

Original article:

Digital revolution in healthcare: Potential tool for achieving health equity in Bangladesh

Dr. Nowsheen Sharmin Purabi

Abstract

Men's engagement in women's sexual and reproductive healthcare as well as responsible parenthood is a demand of time in countries like Bangladesh, where men play a vital role, when it comes to the issue of women's ability to seek healthcare. Yet, we couldn't reach a point, where our men are well-equipped with proper healthcare information to assist their partners in a specific health complication and fully participate to take a decision on their health and wellbeing. But, if they can be aware and motivated about the importance of their active involvement in family's healthcare using ICT tools, they could definitely help their partners to take effective decision in emergency. Ensuring the use of low cost intervention like ICT tools for receiving health information will also help achieving the vision of health equity, by engaging all, regardless of gender or class barriers. **Objective:** The main objective of this paper is to assist the healthcare professionals and development partners, who are involving with advocacy through e-health awareness programs using ICT tools, to formulate their coordinated next plan of action. By formulating such an action plan, healthcare providers can easily identify the issues that need to be more emphasized, topics that are not covered by anyone yet and prevent duplication of healthcare contents that are already available online. By ensuring e-health for all, we can contribute to implementing our UHC, as part of Sustainable Development Goals (SDG).

Materials and Methods: In order to showcase the importance of digital technology in healthcare, we picked up two social media platforms that provide the highest possible healthcare information on adolescence and reproductive health and aim to reduce the rate of maternal mortality and morbidity to the bare minimum. Since the inception of the Facebook page called 'Dr. Purabi's Help Desk' <https://www.facebook.com/DrPurabisHelpDesk/> and the YouTube channel 'Nowsheen Purabi', <https://www.youtube.com/user/drpurabihelpdesk> in November 2012, these online platforms have been delivering video contents, articles on adolescent-maternal-reproductive health, contraception, non-communicable disease prevention, vaccination, nutrition, and mental health. The data we have shown are taken from the analytics/ insights of Facebook page 'Dr. Purabi's Help Desk' and YouTube channel 'Nowsheen Purabi'. For Facebook page data, we have used the monthly insight report that Facebook provides every page owner. On the other hand, the YouTube data was taken from the channel analytics, which gives a lifetime data to the channel owner. **Results:** People from reproductive age (18-34 years old) mostly watch the YouTube contents, while same in Facebook Page. 64% men are somehow likely to be active in watching healthcare contents online. Contents are viewed by people from different parts of the world (Bangladesh 88%, India 8%, Saudi Arabia 1%, USA 1%, and Australia 1%). Almost 91% of the viewer uses their mobile phones; 6% use computers and 3% percent use tablets to watch the contents. 94% male and 6% females are engaged in the posts. **Conclusion:** If we can take necessary steps to engage more people in digital healthcare by lowering the internet price, we will be able to achieve SDG as well as UHC within a short time. We need the coordination of government and private initiatives to bridge the information gap between the healthcare professionals and the patients.

Keywords: eHealth, HeForShe, Nowsheen Purabi, SRHR, UHC, DrPurabi's Help Desk, Maternal Health, Adolescent Health.

*International Journal of Human and Health Sciences Vol. 03 No. 04 October'19 Page : 201-206
DOI: <http://dx.doi.org/10.31344/ijhhs.v3i4.103>*

Introduction

Bangladesh has a great potentiality to achieve success in health sector by using Information and Communication Technology (ICT) tools. To ensure reliable, sustainable and doorstep health services to the people, the government, along with different

Non-government Organizations (NGOs) and individual healthcare providers have been working hard through a wide range of digital platforms, such as, mobile application, consultation through mobile phone helpline/telemedicine, health and

Correspondence to: Dr. Nowsheen Sharmin Purabi, Consultant, Gynecology and Obstetrics, Orion Renal and General Hospital, Dhaka. Chairman, Live Healthy Foundation, Email: dr.purabi@yahoo.com .

wellness YouTube channels and Facebook pages, newspaper articles, television and radio health shows and much more⁷. Different members of the healthcare industry are working to meet the target of the Sustainable Development Goal (SDG) to ensure healthcare for all social classes.

Furthermore, ensuring the involvement of male members in the family's healthcare can play an important role to achieve a healthy family. A large number of women in Bangladesh, especially from rural settings, still solely depend on the male members of their family for a financial cause or decision-making process. Men act as a gatekeeper to take a primary decision on the healthcare of their partners and children, such as taking a decision about where their patients should be taken, or accompany them while taking to the health center and during the treatment period. If they are not properly informed, motivated and guided they might be misguided by the traditional healers or elder members/ friends of the family, having not much authentic information on the reproductive-maternal-adolescent health care. If they are given necessary resources to be well informed about the particular health complexity of their partners or children, they will develop a positive attitude in solving in solving the problem. ICT tools can be that resource by which male partners can be informed, motivated and guided to support his family.

Universal Health Coverage (UHC) stresses on all individuals and communities getting necessary health care without any financial barrier. When a man pays out of pocket expenses for medical cost, it directly affects the financial condition of his/her family. And every year, a large number of families are bound to spend their savings and property for the treatment of chronic diseases such as cancer, heart complication or others. But if they are previously aware of their health through digital awareness building contents, and early diagnose their problem, it becomes easy to reduce the death toll and the cost of the treatment. Besides, it is easier and more cost-effective to make online contents and reach a larger number of audiences, than physically arranging awareness-raising programs in real life.

Method

In order to showcase the importance of digital technology in healthcare, we picked up two social media platforms that provide the highest possible healthcare information on adolescence and reproductive health and aim to reduce the rate

of maternal mortality and morbidity to the bare minimum. Since the inception of the Facebook page called 'Dr. Purabi's Help Desk- <https://www.facebook.com/DrPurabisHelpDesk/>' and the YouTube channel 'Nowsheen Purabi'—<https://www.youtube.com/user/drpurabihelpdesk>' in November 2012, these online platforms have been delivering video contents, infographs, articles on adolescent-maternal-reproductive health, contraception, non-communicable disease prevention, vaccination, nutrition, and mental health.

The reason behind picking up these two platforms is these platforms are run by Dr.Nowsheen Purabi, a renowned Consultant Physician and a dedicated health awareness activist, who has been working relentlessly to spread maternal and reproductive health awareness, among the underprivileged women of Bangladesh. Dr. Purabi is by some, the first Bangladeshi physician, who stepped in to provide doorstep services of healthcare information using the mass media and information technology. In countries like Bangladesh, where the idea of having healthcare awareness a fundamental requirement in leading a healthy life, has not been developed massively, these platforms have been working on making the digital healthcare contents accessible for people of all social classes, for more than past seven years. Although there are some other channels and pages who have been working on creating general online health care contents for all types of health problems, the platforms we have chosen have been generating contents on specific topics like reproductive maternal and adolescent health. This way, these platforms have been serving a specific group of audiences and anyone having needs of this online information. People can click on the contents and have the required medical advice for themselves at their convenience. They can also share this advice among their peers or help a person who may be in need of such healthcare suggestions.

These platforms have also been creating an impact on a large number of people online as the contribution has crossed the geographical barrier. Bengali speaking people over the world can avail the benefits of free lectures and videos easily, by clicking on the contents. These platforms also frequently prepare digital contents upon requests of the audience. Apart from creating awareness, these contents also help in creating a closer relationship between the healthcare professional and her patients.

Results

The data we have shown for here are taken from the analytics/ insights of Facebook page 'Dr. Purabi's Help Desk' and from the YouTube channel 'Nowsheen Purabi'. For Facebook page data, we have used the monthly insight report that Facebook provides every page owner. On the other hand, the YouTube data was taken from the channel analytics, which gives a lifetime data to the channel owner.

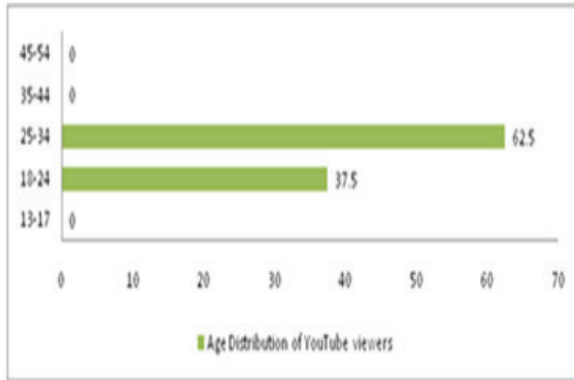


Figure 1: People from reproductive age (18-34 years old) mostly watch the YouTube contents.

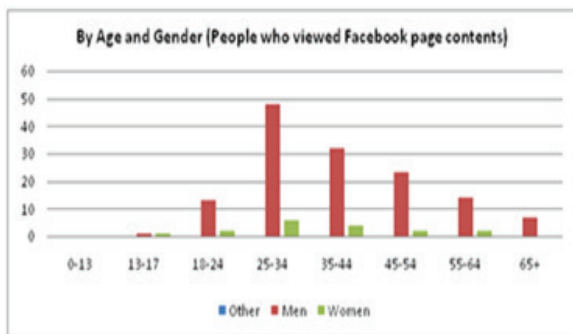


Figure 2: In Facebook people from the age group 18-54 years old watch the contents most.

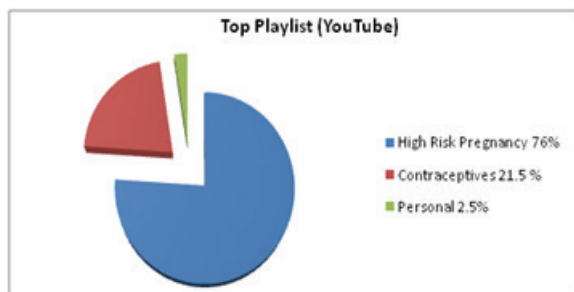


Figure 3: People of reproductive age wants to know more about the topics, such as, high risk pregnancy and contraceptives.

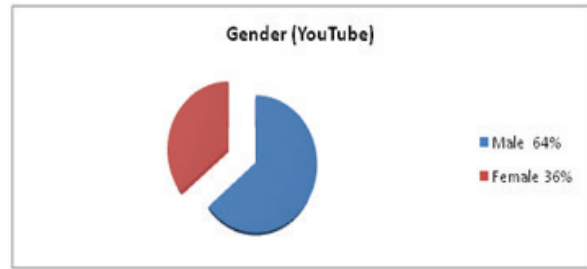


Figure 4: YouTube data shows 64 percent viewers are male.

Global System for Mobile Communications (GSM)'s 2019 Mobile Gender Gap report also shows that in Bangladesh, 86 percent of men use mobile phones and 30 percent of them are connected to the internet, while 58 percent of adult women own mobile phones and only 13 percent of them use the internet¹.

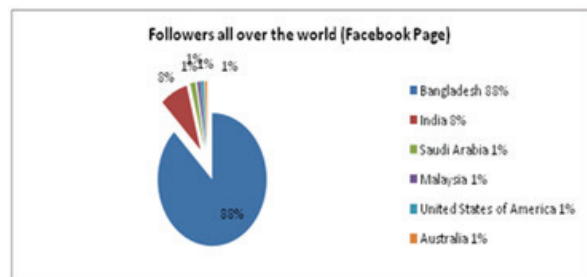


Figure 5: Along with viewers from Bangladesh, these contents have also been viewed by people all over the world.

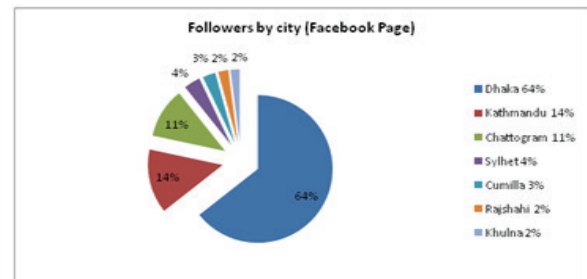


Figure 6: Facebook page followers' distribution in different cities.

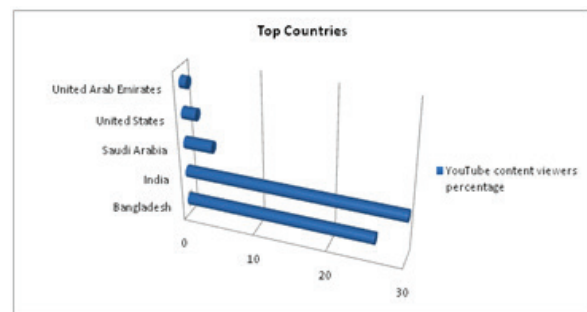


Figure 7: YouTube channel viewers' distribution all over the world.

Bengali speaking people all over the world can easily watch these contents, as these videos are uploaded in Bengali. They can easily share their queries in the comment/ message section of these contents. It is a supportive tool for health information for the immigrant Bengali speaking people since they have a language barrier with their health care providers, at the same time, the cost of healthcare is high in developed countries and the non-immigrants are often not covered by health insurance and other facilities. This is why the migrant workers, most of the times, ask specific questions in their acute problems to the doctor of these two platforms and take guidance/ help when necessary.

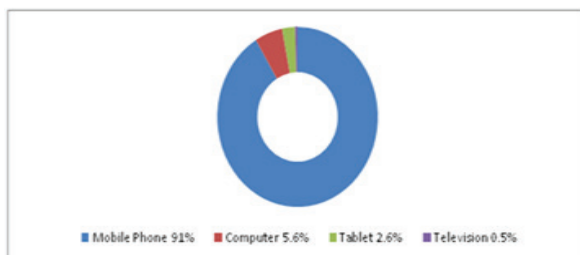


Figure 8: 91% of the viewer uses their mobile phones; 6% use computers and only 3% use tablets to watch the videos.

That means, if we can keep our mobile data cost more reasonable/ cheaper, we could easily reach a large number of audiences with healthcare information. The cost of internet in Bangladesh is yet high enough as only 30 percent of men having mobile phones are connected to the internet, while the percentage is only 13 for women having mobile phones.

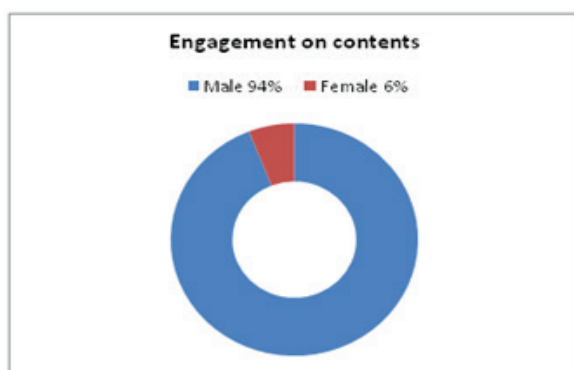


Figure 9: Post engagement is much higher in case of male (94%).

According to our findings, women need to be more proactive, vocal and motivated for their own problems. Because, it happens so many times that maybe there is an online campaign on reducing the tax from sanitary napkin thus support menstrual hygiene management, but in reality, the engaging people are mostly male and their involvement/

support is always high, compared to the female, who is actually targeted and beneficiary of the campaigns.

If we want to analyze the participation of men in the health complications of women, we can take it as a positive change of our society. Because, according to our experiences, these days, husbands are quite engaging than before and they play a crucial role in the health issues of their wives, like during their wives pregnancy or reproductive health problems. In order to get the best from them, they need to be given the necessary resources and tools. For example, in live TV shows on women's health, most of the phone calls the host receives are from the men. Because women most of the time are reluctant/ hesitant to talk to doctors.

Discussions

Although earlier, men wanted to help their partners, most of the time they couldn't do that for lack of health information resources/ guidance and women need to depend on the traditional healers to heal. But now, men are using digital technology and taking their partners to the doctors when needed. Every male member of the family loves women in their lives, be it his mother, wife or sister. What they need is just the proper guidance to support women. If we analyze their contribution, we will find that it is the husband who calls the doctor on behalf of their wives; they even watch the healthcare contents most, compared to their female counterparts. In fact, they are the attendants, who take women in hospitals when necessary.

But this doesn't mean that women need to depend on men entirely. The women are also coming forward and talking about their health problems in different support groups on real life and social media like Facebook and providing necessary support and practical assistance to others². For example, not only the well-off urban women but women living in remote villages with little education are also engaging with these peer groups with nothing but a Facebook account. These are also helping them creating awareness, eradicating superstitions and misconceptions related to pregnancy and child-rearing. Beyond that, they are also opening up for getting psychosocial supports from others because mental health is a neglected issue in Bangladesh. And still today, women become the worst victims of social stigma when they share their problems in public and sometimes within their families. Since digital healthcare awareness materials can

easily cross the geographical barrier⁵, it can be a great source of awareness for Bengali speaking people over the world who are deprived of this information due to the linguistic barrier. In many cases, where Bengali speaking people cannot open up to the foreign doctors well and describe their problem entirely.

Another important fact is, when people find something useful, they can also share the information with their peers, and they can also involve others to raise awareness on a particular topic. This is how, within a very short time, the content is circulated to a mass audience. In this method, they don't need to depend on time-consuming ways such as textbooks³, it is a long procedure to write a book and publishing it. Even, after publishing, people might not buy the book to pursue such awareness building contents. The same thing happens in case of newspaper or journal articles, as it requires a lengthy process to publish, but it might not be read by the people who don't have the opportunity to read it. Television or radio programs are also the same because maybe when they are broadcasting, people might miss the programs.

At the same time, government helpline provides varied information on various topics and the mobile phone operator's take a charge for their doctors' service. But, when people will be aware that there is a page or channel online which gives information on adolescence-maternal-reproductive health, they can easily visit these platforms in their free time, and use these contents according to necessity. For example, one might need primary information/guidance on a specific health problem; s/he can take that primary information from these platforms even before the ambulance comes.

Such online tool is also helpful for maintaining the privacy of sexual and reproductive health and rights (SRHR) issues. For example, if someone facing a problem with her menstruation, she can just take a photo of her pads and send it to the doctors. The doctors might suggest them about their problems by watching the color of her discharge.

Health awareness is also important for preventing and early diagnosing a disease. In our perspective, we are very reluctant to visit a doctor in the early stage of the disease. But if a patient can learn about the primary symptoms/information of a particular disease, it will help them to take the decision to visit the doctor earlier. In this way, the disease

can be early detected and the chance of recovery becomes high. It also reduces the duration and expense for treatment.

Besides, people need to spend time and money or they require an accompanied person, for which they delay to visit the hospital with primary symptoms and signs. If we can strengthen the e-health model, we can avoid such inconvenience easily.

This also allows patients to take a follow-up or a second opinion from the physician of this platform. If people are well informed about their disease, they become empowered. They can participate in the decision-making process of the treatment. This also bridges the gap between the doctors and patients which is a demand of time for Bangladeshi context.

These platforms also act as a tool to disseminate important health notices⁷. For example, maybe there is a free screening program/ campaign running in an area and these platforms make an announcement of the schedule of the above programs. Thus people can be informed about the campaign and use it for their context.

These platforms are also helping the patient by allowing online doctor's appointment, video call, and tele-prescription. It is also an important teaching tool for the field level health workers for raising their advocacy skill⁷.

Challenges and Risks

One very significant challenge in sharing healthcare information through ICT tools is sometimes people might get sub-optimum information on a specific problem⁷. So, they cannot use the half-baked information in their need. The understanding capacity of everyone is not the same or the educational qualifications or background of the viewers is also an important factor to grasp healthcare information delivered by a healthcare professional.

Although it is beneficial for creating awareness among the public through ICT tools, the price of internet is relatively higher in Bangladesh. People who lack access to the internet or have limited knowledge of using technology might face difficulties to utilize these resources. Currently, it is used by urban or small town people, in remote and rural areas where doctors are not always available; the affordability of using this technology is a big obstacle to address there. For example, many of the people in rural area don't have the money to pay for the internet to watch health awareness contents. If we can lower the price of mobile data,

they could easily use them and the health equity would also be achieved quickly.

Apart from these challenges, there are some risks too. We must identify/ use authentic platforms creating authentic information for all. Because, there are a lot of fake pages, which produce duplicate contents infringing the copyrights of the actual content makers or creating contents that are not based on scientific explanation. In fact, the fake pages sometimes suggest misleading/ confusing information for public health with a 'click bait' title to attract viewers⁴. This way, people might lose faith in the real contents, which are produced with hard work. Sometimes people become confused with diversified information on a singular health problem from diverse platforms. This way, people confuse to decide on what to do in a specific health complication.

Besides, solely depending on the internet for getting healthcare information can cause internet obsession, which might affect individual's productivity in long run⁶.

Conclusion

By all counts, and with proven results, it is no wonder that if we can take necessary steps to engage more people in digital healthcare by lowering our internet price, we will be able to achieve our SDG as well as UHC within a short time. What we need is the coordination of government and private initiatives to bridge the information gap between the healthcare professionals and the patients. Since digital platforms require funds for promoting the information or healthcare contents, external funding/ partnership can also help here to cover more people.

Disclaimer

All the above initiatives are solely taken by Dr.Nowsheen Purabi without any external funding. Funding crisis sometimes slows her activities. If likeminded organizations [Both Government and NGOs] refer these platforms to their beneficiaries, it will be able to reach more people. It will also save the cost of producing a similar type of content by other organization.

Conflict of interest: None declared.

References :

1. Muhammad Zahidul Islam, Mobile, Internet Use: Women far behind men. The Daily Star, March 8, 2019.
2. Nilima Jahan, Solidarity through Social Media. The Daily Star, February 15, 2019.
3. Nina Bjerglund Andersen, Thomas Söderqvist .Social Media and Public Health Research. University of Copenhagen: Medical Museion ; 2012.
4. Kapil Chalil Madathil, A Joy Rivera-Rodriguez, Joel S Greenstein and Anand K Gramopadhye, Healthcare information on YouTube: A systematic review. Health Informatics Journal 0(0) 1–22. Clemson University, USA; 2014.
5. V. Welch, J. Petkovic, J. Pardo Pardo, T. Rader, P. Tugwell, Interactive social media interventions to promote health equity: an overview of reviews, HPCPD : Volume 36-4, May 2016. Health Promotion and chronic disease prevention in Canada; 2016.
6. Deb Levine, Using Technology, New Media, and Mobile for Sexual and Reproductive Health. Sexuality Research and Social Policy March 2011, Volume 8, Issue 1, pp 18–26: 2011.
7. C. Lee Ventola, Social Media and Health Care Professionals: Benefits, Risks, and Best Practices. P&T Community: 2014.