



## Perspective

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## Promotion of sexual and reproductive health in Pakistan—The role of technology and online awareness

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Digital health innovations such as online webinars, websites, blogs, and health apps have been associated with increased sexual and reproductive health (SRH) among the general population. Many studies have been conducted in developed countries in the West; however, little research has been conducted in low-income countries, especially in Pakistan. The socioeconomic instability and the government's lack of awareness and knowledge have resulted in no regulations being placed to incorporate telehealth in medicine. The healthcare departments must take into consideration the life-changing impact of telehealth and the barriers that prevent it in becoming known, to reduce the incidence of unsafe abortions and sexual health practices that prove to be a stigma in society.

Approximately 890 000 abortions are said to be conducted by Pakistani women every year, between the ages of 15-49, which is drastically high[1]. Abortion is illegal as stated by the law; being a social stigma, women tend to avoid seeking medical help. Females therefore opt for unsafe practices to eliminate the fetus, and this results in an extremely high death rate. The major reason for terminating the baby is due to unwanted pregnancy, highlighting the lack of awareness of safe, cheap, and easily accessible contraceptives to the general population. In the past recent years, there have been many reports of young females reporting to tertiary care hospitals dead, due to unsafe abortion practices including a headline news about a young student in 2021, Gujrat, Pakistan[2]. She, being unmarried and pregnant resorted to a hushed procedure, as having intercourse outside the rails of marriage is disgraceful and socially unacceptable in the community. Mother child healthcare is just one of the aspects that is annihilated; geriatric medicine, access to hygienic practices and basic medical and reproductive education is compromised in Pakistan. This is majorly since approximately 62% of the population resides in rural areas, in contrast to only 38% in urban settings[3] with the peripheral areas being neglected because of the low-income status of the nation.

With ongoing research, it has been proven that by providing access to online sexual and reproductive health awareness, there has been an increase in safe sex practices, a decrease in sexually transmitted diseases such as acquired immunodeficiency syndrome (AIDs), hepatitis B, and a decrease in morbidity and mortality due to reproductive health compromise. Numerous studies have been conducted in developed countries such as the UK, where a randomized control trial was carried out called the JACK trial, where 8 000 young individuals were taken from a wide range of backgrounds to eliminate heterogeneity[4]. Digital health

communication was implemented using online resources and mobiles to allow for effective communication about sexual health between parents and children and it concluded in a positive and beneficial result with students being aware of safe sexual and reproductive practices. However, very few studies have been conducted in low-income, developing countries to show a positive correlation between online awareness and an improvement in sexual and reproductive health, especially in Pakistan. In 2016, the World Health Organization (WHO) performed a telemedicine survey and found that there were no rules or regulations in Pakistan relating to the use of telemedicine[5]. Implementing telemedicine programs can therefore be difficult due to a lack of awareness and no set law. Despite this, studies have been shown to improve health significantly showing a strong association in the incorporation of telemedicine in various aspects of health care providing an efficient method for the population to seek medical attention.

In comparison to traditional healthcare, telemedicine effectively addresses patients' needs with increased convenience and reduced costs, which can be lifesaving in the developing countries such as Pakistan[6]. It enhances healthcare accessibility in remote areas by decreasing and cutting down transportation expenses, saving time of the many farmers and laborers that reside in those areas, and allowing patients to avoid taking time off from work, which is particularly significant given the challenging socio-economic conditions in rural areas[7]. These positive aspects of telehealth can contribute to increasing patient compliance among the rural population, encouraging timely medical care seeking. Urban areas also benefit from telemedicine by alleviating workload and stress on understaffed healthcare facilities which further prevents physician burnout[8] and preventing overcrowding of the previously congested and resource limited hospitals, as patients can receive medical attention from the comfort of their homes.

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In Pakistan, rural residents often face challenges traveling long distances to reach city hospitals, posing great risks to maternal and fetal health. Digital health services overcome these obstacles by connecting patients with their doctors and healthcare workers through online platforms. Several studies report that telemedicine has saved lives in lower-income countries by mitigating complications that would otherwise lead to fatalities due to delayed treatment[9].

Furthermore, studies have been performed showing telehealth being instrumental in enhancing maternal care, including prenatal, antenatal as well as post-natal care, offering more patient satisfaction through educational and supportive aspects with meeting schedules that are flexible[10]. Telehealth also enhances accessibility to specialized neonatal care, leading to improved patient outcomes, and lowering the overall cost of care for neonates especially in the rural settings[11].

Moreover, it also facilitates reproductive counseling for women and girls in Pakistan. Collaborative efforts by non-governmental organizations (NGOs) and organizations like Aahung, the United Nations Fund for Population Activities (UNFPA) Pakistan and Intelligent Project Automation System (IPAS) have provided training to physicians in digital health and telehealth consultations.

In the year 2020, IPAS Pakistan, a nonprofit organization dedicated to enhancing access to safe abortions and contraceptives, collaborated with Sehat Kahani, a regional telehealth platform to introduce a hybrid telemedicine and community model, providing complimentary contraception, safe abortion, and various gynecological services. Essential to this initiative were lady health workers who play a key role, connecting women with online consultations[12].

During the COVID-19 pandemic, there was an immense struggle for pregnant females to receive sufficient care and telemedicine proved to be a cost-effective method to help females receive sufficient maternity support. Online sexual health programs can therefore gain significant attention from the young generation to bring awareness on secure sexual practices and contraceptive methods that have been stigmatized in society. This can decrease the number of unwanted pregnancies which make up 37% of the total in Pakistan and unsafe abortions resulting in a greater rate of survival. In other low-income countries such as Bangladesh, a case study evaluated the effect of telemedicine programs in improving the antenatal and postnatal care of females and observed a statistically significant rise in health and a decrease in gender-based violence[13].

In conclusion, even though Pakistan ranking 79th globally on the Inclusive Internet Index 2022, which measures the ability of citizens to use the internet, Pakistan has the strongest performance being affordability and despite there being evidence of technology being proven to be an effective and socially acceptable method of positively influencing reproductive health, the incorporation of telehealth seems to be a great challenge. This is due to the lack of awareness of such programs and insufficient training of healthcare professionals in this area of expertise. Therefore, it is essential to introduce nationwide awareness of online and mobile technologies and lay out rules and regulations to allow virtual practices in improving online sexual and reproductive health.

## Conflict of interest statement

The author declares that there is no conflict of interest.

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## Author's contributions

Mawiya Sana worked on the conception of the work, drafted the article, carried out critical revision of the article and proof read the completed work.

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