TEENAGE FERTILITY IN SOUTH AFRICA

By

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ABSTRACT

Various studies have identified the problems associated with teenage fertility and include school drop-out or interrupted education, vulnerability to criminal activity, social ostracism, child neglect and abandonment, school adjustment problems for children born to teenage mothers, poverty, and repeat pregnancies before the age of twenty. Utilising the 2016 South Africa Demographic and Health Survey and using life table method to deal with censoring and selectivity, this study estimated the magnitudes of teenage fertility in South Africa. The results indicate that of the women who were 15-49 years old in 2016, about 31% had a first birth after attaining the age of 13 years. The results further imply that of the women who were 15-49 years old in 2016 who had their first birth between age 13 years and exact age 19 years, approximately 92% of their first births resulted from statutory rape. The provincial comparison indicated that first births among teenagers is highly prevalent across the nine provinces of South Africa. The cumulative percentage as of 2016 ranged from about 31% in the North-West to 38% in KwaZulu-Natal among women who were 15- 49 years old as of 2016. Punishment for statutory rape may be up to life imprisonment in South Africa, yet there is a high level of first births by teenagers due to statutory rape. This is probably partly due to failure by victims to report offenders for various reasons which may be fear, male-female power imbalances, economic dependence, cultural constraints. A re-focus on some of the discourse about teenage fertility on the responsibilities of parents, guardians or relatives is necessary to mitigate the high level of teenage fertility. There is little the judiciary can do if offenders are not reported.

INTRODUCTION

The Problem

Teenage fertility refers to births by women between the age of 13 and 19 years. This group is part of wider age group usually referred to as adolescents. The World Health Organisation defines adolescents as persons in the age group 10-19 years old. A summary of the problems associated with

teenage fertility in South Africa by various studies have been outlined by Udjo (2014). These include school drop-out or interrupted education, vulnerability to criminal activity, social ostracism, child neglect and abandonment, school adjustment problems for children born to teenage mothers, poverty, and repeat pregnancies before the age of twenty (Cunningham and Boult (1996). Gustafsson and Worku (2007) also found that teenage childbearing in South Africa is negatively correlated with completing high school. According to Macleod and Tracey (2009), about three-quarters of teenage learners in South Africa who conceive leave school at the time of the pregnancy though about a third and half of these return to school. In view of the above, there are concerns that the social grant in South Africa may be encouraging teenage pregnancy (Kesho Consulting and Business Solutions, 2006). However, Udjo's (2014) study did not find empirical evidence in support of the claim. Specifically, Udjo (2014) observed that teenagers who received the child support grant were significantly less likely to be pregnant with another child compared with teenagers who did not receive the child support grant.

Objective

The specific objective of this study was to estimate the magnitudes of teenage fertility in South Africa.

DATA

The analysis was based on the 2016 South Africa Demographic and Health Survey (SADHS). The 2016 SADHS employed a two-stage stratified sampling design: sampling of area units (primary sampling units (PSUs)) in a single stage with probability proportional to size. This was followed by listing and selection of households to yield around 30 female respondents per area unit at the second stage. The sampling design was expected to yield a sample size of 15,000 households nationally. See Statistics South Africa, 2015.

The realised sample after data processing and cleaning comprised the following 11,083 households and 8,514 women of reproductive age (i.e., 15-49 years) [see NDoH, Stats SA, SAMRC, and ICF, 2019]. I observed certain limitations in the sampling design and weighting of the data. There were issues that may have had potential effect on the weights in the data. Firstly, the universe of the study (South Africa's population) appeared overestimated by Statistics South Africa in its mid-year estimates (Udjo, 2017). The size of the population is a consideration and input in sample size estimation for a survey. Secondly, response rates were taken into consideration in computing the design weights. However,

the response rates may have been exaggerated in the 2016 SADHS because of the ambiguous definition of "out-of-scope" in the survey. Out-of-scope was initially defined as the non-institutional enumeration areas (EAs) and EAs that had zero households at the time of the 2011 census. EAs with small household counts were also excluded from the sampling frame. However, at the weighting stage, households (that were originally, in-scope) where households were not found to be enumerated were re-classified as out-of-scope. Technically this should reduce the size of the denominator in the response rate computation thus exaggerating the households' response rates. Consequently, this should bias the sample weights estimates.

Rutstein and Rojas (2006) have cautioned that although the use of sample weights is appropriate when representative levels of statistics are desired, sample weights bias estimates of confidence intervals. This is because in most statistical packages, the number of weighted cases is taken to produce the confidence interval instead of the true number of observations. In view of the above, the analysis presented in this study was based on the unweighted data. In the 2016 SADHS, the first stage selection of the primary sampling units was done using probability proportional to size (Statistics South Africa 2015), results based on unweighted data should therefore not be biased but might be different from results using weighted data largely due to the reasons noted above. The analysis was based on part of the birth histories – birth order (i.e. first births) - reported by women. I did secondary data processing before the analysis could proceed. The women's and children's data were in two separate files in the rectangular flat files that I received. Splitting the data into separate files could have been avoided if the data were created from CSPRO. Since the unit of analysis was women, I had to write the relevant variables on first births from the children's file on to the women's files but before this, duplicate cases had to be identified and eliminated from both files. A data entry program in CSPRO should usually prohibit accepting duplicate cases in the CSPRO data base if CSPRO is used as the data management system.

METHODS

Two problems in estimating the magnitudes of teenage pregnancy from cross-sectional survey data include censoring and selectivity. Censoring has to do with the fact that although some of the younger women may not have had any birth as at the time of the survey, could do so after the survey. Thus, some women's experience was censored at the date of the survey. Results based on computations of magnitudes of teenage fertility without taking into consideration censoring would be difficult to

interpret. Selectivity has to do with the fact that teenagers who have had a birth as at the date of the survey may be different on average from other women in the population in certain characteristics.

Life table method can be used in the analysis to deal with censoring, and by introducing appropriate controls can also deal with selectivity. Life table method is a tool commonly used in the analysis of mortality but can be applied in the analysis of teenage fertility. In the application of the life table method, women who did not experience teenage fertility after a certain length of exposure are treated as survivors. The construction of life tables is described in various demographic text books. See for example, Pressat (1972), Preston et al (2001). The application of life table method to birth histories is analogous to estimating parity progression ratios. However, the current application was confined to progression to first birth only. A full description of the method has been provided by Rodirguez and Hobcraft (1980).

In the current application, the starting point of women moving to have a first birth was age defined as 13 years. All women aged 15 – 49 years old at the time of the survey were included in the analysis. I computed an exposure variable indicating the duration of exposure and termination status. The duration of exposure for each of the women who had never had a birth i.e. status terminated by the survey, was computed as the year of the survey minus the year of birth of the woman. For women whose termination status was the birth of their first birth, the exposure period was computed as the woman's current age minus the woman's age at first birth. Age at first birth was derived as year of birth of the first birth minus the year of birth of the woman. In life table terminology, $1 - l_{(x)}$ denotes the birth function, B_x (borrowing from Rodirguez and Hobcraft,1980), the cumulative proportion of women having a first birth by a certain duration. In the current application, I employed B_{13}, B_{15} and B_{19}, the cumulative proportion of women who had a first birth after attaining age 13, within two and five years respectively after age 13 years. The controls introduced in the analysis were relative age to control for age at first birth, province (for provincial comparison). Although period was also introduced as control (to examine trend), the number of cases were too few rendering the results meaningless hence not presented.

Certain limitations that could produce biases in the results need to be noted. These limitations relate to the nature of the data utilised. The accuracy of the computed duration of exposure depends on the accuracy of the reported dates in the data. Errors in the reporting of the year of birth of women as well as year of birth of first births may bias the derived age at first birth. This in turn could bias the

estimates produced by the procedure. To minimise the biases, negative durations of exposure as well as improbable age at first birth were excluded from the analysis by assuming that women rarely have a first birth before the age of 13 years. In practice, some younger women do have children below the age of 13 years.

RESULTS

The results in Table 1 indicate that overall, of the women aged 15-49 in 2016, approximately 31% (0.305 * 100) had a first birth after attaining the age of 13 years. This means that women aged 15-49 years at the time of the survey contributed approximately 31% to the B_{13} value. Another way of interpreting this figure is that approximately 31% of the women aged 15-49 years in 2016 who had a birth after they attainted the age of 13 years was due to statutory rape. The legal age of consent in South Africa is 16 years. See https://www.ageofconsent.net/world/south-africa

Table 1: Life table Probabilities of having a first Birt after attaining Age 13 *(B_{13})*, within 2 years (B_{15}) and 5 years (B_{19}) after age 13 years: Women aged 15 -49 years in 2016.

Measure	Life table Probability
B_{13}	0.305 *(175)*
SE	0.006
B_{15}	0.322 *(155)*
SE	0.006
B_{19}	0.351 *(158)*
SE	0.007

Source: Author's Computations from 2016 SADHS
SE = Standard error. Number of valid cases in the unweighted sample in parenthesis

Of the women who aged 15-19 years at the time of the survey, about 25% of them had their first birth after attaining age 13 years and 28% of them had their first birth within five years after age 13 years (Table 2).

Table 2: Life table Probabilities of having a first Birth after attaining Age 13 *(B_{13})*, within 2 years (B_{15}) and 5 years (B_{19}) after age 13 years controlling for age at first birth: Age at first birth = 15-19 years

Measure	Life table Probability
B_{13}	0.247
SE	0.009
B_{15}	0.258
SE	0.009
B_{19}	0.279
SE	0.010

Source: Author's Computations from 2016 SADHS
SE = Standard error. Number of valid cases in the unweighted sample in parenthesis

At provincial levels, the results indicate that of the women aged 15-49 in 2016 Mpumalanga had the highest percentage (35%) of women who had their first birth when they were still below the legal age of consent and the Western Cape the lowest percentage (29%) compared with other provinces. Overall, however, KwaZulu Natal had the highest percentage (38%) of first births by teenagers and the North-West, the lowest percentage (31%) compared with other provinces (Table 3).

Table 3. Life table Probabilities of having a first Birth after attaining Age 13 *(B_{13})*, within 2 years (B_{15}) and 5 years (B_{19}) after age 13 years by province.

Province	B_{13}	B_{15}	B_{19}
Eastern Cape	0.301	0.311	0.350
Free State	0.322	0.333	0.374
Gauteng	0.317	0.340	0.368
KwaZulu-Natal	0.330	0.347	0.379
Limpopo	0.286	0.300	0.317
Mpumalanga	0.331	0.349	0.367
North West	0.283	0.297	0.313
Northern Cape	0.296	0.314	0.356
Western Cape	0.254	0.286	0.321

Source: Author's Computations from 2016 SADHS

DISCUSSION AND CONCLUSION

The results from this study indicate that teenage first birth is a highly prevalent phenomenon across the nine provinces of South Africa. The cumulative percentage ranged from 31% in the North-West to

38% in KwaZulu-Natal among women aged 15- 49 in 2016. What is also disturbing is that the cumulative percentage of women aged 15-49 in 2016 who had their first birth between age 13 years and exact age 19 years indicate that about 92% of the first births resulted from statutory rape nationally. See Table 1: 0.322/0.351 = 0.917 or 0.917 * 100, approximately 92%. This suggests that although there is legal protection of women from statutory rape in theory, this is not the case in practice. Offenders in statutory rape are easily identifiable since the victims should be able to point them out if there is willingness on the side of the victims to do so.

Although statutory rape is treated as a serious crime world-wide, the punishment imposed varies from country to country. Whereas some countries impose prison sentences some impose the death penalty or life imprisonment as in Bangladesh. In South Africa, punishment for statutory rape may be up to life imprisonment, yet high levels of first births by teenagers are due to statutory rape. This is probably partly due to failure by victims to report offenders for various reasons such as fear, male-female power imbalances, economic dependence, cultural constraints. The responsibility to report offenders lies on the victims as well as on their relatives. This in my view, should be part of the focus in the rhetorical discourse in mitigating statutory rape. Victims may be able to conceal statutory rape but can rarely be concealed from relatives if it results in pregnancy. As the pregnancy grows, relatives are bound to notice. Successful judicial prosecution of statutory rape offenders cannot happen if offenders are not reported.

It is pertinent to note that of the females aged 15-19 at the time of the 2016 SADHS who had ever had a birth, 22% of them reported they had never used any form of contraception, about 13% of them had their first intercourse at the age of 14 years and 32% of them at the age of 15 years. The reality is that at some point, teenagers would explore their sexuality. It is practically impossible that parents or guardians would be with their children 24 hours a day. However, if sex education starts at home for most of the population, which should be the case in my view, might mitigate some of the teenage fertility.

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REFERENCES

Gustafsson S. and Worku S. (2007). Teenage motherhood and long-run outcomes in South Africa Tinbergen Institute Discussion Paper, TI 2007-024/3, University of Amsterdam, Amsterdam.

Kesho Consulting and Business Solutions. (2006). Report on Incentive Structures of Social Assistance Grants in South Africa, Pretoria: Department of Social Development.

Macleod C. and Tracey T. (2009). Review of South African Research and Interventions in the Development of a Policy Strategy on Teen-Aged Pregnancy, Grahamstown: Rhodes University.

NDoH, Stats SA, SAMRC, and ICF. (2019). South Africa Demographic and Health Survey 2016. Pretoria, South Africa, and Rockville, Maryland, USA: NDoH, Sats SA, SAMRC, and ICF.

Rutstein, S.O. ; Rojas, G. (2006). Guide to DHS statistics. Calverton: USAID

Statistics South Africa.(2015). South Africa Demographic Health Survey Sampling report. Pretoria: Statistics South Africa.

Pressat R. (1972). Demographic Analysis. Atherton, Inc: Chicago, pp 107 – 152.

Preston S.H., Heuveline P., Guillot M. (2001). Demography: Measuring and modelling population processes. Blackwell Publishers Inc.: Oxford, pp. 38 – 70.

Udjo E.O (2014). The relationship between child support grant and teenage fertility in post-apartheid South Africa. Social Policy & Society, 13 (4): 505–519.

Rodriguez G. and Hobcraft J. (1980). Illustrative analysis: Life table analysis of birth intervals in Columbia. World Fertility Survey Scientific Reports, 16. International Statistical Institute, Voorburg.