Point of View

Using videos to mitigate risk factors for cardiovascular disease and diabetes mellitus in risk communication; sharing experiences from Singapore

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Digital health encompasses various product categories such as telemedicine, wearable devices, software including mobile applications, web applications (apps) and artificial intelligence (AI) to address various health needs using information and communication technologies (1). As Asian countries, both Sri Lanka and Singapore have taken similar approaches to eHealth (electronic health) and mHealth (mobile health) in the recent past. They have also faced the COVID-19 pandemic to the same extent, leading to the adoption of more digital platforms in healthcare. The aim of this article is to present some digital health tips practised in Singapore for risk communication and possibly transfer them as viable and cost-effective interventions to the public health system in Sri Lanka.

In the Singapore health system, the implementation of mobile or web-based applications for health management among patients, at-risk groups and healthy individuals has become popular. There are personalised health management and wellness applications developed by various health clusters for major chronic diseases (2), especially for primordial and primary prevention of non-communicable diseases (NCDs). The major categories of digital health initiatives in Singapore include (2-3);

- Fitness trackers, e.g., Fitbit, Apple Watch
- Assisted living sensors, e.g., wearables for the elderly that track location, detect falls and trigger alarms
- Personal health data, e.g., Apple Health Kit
- Medication management apps, e.g., prescription reminders and tracking to improve treatment adherence
- Maternity and family apps, e.g., to monitor baby's growth, vaccinations, medications, etc.
- Apps for health management, e.g., smoking cessation, weight management, etc.

Many of these apps have been set up as module-based programmes and consist of the following:

- *Expert videos* - Various experts specialised in the areas of cardiovascular disease (CVD) and diabetes mellitus give brief descriptions on risk factors. Nutritionists, dieticians, pharmacists, physiotherapists and smoking cessation ambassadors are the main groups of professionals involved. They give simple tips on weight management, maintaining an energy deficit, active lifestyle, tobacco cessation and basic rules for taking medications. Apart from

imparting knowledge, these videos lead to individual empowerment for a life free from NCDs.

In the local context, there are few personalised health apps and freely available software, however, the enthusiasm for its use has not been satisfactory in the community as the reach of other entertaining social media. This could be because health information is predominantly presented in book form, with large chunks and medical jargon. Unlike in Sri Lanka, there are various paramedical professionals in Singapore who are majorly involved in these risk communication activities and do documentaries. The aim is to be closer to the audience, to avoid the medical/technical jargon of doctors and to prevent the "white coat syndrome" (4). Apart from this, many valuable expert videos are uploaded on social media without bundled into a single platform. The Sri Lankan healthcare sector can develop attractive and user-friendly applications/digital platforms or integrate these available resources into existing personalised health/wellness applications.

- *Drama video series/dramatic vignettes* - The main goal of this type of video is to convey health messages through a drama series. Different characters that we encounter in the society are inserted into these drama plots. They represent healthy people, people with CVD and DM risk factors, people who easily fall back into old habits, some dedicated people and family physicians/ healthcare providers. The stories cover different aspects of the diseases, the challenges of finding health, sharing experiences, learning from each other, and getting support from wellness and personalised health applications.

  Unlike many health education documentaries in Sri Lanka, the humour and attraction between characters in these drama videos have captured the audience's attention, and the episodic nature avoids the boredom of the usual "health" news for ordinary people. The Sri Lankan public health providers can also come up with new communication strategies for health messaging besides the traditional way of presentation. This strategy has been successfully used in tele dramas for health education about leprosy and epilepsy in the past, thus communicating about NCD risks will not be impossible.

- *Peer group videos* - This type of video footage includes discussions within a small group of people with similar health conditions. These groups discuss various positive health milestones in preventing NCD risk factors that they have achieved, the difficulties they face, the challenges, and how to sustain them. The main idea is to evoke empathy and a sense of commitment to health among the audience (5).

  In Sri Lanka, there are several documentaries with face-to-face communications between health professionals and the patient/client. Peer group discussions is the current trend for individual and community empowerment. Here, videos highlight the importance of self-care behaviour and dispel myths and taboos by having a responsible health professional provide a commentary/ take-home message as an integral part of risk communication.

Plain language guidelines are one of the priority interventions to improve health literacy among Singaporeans (6-7). Thus, the approach of visual communication through the use of simple video-based education has been successful in digital health across the country. On the other hand, the biggest challenge for the Sri Lankan government could be the high production costs of this type of video for digital

health applications for the public health system. High telecommunication charges, uneven signal coverage across the island by service providers and other technical issues may pose a problem for the Sri Lankan audience.

The practicality of personalised digital applications in health promotion may be the next question we face. However, the basic digital culture shows us the possibility of such interventions in future healthcare in Sri Lanka. Broadly, the state of digital adaptation in Sri Lanka at the beginning of 2023 shows that internet usage is 14.58 million and accounts for 66.7% of the total population. This figure shows an increase of 0.3% (n=43 000) compared to last year. The number of social media users was 7.2 million, representing nearly 33% of the total population in January 2023. Nearly 36.18 million mobile connections were active during this period, a rate higher than the overall population (165.5%) (8). Sri Lanka has a well-functioning public health network, and these new approaches can be used to improve health literacy and the bottom-up approach to health promotion in broader forums to address risk factors related to CVD and T2D among Sri Lankans.

Conclusions & Recommendations

Asia today is undergoing a rapid epidemiological transition, with the healthcare system burdened with an ageing population and rising costs of managing NCDs. Today, digital health seems to be the roadmap for effective health communication worldwide, not excluding Asian countries such as Sri Lanka and Singapore. With similar patterns of multicultural and NCD challenges, we can adapt and look for opportunities for cost-effective, efficient, and attractive multiple interventions that work well in developed Asian countries. Creative ways of communicating risk in Singapore have been explored in this article, such as video-based risk communication methods that can engage large audiences and teach self-care behaviours for the public health in Sri Lanka, via both population and individual approaches as needed.

Author Declarations

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