Nepal is at the cross roads of a social transformation. Previously held social norms of being sexually active only after marriage is not adhered to by young people. Adolescents and youth are by nature curious about sexual issues and today it is easier than ever before to access sexual content from electronic media and the internet, including social media. However, young people may not have many opportunities to receive correct and credible answers to their questions regarding sexual and reproductive health practices. Moreover, given the socio-cultural context of Nepalese society, youth are discouraged from openly talking about or asking questions about the problems they face as adolescents. To ensure these youth are able to access credible and correct information in order to make healthy decisions, Public Health Concern Trust-NEPAL (phect-NEPAL) decided to build upon the growing trend of young people receiving information more independently through smart phones and other devices, with a greater trust in social media and other digital media channels. The program strategy was to develop an Android-based mobile application (app) that would inform youth about reproductive and sexual health.

Today in Nepal, about 80 percent of youth aged 15 to 24 years in urban areas and about 60 percent in rural areas own mobile phones. Mobile devices are increasingly becoming the dominant source for information sharing. Therefore, phect-NEPAL felt an electronic tool such as a smart phone app could be an appropriate medium to leverage the technological adeptness of adolescents and inform them on sensitive sexual and reproductive health (SRH) issues. With this app, the correct information on SRH issues will be at their fingertips, to be accessed anytime and anywhere. Phect-NEPAL believes this kind of access to SRH information will help facilitate their behavior modification. Hence, the program developed an interactive android mobile application for adolescents and youth regarding SRH. The strategy was to build awareness among adolescents and youth by providing the content in a medium they were comfortable with and enjoyed using. By including common Nepali myths and incorporating testimonials from Nepali youth, this helpful tool was developed to be culturally suitable and especially relevant to today’s Nepalese adolescents.

The app, named “Mero Lagi” which means “For Me” in Nepali, is attractive, attention-grabbing and includes clear and correct SRH information adolescents can easily understand, learn from and relate to. The information mainly focuses on:

- Reproductive health information, including an overview of the reproductive system, and puberty;
- Social aspects of sexual health including healthy relationships, positive body image and gender;
- Sexual health, including sexually transmitted infections (STIs), consequences of unplanned and unwanted pregnancy and contraceptives; and
- Resources such as information on health/help centers and their locations.

Phect-NEPAL anticipates Mero Lagi will serve as a one-stop resource for youth in Nepal on SRH issues. It is available in both Nepali and English, and will be available for free download from Google Play™.

In developing the Mero Lagi app, phect-Nepal followed the steps recommended in the Demand Generation Implementation Kit (I-Kit) for Underutilized, Life-Saving Commodities, which was developed by the Health Communication Capacity Collaborative (HC3) with support from United States Agency for International Development (USAID) and the United Nations Children’s Emergency Fund (UNICEF).
The initial formative research included a literature review and focus group discussions with young people on topics related to SRH. The app was designed, tested and revised according to the suggestions received from the intended audience in the 15 to 24 year old age group. Mero Lagi is intended to act as a complementary source of information to the ongoing formal education in the schools and informal conversations that might be taking place at home. The app will help generate increased knowledge and awareness among youth on SRH issues and help influence their behavior related to safe sex and consent.

Among the life-saving commodities presented in the I-Kit, Mero Lagi promotes three specific under-utilized commodities:

- Female Condoms
- Emergency Contraceptive Pills
- Contraceptive Implants

**Key Steps to Developing the Mero Lagi Application**

Pfect-Nepal conducted a literature review on various mHealth intervention projects (including those focused on social and behavior change communication) around the world and focus group discussions (FGDs) with young people, following which a prototype of the app was developed and pretested with the intended audience. Subsequently, modifications were made based on the pretest findings and the finalized app was widely promoted and disseminated through a variety of media channels.

**Literature Review Findings**

The review of different mHealth-related studies focusing on mobile phones and their influence on adolescent and youth SRH found that the use of smart phones and mobile applications is on the rise both worldwide and in Nepal, but intervention studies related to mobile applications are still very limited. Most of the published literature on mHealth focused only on text messaging interventions, which suggested positive SRH-related behavior change.

**FGD Findings**

Pfect-Nepal conducted six FGDs of eight to ten participants between the ages of 18 and 22. These discussions included the following themes:

1. **Use of Smart Phones and Apps**: All of the participants hailed from urban and semi-urban areas and used or owned a smart phone. They said most of their peers use similar devices, irrespective of socioeconomic status, due to the availability of cheaper Android™ smart phones in Nepal. Everyone mentioned they download apps largely based on recommendations from friends and app reviews posted online.

2. **SRH Knowledge**: Knowledge about SRH was not uniform among FGD participants. Those who received practical instruction in school had a better understanding of SRH than those who received only theoretical information at home or from other sources. Almost all FGD participants had some level of knowledge about sex, puberty, menstruation, contraceptives and STIs. However, their knowledge remained inadequate in terms of sexuality and the functions and availability of different contraceptives.

3. **Suggestions for Developing an SRH App**: All the participants said they were not aware of mobile apps that addressed their questions related to SRH. Everyone agreed that this app would be very promising and popular among youth because it would be developed for and by Nepalese youth. All of the participants said they wanted the contents to be informative and personalized.

A detailed report of key findings from the literature review and the FGDs was submitted to HC3.
App Development

Based on the findings of the formative research, phect-NEPAL developed the wireframe and contents of the app. The content was structured under eight main headings, which appear as icons on the menu page. The contents in each section is linked to related items in other sections. Each page also has a search bar where users can type in their queries with key words, which can lead them to the pages and answers they are looking for.

A detailed report containing the concept note of the content and the wireframe was submitted to HC3. The app contents were reviewed and refined by clinical, public health and legal experts. The final content was then prepared in both English and Nepali languages.

The app prototype was engineered by professional app developers, hired by phect-NEPAL, who worked in close coordination with program staff as they developed the app graphics, icons and overall design.

Pretesting Findings

Once the prototype was completed, it was tested with a group of youth between the ages of 17 and 21. After a week, the youth met to share their feedback on the app.

The participants liked the app name, contents, design and user interface. They also said they would recommend the app to their friends. One major piece of feedback was related to the app's lack of interactivity; the group had expected the app to be more interactive and have regular notifications and updates. The youth hoped the app would be a platform for posing questions and to post their own stories/blogs – similar to other social media. Almost all of the pretest participants suggested the app be made interactive and allow users to address their questions directly to experts. Some also suggested the app have a chat board where users could interact with one another in the presence of a moderator. The youth also expressed a desire for additional quiz questions and offline access to more questions. They suggested inviting a celebrity or youth icon to help promote the app. All feedback was noted and taken into consideration.

Based on the feedback received, a new interactive section was added to the app. In this section, users can ask questions, read answers to the questions asked by other users and save specific questions and answers to their
Feedback from Users

The app is available to download from the Google Play store for free. phect-NEPAL continues to collect feedback from the app users. A male user, age 19, said, “The app looks very appealing, visually. I was initially attracted by the design. The contents are well managed and easy to search.” A female user, age 22, said, “I liked the details given on reproductive system. It is very easy to understand as I can directly click on the picture.”

Almost all the users said that they liked the layout of the app. A male user, age 24, said, “I like that the app is available in both English and Nepali Language. I teach at a government school and I know that my students will find it easier to read the information in Nepali Language.” A female user, age 20, commented, “The most important part is the section where I can ask questions to experts. I think this will really make the app personal and not just a collection of information.” Another female user, age 17, said, “The information on contraceptives and STIs is very helpful and informative. I also liked that I can read the experiences shared by other users who have undergone similar situations. That way I will feel that I am not the only one going through such a situation.”

Next Steps

The Demand Generation I-Kit was very useful to phect-NEPAL as it developed this project, providing a roadmap of specific steps for the strategy development process and work plan. The Mero Lagi app is a first step in the development of interactive mobile application for Nepali youth pertaining to SRH. The interaction of users and experts will lead to the increased use and effectiveness of the app among Nepali youth, and ultimately improve the SRH health of this new generation. The next step is to secure additional funding to further increase the interactivity of the app, and continue to update the app to meet the needs of its users.

Resources

- Every Woman, Every Child
- Demand Generation I-Kit for Underutilized, Life Saving Commodities

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