

SHORT REPORT

## The recent increase in contraceptive discontinuation in Egypt

Mona Khalifa\*, Wafaa Abdelaziz, Soha Metwally\* and Ehab Sakr

Department of Biostatistics and Demography, Institute of Statistical Studies and Research (ISSR), Cairo University, Giza, Egypt

\*Corresponding author. Email: [monakhalifa2010@gmail.com](mailto:monakhalifa2010@gmail.com)

(Received 30 December 2018; revised 05 March 2019; accepted 06 March 2019; first published online 20 May 2019)

### Abstract

This study sought to establish whether recent changes in discontinuation of contraceptive use and switching in Egypt can be considered an important cause of the unexpected increase in overall fertility and slight fall in contraceptive prevalence in the country. The analysis was based on calendar data from the 2008 and 2014 Egyptian DHS. Single/multiple decrement life tables were built to calculate contraceptive discontinuation rates and examine these by reasons for discontinuation focusing on three methods: IUDs, pills and injectables. The unit of the analysis was 'segment of use', defined as a continuous period of use/non-use of a contraceptive method (in months). It was found that over the period 2008–2014 the rise in the 'all method' discontinuation rate was mainly due to the shift away from IUDs to hormonal methods, which have higher discontinuation rates. Segments of use were more likely to be discontinued for 'method/service-related' reasons than for 'reduced need' reasons. This was due to an increase in contraceptive failure and side-effect/health concerns. Also, 'the desire to get pregnant' increased to become the second highest reason-specific discontinuation rate. This has coincided with a recent increase in ideal family size in Egypt. About half of the women who reported discontinuing for reasons related to method/services switched to another method, while the rest became subject to the risk of an unintended pregnancy. The rate of switching, rather than stopping use, increased for IUDs, remained the same for pills and increased slightly for injectables, indicating an improvement in switching behaviour. However, a marked high percentage of switchers moved to less-effective methods. If these issues are not addressed, many women in Egypt have an unmet need for contraception, leading to an increase in unintended pregnancies. Specific interventions that would greatly benefit the family planning programme in Egypt include improvement in counselling at the time of IUD insertion and removal and the reduction in failure rates for hormonal methods.

**Keywords:** Discontinuation; Family planning; Egypt

The 12-month contraceptive discontinuation rate in Egypt fluctuated around 30% over the period 1991–2005, and decreased to 25.9% in 2008. An unexpected increase to 30.1% was observed in the most recent Egyptian Demographic and Health Survey (EDHS 2014), which is almost equal to the 30% rate observed in 2000. This was accompanied by a slight decrease in contraceptive prevalence from 60% to 58% and changes in the method mix. The use of hormonal methods increased from 19.7% to 27.4% for pills and from 12.3% to 14.5% for injectables, and the share of IUD use dropped from 59.9% to 51.5%. An alarming increase in the total fertility rate (TFR) from 3.0 to 3.5 children per woman was documented over the period 2008–2014 (Ministry of Health and Population *et al.*, 2015a). Three national strategic objectives have been defined: to increase the contraceptive prevalence to 72%, reduce the discontinuation rate (within 12 months of use) to

18% and reduce the proportion of unmet need for family planning from 13% to 6% (National Population Council, 2015).

This study sought to establish whether recent changes in discontinuation of contraceptive use and switching in Egypt can be considered an important part of the overall unexpected change in contraceptive dynamics in the country, and attempted to answer the following questions: What are the changes in the level and pattern of method-specific contraceptive discontinuation and switching in Egypt over the period 2008 to 2014? What are the main reasons for discontinuation/switching? Have these reasons changed over the study period? To what extent has the act of discontinuing a contraceptive method left the user at risk of an unintended pregnancy?

The analysis was based on calendar data from EDHS 2008 and EDHS 2014. These included 10,704 and 15,236 'segments of use' for EDHS 2008 and EDHS 2014 respectively. A segment of use is defined as a continuous period of use/non-use of a contraceptive method (in months).

Single/multiple decrement life tables were built to calculate discontinuation rates as well as to examine various net rates of contraceptive discontinuation by reasons. The segments of contraceptive use that were used to construct life tables were those that began 3–59 months prior to the survey. This study focused on the three most widely used contraceptive methods, IUDs (pills and injectables), which accounted for 92% of the method mix in EDHS 2008 and 93% in EDHS 2014.

By the end of the first year after beginning contraceptive use, 12% and 14.3% of the IUD segments, 39.9% and 41.8% of the pill segments and 37.2% and 37.9% of the injectable segments were discontinued in the EDHS 2008 and EDHS 2014, respectively. By the end of 3 years, slightly more than half of the IUD segments, about 70% of the injectable segments and more than three-quarters of the pill segments were discontinued.

The median duration of contraceptive use was 24 months at the time of EDHS 2008, and this fell to 22 months at the time of EDHS 2014. The IUD users had the longest duration of use, dropping from 35 to 33 months. For pill users, the median duration of use dropped from 17 to 16 months, and for injectable users it remained almost constant at 20 months. The IUD can be used for spacing because it is reversible, and this is common in Egypt. A comparative study of the discontinuation of IUD use (Ali *et al.*, 2011) reported that in all countries studied, women were more likely to use modern methods rather than IUDs to space births – with the exception of Egypt.

The detailed comparison showed that 12-month discontinuation rates rose by 2.3% for IUDs, 1.9% for pills and 0.7% for injectables from EDHS 2008 to EDHS 2014. Although statistically significant, the effect on the 'all method' discontinuation rate was larger at 4.3%. When the 'all method' discontinuation rate was standardized by applying the specific discontinuation rates of the EDHS 2014 to the segment method mix of EDHS 2008, the 'all method' discontinuation rate for 2014 was 27.5% instead of 30.3%, indicating that if the 2008 method mix had remained constant, the 'all method' discontinuation rate for 2014 would have been 27.5%. The difference between the 'all method' discontinuation rate of 26.1% in 2008 and the standardized level of 27.5% in 2014 shows that the above-mentioned difference of 4.3% was mainly (65.1%) due to the shift away from IUDs to hormonal methods, which have higher discontinuation rates, and the remaining effect (34.9%) was due to the recent rise in the method-specific discontinuation rates.

Reasons for discontinuation in the 'method/service-related' category included contraceptive failure, side-effect/health concerns and 'other' reasons. These remained almost unchanged at about 18% in both surveys, while the 'reduced need' category, which included 'desire to get pregnant' and 'not exposed to pregnancy' increased from 8.1% in 2008 to 11.8% in 2014. This is a meaningful shift away from reasons related to contraceptive methods and services towards need-based reasons.

This shift occurred for all three contraceptive methods while segments of use remained more likely to be discontinued for 'method/service-related' reasons rather than for reasons of 'reduced need'. This was due to an increase in 'contraceptive failure' from 2.9% to 4.3% and in 'side-effect/health concerns' from 9.5% to 10.8% in 2008 and 2014, respectively. Both reasons were related to

the quality of counselling and were offset by the drop in ‘other method/service-related reasons’ from 5.6% to 3.4%, which are related to contraceptive logistics and accessibility. This result suggests that while the cost and accessibility of family planning methods and services became less likely to cause discontinuation, counselling on the side-effects of contraceptive methods was still an issue that was likely to provoke discontinuation in 2014. These results conform to the medians for nineteen countries reported by the WHO study (Ali *et al.*, 2012), with only two exceptions. Pill failure rates increased from 6% to 7.7% while the reported median was 5.6%. Also, discontinuation due to the desire to get pregnant for the IUD segments rose from 3.3% to 4.3%, while the reported median was 1.3%.

At the same time, the largest significant increase in the 12-month discontinuation rate was among users who discontinued for a need-based reason, and ‘the desire to get pregnant’ became the second highest reason-specific discontinuation rate, increasing from 4.4% to 6.3%. These rates were 4.3%, 8.6% and 6.1% in the 2014 survey among IUD, pill and injectable users, respectively, compared with 3.3%, 7.3% and 5.2% in the 2008 survey. A survey of nineteen countries reported that the median discontinuation rate due to the desire to get pregnant for the IUD segments was 1.3% (Ali *et al.*, 2012). This coincides with the recent increase in ideal family size in Egypt and could be a motive to stop using a family planning method. The mean ideal family size was 3.4 children among men and 3.1 among women of reproductive age in 2015 (Ministry of Health and Population *et al.*, 2015b).

Women in Egypt who reported discontinuing contraceptive use for reasons related to method/services were either abandoning use while in need, and therefore at risk of an unintended pregnancy, or discontinuing use to switch to another contraceptive method. Discontinuation followed by prompt switching does not affect the risk of an unintended pregnancy. The effect of discontinuation on unmet need in Egypt is large. Past users with unmet need accounted for 71% of the unmet need in Egypt 2008 (Jain Anrudh *et al.*, 2013).

About half of the women who reported discontinuing for reasons related to method/services switched to another method, while the rest became subject to the risk of an unintended pregnancy, which is in the range observed for other countries, from 72.5% to 40.5% (Ali *et al.*, 2012).

Switching increased for IUDs over the study period from 48.8% to 58.9%, remained the same for pills at about 53% and increased slightly from 45.7% to 47.7% for injectables. Although this result indicates an improvement in switching behaviour in Egypt, the study found that the minority of IUD switchers moved to a more-effective method (implants, injectables and sterilization). Among IUD switchers in 2008, 73.2% switched to a less-effective method and 26.8% to a more-effective method. In 2014, 86.6% switched to a less-effective method and 13.4% to a more-effective method. This marked high percentage of switchers to less-effective methods is worrisome and calls for further analysis.

Contraceptive security remains a financial challenge after the phasing out of USAID support and plans to avoid unintended pregnancies are likely to require an increased allocation of resources. However, the financial and health burden of unintended births may make programme efforts to reduce unmet need quite cost-effective. The programme needs to shift its emphasis from increasing the number of users to reducing discontinuation rates and, more importantly, to improving advocacy efforts in favour of the correct use of contraceptive methods. If these issues are not given due attention, many women in Egypt will be at greater risk of having an unintended pregnancy.

The required strategy is to ‘focus on encouraging past users with unmet need to resume use and supporting current users in continuing their use of the same method or change to a different one appears to be essential in reducing unmet need in the future’ (Jain *et al.*, 2013). Additionally, the results of this study confirm the use of the IUD in Egypt as a spacing method, and that IUD switchers tend to use a less-effective method implies that a strategy aimed at improved counselling is needed, not only at the time of insertion but also at the time of removal. It also suggests that a reduction in the failure rates of hormonal methods is required.

**Acknowledgments.** The study was based on DHS Working Paper No. 132 (Changes in Contraceptive Use Dynamics in Egypt: Analysis of the 2008 and 2014 Demographic and Health Surveys).

**Funding.** The study was carried out with the support of the United States Agency for International Development (USAID) through the DHS Program (#AID-OAA-C-13-00095).

**Conflicts of Interest.** The authors have no conflicts of interest to declare.

**Ethical Approval.** The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

## References

- Ali M, Cleland J and Shah I (2012) *Causes and Consequences of Contraceptive Discontinuation: Evidence from 60 Demographic and Health Surveys*. World Health Organization, Geneva.
- Ali M, Sadler R, Cleland J, Ngo Thoai D and Shah I (2011) *Long-term Contraceptive Protection, Discontinuation and Switching Behavior: Intrauterine Device (IUD) Uses Dynamics in 14 Developing Countries*. World Health Organization and Marie Stopes International, London.
- Jain Anrudh K, Obare F, RamaRao S and Askew I (2013) Reducing unmet need by supporting women with met need. *International Perspectives on Sexual and Reproductive Health* 39(3), 133–141.
- Ministry of Health and Population [Egypt], El-Zanaty and Associates [Egypt] and ICF International (2015a) *Egypt Demographic and Health Survey 2014*. Cairo, Egypt and Rockville, MD, USA.
- Ministry of Health and Population [Egypt], El-Zanaty and Associates [Egypt] and ICF International (2015b) *Egypt Health Issues Survey 2015*. Cairo, Egypt and Rockville, MD, USA.
- National Population Council (2015) *National Strategic Population Plan 2015–2030*. National Population Council, Cairo.

---

**Cite this article:** Khalifa M, Abdelaziz W, Metwally S, and Sakr E (2020). The recent increase in contraceptive discontinuation in Egypt. *Journal of Biosocial Science* 52, 154–157. <https://doi.org/10.1017/S0021932019000269>