Editorial

Mobile Telephones to Improve Mental Health Care

Technology has brought a revolution in the health sciences in the past few decades, and has also improved diagnostic research abilities in mental health. However, the application of digital technology in delivering mental healthcare has been, relatively, a new discovery. Terms such as mobile health (mHealth) or electronic health are in common parlance. Digital healthcare is fast becoming a reality, not through desktops or laptops alone, but through all kinds of mobile devices such as smartphones and notebooks.

A Google search for 'mobile apps for anxiety disorders' yielded 29 200 000 results in 0.30 seconds; these applications (apps) were for diagnosis, to determine propensity for anxiety and nervousness, apps to beat stress, self-help for anxiety and depression, relaxation apps, game apps, apps for mental health professionals, meditation apps, and so on. The list is endless, claiming all benefits and no risks.

WHO[1] sought to study the use of mobile and wireless technologies to support the achievement of health objectives in its 2011 report, 'mHealth: New horizons for health through mobile technology'. It listed 14 categories of mHealth services, which have been in use: Health call centres, emergency toll-free telephone services, managing emergencies and disasters, mobile telemedicine, appointment reminders, community mobilization and health promotion, treatment compliance, mobile patient records, information access, patient monitoring, health surveys and data collection, surveillance, health awareness raising, and decision support systems. WHO[2] has further, in its Mental Health Action Plan 2013–20, recommended the use of electronic and mobile health technologies for promotion of self-care.

Smartphones and the internet have penetrated personal and social lives even in low- and middle-income countries. There are over 1.1 billion subscribers to wireless telephones (mobile phones) in India with an overall wireless teledensity of 91.74% (Telecomm Regularity Authority of India press release No. 50/2017). The number of broadband subscribers has increased to 291.61 million.

Mobile devices are increasingly being used to support public healthcare, with recognition of mHealth as an important interdisciplinary field. Mobile devices can support the delivery of healthcare in many formats; for example, enabling patients and providers to send and receive call and text messages, accessing websites, providing clinical support, capturing and transmitting data, and using health-focused applications.[3]

There are several peculiarities of mental health in India: Besides a huge mental health gap of 80%, patients who do report to mental health facility drop out of treatment after one or two visits, become drug non-compliant for various reasons either by stopping the medicines altogether or taking fewer doses than prescribed, or do not follow advice on diet, exercises and regular follow-ups. Without doubt mobile devices can play an important role in mental healthcare delivery in such situations.

Sood *et al*.,[4] in a sample of patients attending the outpatient department of a tertiary care hospital, found that patients were using smartphones for multiple reasons and agreed that they could also be used to receive alerts for a scheduled appointment in the hospital, reminder to take medicines, recording and reporting of side-effects of a drug, receiving information on a mental illness, tips for psychological treatments, and educational messages. This cross-sectional study examined only the feasibility of using mobile phones. There was no actual application of mobile apps in mental healthcare. However, it did emphasize the acceptability of mobile phones by Indian patients in alerting them of

certain services. Brian and Ben-Zeev[5] reviewed the penetration of mobile technology in Asia to conclude that mHealth programmes could improve mental health literacy, provide greater access to mental health services, strengthen outreach programmes, have less reliance on hospital visits, and improve drug compliance. They argue that mental healthcare is handicapped by slow dissemination of services and limited workforce. Digital technologies, including the internet, mobile applications, sensors and others have the potential to improve the delivery of health interventions. Digital technology enables real-time collection of data and provide results for immediate clinical interventions. Hence, enhanced patient outcomes are expected. However, the authors point to certain barriers. Some patients may not adapt to new technologies, some may find internet to be too intrusive and invading their privacy. Additionally, even therapists may be reluctant to implement the technology for issues such as security of data. Even software companies may be reluctant to develop digital health tools due to the regulations in healthcare systems. That is why, frequently, these applications are geared more towards consumers, and not healthcare providers. Finally, there is still a huge divide between internet users and non-users.

The paper, 'Feasibility and accessibility of using mobile telephonic contact to improve follow-up in patients with alcohol dependence syndrome' in this issue of the *Journal*,[6] studied the feasibility and acceptability of following up patients with alcohol dependence syndrome (ADS) through telephonic means in the psychiatry department of a large tertiary care hospital. The outcomes estimated were the proportion of new patients with ADS who achieved and maintained abstinence over a 6-month period after undergoing routine treatment according to the hospital protocols, and to study the factors associated with abstinence. The authors were able to obtain an excellent follow-up, and improve the outcome measures by 35.18% at the end of a 6-month period among new patients with ADS, through the use of mobile technology.

Mental healthcare through the use of internet and smartphones is on the threshold of an exciting phase, though electronic interventions in psychology have been in use for a long time. The best part of the smartphone is that a person carries it in one's pocket and can launch the app just by a simple touch. It is available round the clock and is likely to be cost-effective. However, most apps currently available in the market are not evidence-based. It is also not clear if indiscriminate use can have any harmful effects. Some persons may be tempted to self-diagnose and self-prescribe an app-based therapy, akin to self-medication. Since all these mobile apps collect people's data, there is a potential risk of data theft and violation of privacy laws.

Conflicts of interest. None declared

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