



# ANALYZING ATTITUDES TOWARDS CONTRACEPTION & TEENAGE PREGNANCY USING SOCIAL DATA

UN POPULATION FUND (UNFPA)  
PROGRAMME AREA: PUBLIC HEALTH



## SUMMARY

Pulse Lab Kampala and UNFPA collaborated on a project to explore the use of real-time digital data to understand debate among Ugandans on contraception and teenage pregnancy, and to analyse perceptions towards different types of contraception. The project resulted in a real-time interactive dashboard that analyses public Facebook posts and data from UNICEF's U-report (a SMS-based polling system for Ugandan youth) for keywords related to contraception and teenage pregnancy. The dashboard allows for tracking of emerging and trending topics and perceptions related to family planning month by month. This project demonstrated the potential of using social data to supplement traditional means of gaining insights through less-frequent national surveys.

## BACKGROUND

About 16 million women ages 15 to 19 years old give birth each year, accounting for about 11% of all births worldwide (WHO). Despite a declining adolescent birth rate since 1990, 18 of the 20 countries with the highest rates of adolescent pregnancy are African. A 2010 survey assessing progress on the Millennium Development Goals found women in sub-Saharan Africa had the lowest level of contraceptive access and use; one in four women of childbearing age in a marriage or union had an unmet need for contraception. In Uganda, teenage pregnancy has remained at 24%. Meanwhile, the number of women of reproductive age is growing, which poses an ongoing challenge to family planning programmes and health in the region.<sup>1</sup>

The United Nations Population Fund (UNFPA) works to improve reproductive health and rights of women and girls around the world. UNFPA programmes help young women lead healthy, productive lives by training health workers to deliver quality family planning services, supplying contraceptives in emergency situations, ensuring reproductive care, and providing counselling for women who want to avoid or delay pregnancy.

Understanding the changing attitudes of young Ugandans towards contraception is needed to design and implement effective and relevant programmes. Such insights are typically gathered through surveys and therefore only updated periodically. This study addresses the need for more timely insights into Ugandans perceptions and attitudes toward contraception and family planning by exploring the potential use of data extracted from digital data sources.

<sup>1</sup> If current trends continue, by 2030, there will be 26 million more adolescent girls in the world. The top five countries with the greatest absolute increases are all sub-Saharan African nations: Nigeria (9.2 million), United Republic of Tanzania (3.7 million), Democratic Republic of the Congo (3.3 million), Uganda (2.5 million) and Kenya (2.3 million). (UNFPA 2013)

## USING DIGITAL DATA TO UNDERSTAND ATTITUDES TOWARDS CONTRACEPTION

UNFPA worked in partnership with Pulse Lab Kampala on a pilot project to explore the use of digital data to understand conversations among young Ugandans related to contraception and teenage pregnancy, and to analyse the perceptions towards different types of contraception. The data used for the study was extracted from public Facebook pages and UNICEF's U-report platform from January 2009 to October 2014.

U-report is a free SMS-based system that periodically polls users on specific issues, allowing young Ugandans to speak out on what's happening in their communities.

Relevant messages about contraception and family planning were collected by filtering the anonymised Facebook and U-report messages using a taxonomy of keywords. These relevant messages were then quantified and categorized into discussion categories such as: condoms, vasectomy, abstinence, and contraceptive pills.

The analysis was developed into an interactive dashboard that is publicly accessible online at:

[http://pulselabkampala.ug/dashboard/family\\_planning/](http://pulselabkampala.ug/dashboard/family_planning/)

## INSIGHTS & OUTCOMES

The monitoring dashboard provides snapshots of the relative volumes of conversations around different methods of contraception over time and popular discussion topics associated with contraception and teen pregnancy.

Figure 1 (below) shows the frequency of messages mentioning contraception methods. The light blue bars represent the frequency of messages mentioning condoms, which were the most prevalent term.

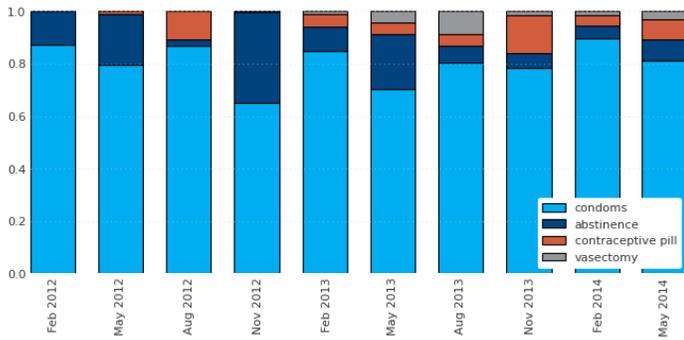


Figure 1. Relative frequency of messages mentioning different contraception types from February 2012 to May 2014.

Conversations about condoms were mostly frequently associated with words such as 'safe,' 'free' and 'best,' which indicated positive attitudes towards condoms as a contraceptive method (Figure 2).

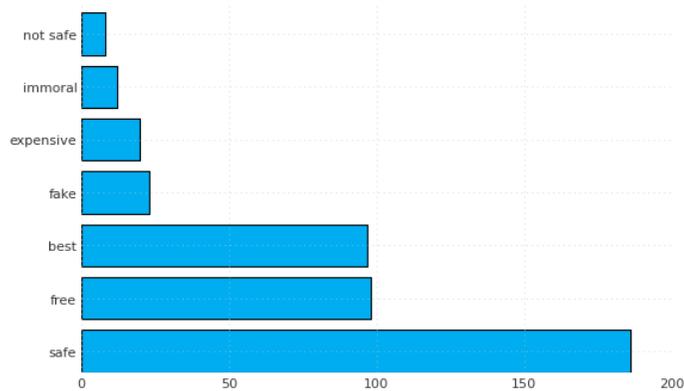


Figure 2. Frequency of terms used in connection with condoms.

Data from January 2009 to May 2014 was analysed, allowing for observation of how online conversations about teen pregnancy changed over time.

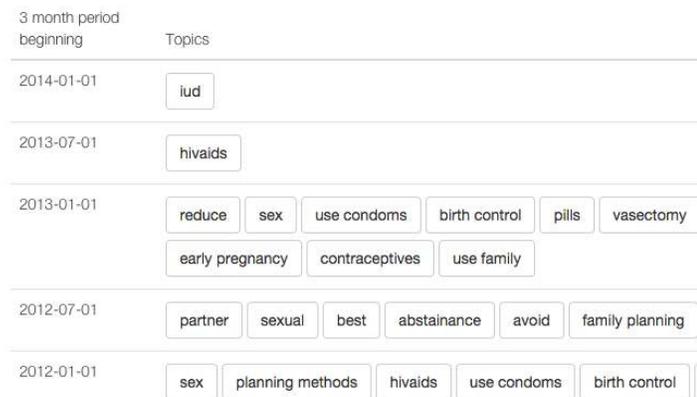


Figure 3. A sample of words that commonly occur in U-report and Facebook comments.

## CONCLUSIONS

The online dashboard provides an innovative way to track emerging and trending topics of discussion related to reproductive health and rights.

By analysing content and sentiment of Facebook posts and U-report messages, the study addresses the development sector's need for more up-to-date information on the perceptions and attitudes of Ugandan youth to contraception and family planning.

There are several opportunities for further study that could support the development of new tools and methods for extracting real-time digital data and thereby understanding sentiment around particular social issues.

Additional data sources, in combination with the analysed social media data, could help to fill the gap between digital perceptions and real behaviours, validating a new family of indicators. For example, analysing contraceptive sales data on the same time scale as the social data might show a relationship between mentions of different contraceptive types on social media and corresponding sales of those varieties of contraception.

## IMPLICATIONS & RECOMMENDATIONS

- This study revealed the potential use of digital data to track attitudes and perceptions related to reproductive health and rights in real-time, which could support monitoring and evaluation of development programmes.
- It is recommended to validate the findings with empirical data on programs and policies, so that the analytics dashboard be expanded and adapted to the needs of policymakers and development practitioners.

## REFERENCES

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