



LEGAL TERMINATION OF PREGNANCY AMONG TEENAGERS AND OLDER WOMEN IN SOWETO, 1999 - 2001

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Background. Legal termination of pregnancy (TOP) was introduced in South Africa in 1996. No data are available to relate the numbers of TOPs to the total number of pregnancies in specific health regions. The level of use of TOPs by women of different age groups is not known.

Objective. To determine the proportion of pregnancies that end in TOP, with special reference to maternal age, and to measure trends in use from 1999 to 2001.

Setting. Greater Soweto, Orange Farm and Lenasia, a densely populated urban health region served by Chris Hani Baragwanath Hospital and comprehensive primary care reproductive health services.

Methods. Two cross-sectional studies performed in 1999 and 2001, counting all pregnancies managed in state-run health services, including legal terminations, spontaneous miscarriages, ectopic pregnancies and deliveries.

Results. There were 5 412 pregnancies in the study period (9 weeks) in 1999, and 5 316 in the study period (8 weeks) in 2001. The TOP rates decreased from 16.1% to 13.6% ($P = 0.20$). The TOP rates for teenagers decreased from 22.3% to 16.3% ($P = 0.006$), but were higher than those for older women (15.2% in 1999 and 13.2% in 2001, $P = 0.006$ and 0.028 respectively). TOP rates for teenagers 13 - 16 years decreased from 28.0% to 23.0% ($P = 0.44$), and rates for older teenagers declined from 21.0% to 14.9% ($P = 0.008$). In 2001, 16.2% of women aged 35 and above underwent TOP, compared with 12.7% of women aged 20 - 34 years ($P = 0.014$).

Conclusion. Use of TOP services was highest in women at the extremes of reproductive age. There was a significant decline in TOP rates among older teenagers between 1999 and 2001. These data, from a comprehensive urban reproductive health service, provide a benchmark for comparison elsewhere and in the future.

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With the introduction of new termination of pregnancy (TOP) legislation in 1996,¹ South African women have acquired the right to make significant decisions regarding their pregnancies. Pregnant teenagers, in particular, are able to rectify difficult personal situations if they can decide on TOP early on in gestation. This applies equally to older women with unplanned pregnancies. While figures are available to describe the numbers of TOPs performed in South Africa,² these have not been presented as a proportion of the total number of pregnancies either at national or local level.

Greater Soweto, Orange Farm and Lenasia form a health region served by Chris Hani Baragwanath Hospital, situated to the south-west of the city of Johannesburg. A fully functioning state-run TOP service is available and includes a primary care facility at Chiawelo community health centre, and second-trimester termination at Chris Hani Baragwanath Hospital. While private TOP services are also available, the majority of the population is of low income and makes use of the state services. The objective of this study was to determine the proportion of pregnancies that end in legal termination in state services in this region, and to relate this to the age of the pregnant women. We also aimed to detect any changes in the use of these services over the last 2 years.

MATERIALS AND METHODS

For users of state services in Greater Soweto, Orange Farm and Lenasia, pregnancies may end as follows: normal deliveries (> 34 weeks' gestation) at one of six community health centres, complicated deliveries (> 26 weeks' gestation) at Chris Hani Baragwanath obstetric unit, miscarriages and ectopic pregnancies at Chris Hani Baragwanath gynaecology unit, first-trimester legal TOPs at Chiawelo community health centre, and complicated and second-trimester TOPs at Chris Hani Baragwanath gynaecology unit. Simple details of these outcomes, including maternal ages, are available from the registers of these units. In 1999, all pregnancy outcomes were noted, using these registers, from 28 January to 31 March (9 weeks), with emphasis on teenage pregnancy (age less than 20 years). A similar count using the same methodology was done in 2001, from 10 January to 6 March (8 weeks), with a few additional details: women aged 35 years and over, timing of TOP, and the mode of delivery if applicable. The design was that of two cross-sectional studies, separated by a period of 2 years. Statistical analysis was performed using Epi-Info 6 statistical software,³ and differences in outcome frequencies were evaluated using the chi-square test with Yates's correction if applicable, and the chi-square test for trend. A P -value of less than 0.05 was accepted as being statistically significant.

RESULTS

In the 9 weeks in 1999, 5 412 pregnancies were recorded, of

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which 873 (16.1%) were legally terminated. There were 5 316 pregnancies in the 8 weeks in 2001, with 722 TOPs (13.6%). The *P*-value for this difference was 0.20. The teenage pregnancy rates were 13.3% (*N* = 719) in 1999, and 13.0% (*N* = 692) in 2001. Table I compares TOP rates between teenagers and older women for 1999 and 2001, including rates of spontaneous early pregnancy loss and advanced pregnancy. The TOP rate for teenagers decreased from 22.3% in 1999 to 16.3% in 2001 (*P* = 0.006). The TOP rates for teenagers were higher than those for older women (15.2% and 13.2%) in 1999 and 2001 respectively (*P* < 0.001, *P* = 0.028 respectively).

Table I. Comparison of pregnancy outcomes between teenagers and older women in 1999 and 2001 (%)

	Age < 20 y		Age ≥ 20 y	
	1999 (<i>N</i> = 719)	2001 (<i>N</i> = 692)	1999 (<i>N</i> = 4 693)	2001 (<i>N</i> = 4 624)
Termination of pregnancy	22.3*	16.3 [†]	15.2 [‡]	13.2 [§]
Spontaneous miscarriage	6.7	4.9	7.0	6.5
Ectopic pregnancy	0.6	0.6	1.3	1.2
Advanced pregnancy	70.4	78.2	76.5	79.1

Difference between * and [†]: *P* = 0.006.
Difference between * and [‡]: *P* < 0.001.
Difference between * and [§]: *P* = 0.028.

Pregnant teenagers ranged in age from 13 to 19 years. There were no teenagers under the age of 14 in 1999, and 3 aged 13 in 2001. Two of the latter had TOPs performed. There were 17 teenagers aged 14 in 1999, of whom 7 underwent TOPs, and 11 in 2001, with 4 TOPs. Table II compares TOP rates and other pregnancy outcomes between young teenagers (13 - 16 years) and older teenagers (17 - 19 years), for 1999 and 2001. TOP rates in young teenagers decreased from 28.0% in 1999 to 23.0% in 2001 (*P* = 0.44), and in older teenagers from 21.0% to 14.9% (*P* = 0.008). The TOP rates for young teenagers were higher than those for older teenagers in both 1999 and 2001 (*P* = 0.11, *P* = 0.041 respectively).

Of the 722 TOPs performed in the 8 weeks in 2001, 195 (27.0%) were second-trimester terminations. Teenagers (16.3%) and women aged 35 years or more (16.2%) had higher TOP rates than women aged 20 - 34 years (12.7%) (*P* = 0.010, *P* = 0.014 respectively). This is shown in more detail in Table III, which also demonstrates increasing rates of spontaneous miscarriage, ectopic pregnancy and caesarean section with increasing maternal age. In teenagers, women aged 20 - 34 years and women aged 35 years and above, the miscarriage rates were 4.9%, 5.9% and 9.7% respectively (chi-squared test for trend *P* < 0.001). Corresponding rates for ectopic pregnancy

Table II. Comparison of pregnancy outcomes between young (age 13 - 16 years) and older teenagers (17 - 19 years) in 1999 and 2001 (%)

	Age 13 - 16 y		Age 17 - 19 y	
	1999 (<i>N</i> = 125)	2001 (<i>N</i> = 122)	1999 (<i>N</i> = 594)	2001 (<i>N</i> = 570)
Termination of pregnancy	28.0*	23.0 [†]	21.0 [‡]	14.9 [§]
Spontaneous miscarriage	4.0	6.6	7.2	4.6
Ectopic pregnancy	0.0	0.8	0.7	0.5
Advanced pregnancy	68.0	69.7	71.0	80.0

Difference between * and [†]: *P* = 0.44.
Difference between [‡] and [§]: *P* = 0.008.
Difference between * and [‡]: *P* = 0.11.
Difference between [†] and [§]: *P* = 0.041.

Table III. Pregnancy outcomes for teenagers, women aged 20 - 34 years, and women aged 35 years and above, in 2001 (%)

	Teenagers (<i>N</i> = 692)	Age 20 - 34 y (<i>N</i> = 3 945)	Age ≥ 35 y (<i>N</i> = 679)
First-trimester TOP	10.1	9.6	11.8
Second-trimester TOP	6.2	3.1	4.4
Spontaneous miscarriage*	4.9	5.9	9.7
Ectopic pregnancy [†]	0.6	1.2	1.6
Vaginal delivery	67.1	66.9	55.2
Caesarean section [‡]	11.1	13.4	17.2

* Chi-squared test for trend *P* < 0.001.
[†] Chi-squared test for trend *P* = 0.070.
[‡] Chi-squared test for trend *P* = 0.001.

were 0.6%, 1.2% and 1.6% (chi-squared test for trend *P* = 0.07), and for caesarean section 11.1%, 13.4% and 17.2% (chi-squared test for trend *P* = 0.001).

DISCUSSION

This study gives data on the fate of all pregnancies in an area that is relatively well served by state-run reproductive health services including termination of pregnancy facilities. From 1999 to 2001, the TOP rate decreased from 16.1% to 13.6%, but this difference did not reach statistical significance. What is clear is that the rate has not increased and that utilisation of the service has probably attained its peak. Unfortunately we could not determine whether the TOP service has reached its capacity in the face of a high demand, or whether the demand has reached a plateau. However, it is well known that there are long waiting lists for TOP at Chiawelo community health centre and at Chris Hani Baragwanath Hospital, and that many applicants are turned away. It is therefore likely that more TOPs would be done if sufficient staff and facilities could be provided.



The teenage pregnancy rate is stable at about 13% and compares with that of the USA (12.7 - 13.3%).^{4,5} Recent findings from the South African Demographic and Health Survey⁶ indicated that the proportion of teenagers aged 15 - 19 years who had ever been pregnant was low in Gauteng (9.5%) compared with Mpumalanga (25.2%), Northern Province (20.0%) and the Western Cape (16.4%). Therefore the relatively low teenage pregnancy rate reported in our study may not be representative of South Africa as a whole. Our figures confirmed that teenagers are more likely to use TOP facilities than older women, although the TOP rate for teenagers decreased significantly from 1999 to 2001. This cannot be readily explained, and might be worthy of specific research. Further examination showed that young teenagers were more likely to undergo legal termination than older teenagers. An interesting finding was the significant decrease in TOP rate for older teenagers between 1999 and 2001, from 21.0% to 14.9%. This accounted for the bulk of the decrease in TOP rates for all teenagers, and again is difficult to explain. The use of TOP services by teenagers in our region has not reached the levels reported from some developed countries. In a German study,⁷ 30% of 732 pregnant teenagers had voluntary terminations of pregnancy, while statistics from the USA revealed a 32% TOP rate.⁴

Inclusion of women aged 35 years and over in the 2001 count indicates that TOP is also more frequently sought by this older age group. A striking finding was the high morbidity in pregnancies among these older women, who displayed the highest rates of spontaneous miscarriage, ectopic pregnancy and caesarean section of all the age groups. Only 55.2% of these pregnancies progressed to a vaginal delivery. Older women often experience difficult pregnancies, even in early gestation, and this adds to the findings of a recent study of obstetric performance in these women at our hospital.⁸ In our study, we were unable to find out the reasons for TOP in each case, specifically how many older women requested termination for medical reasons. In view of the relatively high maternal mortality rate reported for older women in South Africa,⁹ it would be reasonable for women over the age of 35 years to consider TOP if they are at risk of pregnancy complications, such as severe hypertension or cardiac failure.

Our study suffers from a number of potential limitations. We did not determine how many TOPs, miscarriages, ectopic pregnancies and deliveries were managed in private institutions in Soweto and Lenasia. Our comments therefore refer only to the population that uses state-run services, which we believe make up the vast majority of women in Greater Soweto, Orange Farm and Lenasia. Furthermore, we could not separate permanent residents of this area from those who came from rural or other urban areas for procedures or delivery. The use of addresses in the registers was of no value, as virtually all women gave local addresses which may have been temporary

or permanent, or even false. A separate study could investigate the issue of the contribution of immigrants to the area, but would have to be sensitively handled as some patients fear discrimination if it is known that they are not local residents. A final limitation, inherent in this type of study, is the absence of data on spontaneous self-limiting miscarriages that are not reported to a health facility. This may account for the low miscarriage rates in all age groups.

CONCLUSION

This study, providing data from one of the largest urban conglomerations in South Africa, gives useful figures of pregnancy outcomes among users of a comprehensive state-run reproductive health service. It appears that the TOP service has reached its capacity and may be limited by a lack of resources. Women at the extremes of age are important beneficiaries, although the decline in use by older teenagers is a cause for concern. The data, which were easily collected using a repeatable methodology, provide a benchmark that other providers may use for comparison.

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