age group 15-19 years only those exposed to the full time period of interest are included

Summary of initial findings

- For five of the 6 SSA countries and one of the LAC countries estimates of proportion of women giving birth before 15/16 are marked lower for cohort 15-19 than the corresponding 20-24 cohort (at least 50% lower).
- Difference much less marked for births under 19 years overall– suggests that may be a result of different distribution of reported ages within <20 years “envelope” rather than omission of births

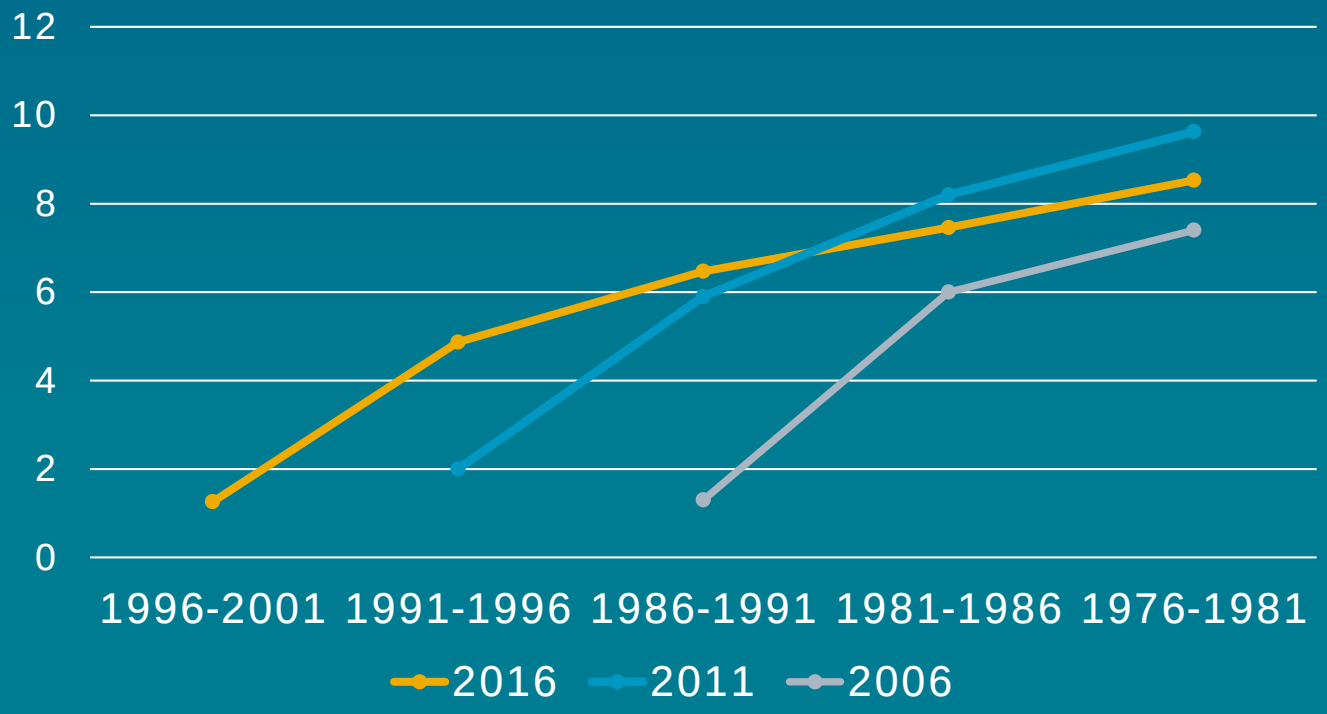
What do comparisons between surveys show us?

- **Fig 3. Trends in % women reporting first birth before aged 16 years by birth cohort for two consecutive DHS: Uganda**



What do comparisons between surveys show us?

Fig 4. Trends in % women reporting first birth before aged 15 years by birth cohort for three consecutive DHS: Uganda



Possible explanation

- Age overstatement of married adolescents / adolescent mothers at time of survey response
- Has been identified as an issue in a number of previous studies e.g. Gage (1995), Hussein (2002) Coale (1988).
- Probably linked to social desirability bias

Implications

- Use of data from respondents aged 15-19 may result in underestimation in some countries. Use of data from 20-24 years may produce more reliable results.
- Use of single surveys to assess trends (using different age cohorts) may lead to false assumptions of reductions in recent years.

Conclusion

- There is evidence of inconsistency in reporting first birth at a very young age, with women aged 15-19 less likely to report these events than women aged 20-24 from corresponding birth cohorts in some countries
- We tentatively suggest that (at least in some countries) this is more likely to be a result of under-reporting in women aged 15-19 years
- Further research is needed in this area, and measures should be taken to improve quality of reproductive health data in surveys.

References

- Dixon-Mueller R. How young is "too young"? Comparative perspectives on adolescent sexual, marital, and reproductive transitions. Stud Fam Plann. 2008 Dec;39(4):247-62.
- Neal S, Channon AA, Chintsanya J (2018) The impact of young maternal age at birth on neonatal mortality: Evidence from 45 low and middle income countries. PLoS ONE 13(5): e0195731. https://doi.org/10.1371/journal.pone.0195731
- Phipps MG, Sowers M. Defining early adolescent childbearing. Am J Public Health. 2002;92(1):125-128. doi:10.2105/ajph.92.1.125
- Garbett A., Perelli-Harris B and Neal S (2020) The untold story of fifty years of adolescent fertility in West Africa:A cohort perspective on the quantum, timing, and spacing of adolescent childbearing. Population and Development Review (in press).
- Benova L, Neal S, Radovich EG, et al. Using three indicators to understand the parity-specific contribution of adolescent childbearing to all births. BMJ Global Health 2018;**3:**e001059.
- Gage AJ, An Assessment of the Quality of Data on Age at First Union, First Birth, and First Sexual Intercourse for Phase II of the Demographic and Health Surveys Program, Calverton, MD, USA: Macro International, 1995.
- Hussein S, An exploration of nuptuality patterns in Egypt and the Maghreb countries, unpublished dissertation, London: University of London, 2002,
- Coale A, A reassessment of fertility trends in Egypt, taking account of the Egyptian fertility survey, in: Awad M and Samir F, eds., Demographic Responses to Modernization, Cairo: Central Agency for Mobilization and Public Statistics, 1988, pp. 21–43.