



Letter to the Editor

Use of mobile phones by patients with serious mental illness attending a general hospital psychiatric outpatient service in India



1. Introduction

Patients with Serious Mental Illness (SMI) residing in low and middle-income countries like India, especially those in remote areas, are often unable to access treatment leading to treatment gap of about 75% (Gururaj et al., 2016). Mobile phone technologies can narrow this gap by linking the meagre mental health services with the patients with SMIs and their caregivers (Sood et al., 2016). Mobile phone penetrance in India has increased exponentially; with a teledensity of 92.84% reported in March 2018 (Telecom Regulatory Authority of India Annual Report, 2017-18). We have reported in our previous work that 87.7% patients visiting a general hospital outpatient service were using mobile phones (Sood et al., 2017). In this letter, we report on mobile phone use among patients with SMIs, and to assess feasibility of using mobile phones in improving service delivery.

2. Methods

The study was conducted in psychiatry outpatient services of a tertiary care public hospital in India. Ethical clearance was obtained from the Institute Ethics Committee for the study (IEC/NP-345.08.10.2014). Every fifth patient aged 18–60 years visiting walk-in clinic, and every fifth patient visiting follow-up clinic over three months were interviewed after obtaining informed consent. Only those patients who fulfilled criteria for SMI, diagnosed as having schizophrenia, schizoaffective disorder, other psychotic disorders, bipolar disorders and depressive disorders diagnosed as per International Statistical Classification of Diseases and Related Health Problems 10th Revision (WHO, 1992), were recruited for the study. The data was collected using a semi-structured questionnaire

3. Results

A total of 350 adult patients were interviewed, socio-demographic, and clinical details of these patients are described in our previous work (Sood et al., 2017). Out of 350 patients, 145 (41.4%) patients suffered from an SMI. The mean age of patients with SMIs was 31.76 years (± 9.95). Majority were males (66.9%) and had received some form of education (91.7%). The primary diagnoses were schizophrenia ($N = 33$, 22.8%), bipolar affective disorder ($N = 32$, 22.1%), severe depressive episode ($N = 44$, 30.3%), recurrent depressive disorder ($N = 20$, 13.8%), unspecified psychosis ($N = 10$, 6.9%), acute transient polymorphic disorder ($N = 4$, 2.8%) and persistent delusional disorder ($N = 2$, 1.4%). Mean duration of illness of was 7.42 (± 2.43) years, and mean duration of treatment was 2.37 (± 4.72) years.

A mobile phone was possessed by 84.4% ($n = 123$) of the patients. Majority of patients with a mobile phone were aware of basic usage of mobile phones; 83.4% ($n = 121$) used it to make calls, 57.2% ($n = 83$)

for sending/receiving messages, 43.4% ($n = 63$) used the clock/alarm function and 50.3% ($n = 73$) used the contact list feature. When compared to the rest of patients ($n = 205$), there was no significant difference in ownership of a mobile phone. Regarding usage of common functions of mobile phone also, there was no significant difference except in usage of the contact list. Patients with SMI were found to use contact list significantly less than the rest of patients ($\chi^2 = 4.672$, $p = 0.03$).

The patients were asked about their perceptions on whether mobile phones could be used as an aid in their treatment. About two thirds ($n = 101$, 69.7%) of them reported that mobile could aid in their treatment and 64.1% ($n = 93$) believed that it could be used for setting reminders 51.7% ($n = 75$) for appointment and reminder to take medicine, 51.7% ($n = 75$) for advice related to precautions, 41.4% ($n = 60$) for advice related to exercise and other activities, 33.8% ($n = 49$) for recording & reporting side effects, 30.3% ($n = 44$) for receiving educational messages related to illness, and 20.7% ($n = 30$) for advice related to diet. Again, when compared to the rest of the patients, there was no significant difference in most of the perceptions related to using mobile phones as an aid in treatment.

4. Discussion

This study reported mobile phone ownership amongst SMI patients to be around 84%. This figure was surprisingly higher than that reported from high income countries. Millet et al. from US reported that 73% of patients with schizophrenia owned a mobile phone. Similarly, Torous et al. reported mobile ownership of approximately 66% amongst patients suffering primarily from psychotic disorder amongst which only 10% had mental health applications installed in their phones (Torous et al., 2018). A meta-analysis of 15 studies from 2007 to 2015, reported overall mobile phone ownership rate to be 66.4% in patients with psychosis (Firth et al., 2016). Majority of patients subscribed to the belief that mobile phones can be used to aid in their treatment. These findings are in line with studies from high income countries which reported that 58% of SMI patients were interested in text message reminders about appointments, and 40% were interested in reminders to take medications or to inquire about symptoms, medication side effects, or other problems (Miller et al., 2015). Video conferencing for imparting parent training in attention deficit hyperactivity disorders and video use to improve medication compliance have been reported from India (Shah et al., 2019; Gowda et al., 2019) Mobile technology also has been recommended to use for prevention of suicide in farmers (Soron, 2019).

A potential limitation of our study is that the sample was taken from a tertiary-hospital setting of a metropolitan city. Hence, the patterns of mobile ownership and usage may not reflect that of patients in the community, especially of those from smaller towns or rural areas. Also,

this study only explored the patient's knowledge and usage of the basic functions of the phones. The proportion of patients who were using smart-phones and were aware of its advanced features could not be assessed.

This study clearly demonstrates feasibility of developing mobile-based interventions for patients with SMI in India.

Financial disclosure

None.

Declaration of Competing Interest

None.

Acknowledgement

None.

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