TUNE ME: A MHEALTH INITIATIVE TO INCREASE YOUNG PEOPLE'S KNOWLEDGE AND SKILLS TO PROMOTE THE ADOPTION OF PROTECTIVE SEXUAL BEHAVIOURS

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Abstract

When m-health initiatives are part of broader programmes addressing the sexual and reproductive health and rights of adolescents and young people, the power to reach a large number of young people in a cost effective manner is unquestionable. UNFPA East and Southern Africa Regional Office (ESARO), under its flagship youth programme "Safeguard Young People" (SYP) and in collaboration with Praekelt Foundation, Ford Foundation and DFID, developed and rolled out TuneMe (tuneme.org) – a mobile site (mobisite) designed for low- and high-end devices in environments where high data charges and poor network coverage combine to limit access to online services. The project took place in eight countries in southern Africa.

Through social features and content designed to be youthful and interactive for users, TuneMe aims to equip adolescents with the information and motivation they need to make informed choices. Adolescents access Tune Me through the internet browser on their mobile phone or through Free Basics by Facebook, which allows any young person with a mobile phone to access the platform without the limitation of data or Wi-Fi connectivity (Facebook, 2018). TuneMe platform also includes a GPS clinic finder feature and an M&E system 'built in' which allows routine reviews of the reach of the mobiste disaggregate by age and sex including bouncing rates, preferred articles – to mention a few.

Background: Youth in Africa: Current Sexual and Reproductive Health Challenges

From 1.2 billion people in 2015, Africa's population is projected to increase to 2.4 billion by 2050. Forty-one percent of the population in African countries is under

the age of 15, compared to a world average of 29% (ECOSOC, 2015). In 2050, the East and Southern region is projected to be home to 47% of Africa's population with a high proportion of young people (UNFPA, 2013; UNICEF, 2014). To usher this large cohort of adolescents and young people into healthy and productive adulthood is critical for their health and well-being and for the continent's ability to achieve its development goals and Agenda 2030. Yet African adolescents and young people face a complex set of risks and vulnerabilities that impede their health, education, social, and economic opportunities.

The UNFPA East and Southern Africa Regional Office has been implementing its youth flagship programme called Safeguard Young People (SYP) since 2014 in eight countries in southern Africa. The SYP Baseline Study statistics indicate that across all programme countries, the HIV prevalence rate for male youth ages 15–24 ranges from as low as an estimated 2% and 3% in Malawi and Namibia, respectively, to a high of 7% in Swaziland (UNFPA, 2015). HIV prevalence is notably higher among female counterparts. HIV prevalence among female youth is lowest in Malawi (4%) and Zambia (5%) and highest in Swaziland (12%) and South Africa (13%). Even though the rate of new infections among adolescents has decreased overall, in Southern Africa it is decreasing at a very slow pace with significant gender imbalances. In Swaziland, for instance, girls aged 15-19 are five times more likely to be infected than boys (UNAIDS, 2014).

The drivers of HIV epidemic among young people in Southern Africa include intergenerational sex, multiple and concurrent sexual partners, gender-based violence, transactional sex/sex work, limited and/or inconsistent use of condoms and other contraceptives, as well as low uptake of medical male circumcision.

The average percentage of boys and girls aged 15-24 with comprehensive knowledge of HIV was 45%, with the lowest percentage in South Africa at 31%, while the highest in Namibia with 54% (UNFPA, 2015). In the countries where more than one survey is available, knowledge levels stayed consistent across the survey years, with the exception of Zimbabwe, where knowledge levels among youth demonstrated a significant decline from 2010–11 to 2014. Generally, comprehensive knowledge of HIV among older youth ages 20–24 is higher than among youth ages 15–19. Across the SYP region, an estimated 45 percent of all youth have comprehensive knowledge of HIV.

On average, 40% of boys and girls aged 15-24 reported use of condom at last sexual intercourse, while in Malawi this was only 30%. Botswana had the highest reported use of condom amongst youth at 78%. Across all SYP countries with the exception of Botswana, condom use at last sexual intercourse is higher in male youth (49%) compared to female youth (28%).

The lowest percentage of boys and girls aged 15-24 who have been tested for HIV in the past 12 months and received their status the last time they were tested was in Lesotho at 28% with the highest percentage in Zambia at 59%. In Lesotho, Swaziland, and Zambia, uptake of HIV testing has increased between the two surveys available for each of the countries, while in Malawi HIV testing has slightly

declined between 2010 and 2014, and it remained stable from 2010–11 and 2014 in Zimbabwe

Across the SYP region, 47% of female youth are currently using a modern contraceptive method and less than 1% uses a traditional method. Overall, the modern contraceptive prevalence rate is highest in South Africa (85%) and Swaziland (80%) and lowest in Zambia (30%) (UNFPA, 2015).

The adolescent birth rate varies significantly across the countries, with the highest being in Malawi and Zambia, at 143 and 141 births per 1,000 women ages 15–19, respectively (UNFPA 2015). Early childbearing is associated with an increased risk of unsafe abortions, impaired foetal growth and child survival, maternal morbidity and mortality, early school exit, and social stigmatisation (Rokicki, Cohen, Salomon & Fink, 2017). Early childbearing across the SYP region ranges from about 9% of female youth ages 15–19 in Botswana to as high as 36% in Zambia (UNFPA, 2015). Youth age 15–19 who have had a live birth and are already mothers also varies significantly across the SYP countries, with the lowest percentages in Botswana (9%) and South Africa (10%), and the highest in Zambia (30%), Zimbabwe (25% in 2014), and Malawi (25% in 2014).

Traditional practices that are harmful to girls and women, such as female genital mutilation, restrictions on their access to education and employment, and endemic gender-based violence at family and community-levels are recognised as major barriers to development in the ESA region.

The ESA region has high rates of sexual violence among adolescents and young women, with at least 20% of those aged 15-24 years in seven countries reported to have experienced sexual violence from an intimate partner. The rate of sexual violence increases with age as young women aged 20-24 enter into long-term relationships. In Swaziland, for example, 48% of young women report having been victims of sexual violence, while 59% of Zambian women have experienced violence since the age of 15 years.

According to the SYP Baseline Study, the average percentage of women and men ages 15-24 who agree that wife beating by husbands is justified is 38%. Zambia had the highest number in agreement at 56%, while Malawi had the lowest at 18%. In most SYP countries, attitudes regarding wife beating do not vary significantly between younger youth ages 15-19 compared to youth ages 20-24, with the exception of Swaziland, where 44% of younger youth believe that wife beating is justified compared to only 31% of older youth.

Malawi had the highest percentage of women aged 15-24 who had married by age 15 at 7%, as well as by 18 years at 49%, followed by Zimbabwe with 5% and 47% respectively (UNFPA, 2015). In Malawi, the percentage of female youth who first married by age 15 and by age 18 declined between 2010 and 2014, while in Zimbabwe the percentage slightly increased between the two survey years.

The results of the 2015 Baseline Study for SYP suggest that programme efforts to improve knowledge and skills of young people to prevent HIV in the region have declined. Young people often lack good quality and age-appropriate, life skills-

based sexuality education, effective social and behaviour change communication interventions, and also services that are tailored towards their specific needs (poverty status, gender, sexual diversity, place of residence, educational level, etc.).

Young people need quality information, skills, and increased access to services to protect themselves from HIV, STIs, child marriages and other gender-based violence and early and unintended pregnancy. It is crucial, now more than ever, for young people to receive quality information on how to take on safer sexual behaviours.

MHealth Technology as a Tool for Promoting Sexual and Reproductive Health in Developing Countries

Mobile health (m-health) is defined as a medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices (WHO, 2011). There is a growing body of literature that demonstrates that mHealth interventions are an increasingly popular method for reaching youth with SRH information and services in lower - and middle income (LMIC) countries. MHealth interventions leverage on the rapid expansion in ownership and use of mobile phones in the developing world (Aranda-Jan, Mohutsiwa-Dibe & Loukanova, 2014). In 2012, more than 87 percent of people living in the developing world were mobile phone subscribers, and in Africa alone, there are now close to a billion mobile phone subscribers (International Telecommunication Union, 2013). These numbers include young people in particular, as young people represent the highest number of mobile phone consumers in developing countries (ibid). Hence, current mHealth technology takes advantage of a preferred form of communication by young audiences.

Moreover, the use of mobile phones as a method for reaching out to young people with SRH information is effective as it can overcome barriers that young people experience in their search for SRH information. For example, in the socio-cultural contexts of the SYP countries, public communication, especially intergenerational dialogue about sexual and reproductive health is still considered sensitive, and young people often report that they face discrimination by health workers when they approach the clinics for SRH information and services (Ippoliti & L'Engle, 2017). Accessing SRH information through their phones therefore provides a welcome private and confidential opportunity without facing stigma and discrimination, and the option to access the information at a place and time convenient to the user.

Recent evidence suggests that mHealth programmes increase health knowledge levels and that these programmes are generally well-received by youth (Rokicki, Cohen, Salomon & Fink, 2017). Ippoliti and L'Engle, who have analysed 17 different m-Health programmes targeting adolescent SRH in low - and middle income countries, suggest that m-Health initiatives are an efficient and appealing

way to connect young people to SRH information and services (Ippoliti & L'Engle, 2017). These authors also found that mHealth is an effective way to contribute towards behaviour change among youth. Therefore, it is critical for HIV prevention programmes to include mobile technology as part of their strategies to engage, inform and link young people with accurate information and services.

Tune Me: A mHealth Initiative for Young People in Southern Africa

Under the "Safeguard Young People" (SYP), programme in collaboration with Praekelt Foundation, Ford Foundation and DFID, UNFPA has developed and rolled out Tune Me (tuneme.org), a mobile site (mobisite) designed for low - and high end devices in environments where high data charges and poor network coverage combine to limit access to online services. Through social features and content designed to engage users rather than lecture them, Tune Me aims to equip adolescents with the information and motivation they need to make informed choices. Adolescents access Tune Me through the internet browser on their mobile phone or through Free Basics by Facebook, which allows any young person with a mobile phone to access the platform without the limitation of data or Wi-Fi connectivity (Facebook, 2018).

TuneMe's look and feel – including the name of the mobisite – was designed for young people of Southern Africa. 'TuneMe' is an expression in slang, used by young people in the region which means 'tell me'. TuneMe is live in Zambia, Malawi, Zimbabwe, Namibia, Botswana, Swaziland and Lesotho. Aside from SRHR content in the form of articles, stories, and testimonials, TuneMe's newest feature finds youthfriendly clinics by geo-location, including feedback mechanisms to track quality of care. Since December 2015, TuneMe has carried out 219 Facebook campaigns, one radio campaign, and many mobile web banner campaigns. The Facebook page, created to popularise TuneMe in a cost effective manner, has had over 1,300,000 unique users, over 50 million impressions, over 60,000 likes and more than 345,000 clicks. The majority of fans are registered to be between 18 and 24 years old. With more than 1.5 million unique users on the site and almost 12,000 registered users, TuneMe is well underway to become the 'go to' mobisite for reliable, realistic, and holistic sexual and reproductive health information in the region. This is particularly important given the many competing sources of information, of various quality, that young people are exposed to each and every day that potentially shape their sexual and reproductive health.

Content Development

Aligned to international standards in comprehensive sexuality education (UNESCO, 2018), the content of TuneMe is scientifically accurate, adopts a gender transformative and rights based framework, and is culturally sensitive and age and

developmentally relevant. The content, on a wide range of SRHR topics, addresses cognitive, emotional, physical and social aspects of sexuality by equipping young people with knowledge, skills, attitudes and values that are meant to empower them to realise their health, well-being and dignity; help them develop respectful social and sexual relationships; help them consider how their choices affect their own wellbeing and that of others; and help them understand and ensure the protection of their rights throughout their lives (UNESCO, 2018). Key issues presented on TuneMe include information on puberty, male and female anatomy and physiology, body image, body rights, pregnancy, family planning/contraception, safe (where legal) and unsafe abortion, gender issues including gender-based violence, choices around drug and alcohol use, healthy relationships, consent, abstinence and other safer sex options, HIV and other STIs, mental and emotional health, and navigating social media safely. The content aims to present sexuality issues realistically, which balances its positive and negative aspects, and is designed to prompt users to think critically about the issues, and consider the types of life skills (such as decisionmaking, negotiation, and other effective communication skills) that are needed to make informed, healthy sexual and reproductive health choices for themselves and as appropriate jointly with their potential partners. The various articles are also labelled for age appropriateness so that some content is open to 10-14 year olds, 15-19 year olds and 20-24 year olds and assumes diversity among users in terms of sexual experience, gender and sexual identity, socio-economic status, urban/rural and geographical location, religious or cultural orientation, disability, and other contextual factors that affect the sexual and reproductive health of young men and women

The content is contained within articles, fictional characters, real life narratives, and testimonies such as personal stories from users, local celebrities, newspaper articles, local competitions, and moderated questions from users with answers. The articles and other pieces of content end on each screen with suggested links to related topics or other resources so that users are encouraged to seek further information beyond the immediate issue they sought information for on the platform.

For each country in which TuneMe is running, local young people and experts review the content so that certain aspects are adapted and translated for local audiences to ensure relevance and improve engagement while being presented in a youth friendly edutainment style that respond to the expressed needs of young people. One concrete example would be content around harmful traditional practices where countries such as Zambia and Malawi would discuss early marriages and its consequences, particularly for young women. TuneMe further presents the opportunity to inform its users of the local sexual and reproductive health related laws and policies such as national age of consent to sex, marriage, access to services such as HIV testing or contraception. It is through this engagement of young people in shaping the content to contextualise nationally, and in concerted effort, to present not only the negative, dangerous, risky aspects of sexuality that allows the TuneMe platform to evolve and reflect the contemporary issues affecting young men and

young women in a relatable form.

The Key Features of TuneMe

TuneMe is built on Praekelt's Molo mobisite platform, using the Wagtail Content Management System (CMS), an open-source Django CMS built by Torchbox. Additional features and feature enhancements were built onto the initial site infrastructure as new user needs were identified:

- Search with iterative upgrades to search parameters.
- Articles then article surfacing, automated scheduling and un-scheduling, Share (FB, Twitter) functionality, visual age guidelines.
- Commenting then comment reporting, management and removal.
- Home page (HP) banners then banner management into various positions on the HP
- Polls then CMS-based polls storage and management area.
- Frontend surveys then data retrieval and export.
- User-generated features 'Your Words' story competition, 'Your Tips 'sharable advice.
- Service Finder initially designed as a searchable database with fixed geographic data, but later adapted to enable GPS.

The TuneMe Content Management System enables site admins to customise the site home page to keep it looking fresh and expose new content. Admins can choose which articles to feature on the home page and how high up on this page they appear. A section home page for each of the site's four main sections enables a secondary layer of relevant articles to be surfaced on the home page, along with new polls and story competitions.

The Survey feature can be used to gather data and insight from users on their satisfaction with the site. The Clinic service finder enables visitors to choose from a list of clinic-based services (e.g. sexual health advice, pregnancy testing, HIV counselling, etc.), then uses GPS to locate the health facilities nearby that provide these services.

TuneMe was built with its end users in mind. While mobile phone (including low-end smartphone) penetration rates continue to grow rapidly in the Sub-Saharan Africa region, the site itself is optimised for use on any device – including low-end devices with limited functionality. TuneMe supports any device that uses a browser – both WAP (Wireless Application Protocol) and HTML. TuneMe is supported by Mobile Network Operators (MNOs) on Free Basics. Free Basics is a partnership between Facebook, Praekelt Foundation and local MNOs to provide free access to content via the MNO's operator deck.

The site's name, design and layout and visual elements were drawn from research with users and provide an authentic regional look and feel that well represents young people from the target countries. The site navigation and usability conform to international standards in information-rich sites destined to be consumed on a phone screen. A set of illustrative visual icons thematically links individual articles to a topic sub-category, with complementary photographic elements sourced weekly from image banks to provide a cohesive yet varied visual language on the home page on any given day.

Visitors to the TuneMe site can get all the facts from articles on the body, sex and sexuality, contraception and relationships, and are guided by age recommendations for 15+ or 20+. Registered users can share their own opinions by adding comments to these articles or casting their votes on engaging poll topics. They can also write their own stories under a running competition strand called "Your Story". Winning stories are published and stored on the site, where they are discoverable every time a user searches the story topic. The Tips feature is for young people who want to give advice to others in short 1-2 sentences. These insights are sharable first person experiences, and site admins can select the best tips to publish on the TuneMe Facebook page, which is the main avenue for recruitment of new users to the site.

Recruitment

Google Ads and a Facebook page in each territory are used to market Tune Me and recruit new visitors to click through to the site. The TuneMe FB recruitment campaign involved creating posts three times a week to engage young people on a range of topics and strategies. Interesting user behaviour was observed when using Facebook as a recruitment tool: while readers clicked through to the mobisite to consume the content and participate in polls etc., they often shared their comments on the Facebook page. This user behaviour requires an adaptive approach: enable engagement and commenting on FB with click-through to the site for anonymous engagement with richer content and the ability to search for answers to more private questions.

Future investigations into Facebook as a key feature of any youth-focused SRHR education programme would be most useful in leveraging the power of social influence and persuasion on youth communities. As the social media landscape rapidly evolves and expands its reach, an agile approach towards messaging young people is the key to staying abreast of the technology continuum.

Behavioural science studies show that people conform to what they perceive to be social norms. Social learning and conformity is one of the most compelling reasons for people to adapt their attitudes and behaviours. This means that a new visitor to a safe sex-savvy community is highly subject to social influence because of his/her innate human urge to conform to that group's norms. Where a community's norms are beneficial for SRHR messaging, that community does our work for us — and positively infects an ever-widening circle of friends and followers, who in turn infect the real-world. Among the most viewed pages, two topics seem to be of high interest for young people, ranging from 7462 views to

30531. Such topics are menstruation facts and how to ask your love to take an HIV test.

Conclusions

The role and potential of social media in the lives of the young people should not be underestimated. When mHealth initiatives are part of broader programmes that address the sexual and reproductive health and rights of adolescents and young people, the power to reach a large number of young people in a relatively cost effective manner is unquestionable. Further, the use of social media platforms such as Facebook - the region's most efficient channel in terms of reach and cost effectiveness – is critical to engage young people through their mobile devices and popularise TuneMe – increasing its reach at no cost. A large majority of young people who have a mobile device also have Facebook which provides a huge opportunity to link adolescents and young people to the mobisite. Government Ministries and local youth networks have launched and rolled-out TuneMe in country to ensure adequate integration into existing health and education systems and guarantee longer-term sustainability with its inclusion in national frameworks for out-of-school Comprehensive Sexuality Education. TuneMe's long-term goal, besides behavioural change of young people, is to empower local youth groups to take ownership of the content, learn to run its mobisite and Facebook platform, and use them as advocacy tools in campaign activities. While challenging to develop content for both boys and girls, TuneMe presents a real opportunity to speak about sexual and reproductive health and rights to boys. Involving boys in the conversations is crucial for gender transformation. While content needs to retain essential messaging in order to have impact – for example, around the consistent and correct use of condoms – it also needs to be contextually appropriate. And in the arena of sexual health, this is a common challenge - particularly when cultural or religious norms are in play.

The Way Forward

This innovation fits well in environments where mobile phone usage is high but data and Wi-Fi infrastructure is limited. TuneMe's strength is in its ability to be adaptable and accessible to a wider range of technology used by young people, particularly in lower income areas. The mobisite has the ability to strengthen monitoring and evaluation systems related to sexual and reproductive health for adolescents and young people and provide evidence that can help improve youth-friendly services in health facilities. In the near future, TuneMe will be evaluated to measure behavioural change/behavioural development, assess how it increases access to services, increases SRHR specific knowledge, and facilitates the adoption of gender equitable norms. Also, it is in the process of being integrated into the UNFPA global portfolio on mHealth with the aim of expanding it to other countries

and regions as a trusted source of realistic sexual and reproductive health information to young people that links to the use of services.

References

Aranda-Jan C. B., Mohutsiwa-Dibe N., & Loukanova, S. (2014). Systematic review on what works, what does not work and why of implementation of mobile health (mHealth) projects in Africa. BMC Public Health, 14, 1-15. https://doi.org/10.1186/1471-2458-14-188.

Facebook (2018). Free basics by Facebook. Retrieved from https://info.internet.org/en/story.

International Telecommunication Union. (2013). *The world in 2013: ICT facts and figures*. Retrieved from http://www.unapcict.org/ecohub/the-world-in-2013-ict-facts-and-figures.

Ippoliti, N. B., & L'Engle, K. (2017). Meet us on the phone: Mobile phone programs for adolescent sexual and reproductive health in low-to-middle income countries. *Reproductive Health*, 14, 1-8. https://doi. org/10.1186/s12978-016-0276-z.

Joint United Nations Programme on HIV/AIDS (UNAIDS). (2014). The gap report. Geneva: UNAIDS.

Rokicki, S., Cohen, J., Salomon, J. A. & Fink, G. (2017). Impact of a text-messaging program on adolescent reproductive health: A cluster-randomized trial in Ghana. *American Journal of Public Health*, 107(2), 298-305. DOI: 10.2105/AJPH.2016.303562.

United Nations Populations Fund (UNFPA). (2015). *High-level ministerial dialogue on harnessing the demographic dividend for agenda 2063*. New York: UNFPA.

United Nations Educational, Scientific and Cultural Organization (UNESCO). (2018). *International guidance on comprehensive sexuality education: An evidence-informed approach.* Paris: UNESCO.

United Nations Populations Fund (UNFPA). (2013). Motherhood in childhood: Facing the challenge of adolescent pregnancy. New York: UNFPA.

UNFPA East and Southern Africa Regional Office. (2015). Safeguard young people programme baseline study. (Unpublished manuscript). The United Nations Population Fund, Johannesburg.

UNICEF. (2014). Generation 2030 Africa: Child demographics in Africa. New York: The United Nations Children's Fund.

World Health Organization (WHO). (2011). mHealth: New horizons for health through mobile technologies: Second global survey on eHealth. Geneva: WHO.

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