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'SMS' for mental health – Feasibility and acceptability of using text messages for mental health promotion among young women from urban low income settings in India

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ABSTRACT

Objective: The current study assesses the acceptability and feasibility of mobile text messages for promoting positive mental health and as a helpline among young women in urban slums of Bangalore.
Methodology: Forty girls in the age range of 16–18 years from urban slums received messages every day for a month. They could call or message back or give a 'missed call' to the same number whenever they had emotional problems or felt like talking to a counselor. The received responses in the form of return texts, missed calls and return phone calls were recorded. Feedback about the feasibility and acceptability of the mobile messages was collected after a month.
Results: 25 out of 40 (62.5%) participants called back, asking for mental health services and to say they felt good about the messages. 23 of 40 (57.5%) messaged back regarding their feelings. 62% reported that they felt supported with the mental health messages. Male family members of nearly half of the participants called back to check the authenticity of the source. Most women did not face any problems because of the messages.
Conclusion: This pilot qualitative study indicates that mobile text messages are a feasible and culturally acceptable method for mental health promotion and prevention among young women from urban slums in India. Issues such as consent from the woman and family, ensuring confidentiality and providing authentic and reliable support services, need to be taken into account before attempting to scale up such a service, particularly in vulnerable groups.

1. Introduction

Mobile health (or mHealth) is defined as "the use of mobile and wireless technologies to support the achievement of health objectives". This approach includes diagnostic and treatment support, remote monitoring/data collection, education services and tools to improve communication and training for healthcare workers (WHO, 2011).

Mobile technologies for mental health have been gaining ground in several countries across the world. Personalized text messaging has been used to manage appointments among youth with mental illness, to record mood state in bipolar disorder, in assessment of schizophrenic patients, to prevent relapse in alcohol use disorder, support patients with bulimia nervosa, evaluate mood among patients with depression, communicate medication changes and provide expressions of support (Furber et al., 2011; Spaniel et al., 2008; Granholm et al., 2012; Bopp et al., 2010; Moore et al., 2012; Agyapong et al., 2013; Mäkela et al., 2010). Personalized text messages have also been used for substance cessation (Free et al., 2009; Rodgers et al., 2005).

Mobile health has also been used widely in physical health for education, monitoring or management of health related issues such as medications, reminders for appointments, self monitoring symptoms and promoting health related information's among people (Buhi et al., 2013; Cole-Lewis and Kershaw, 2010; Fjeldsoe et al., 2009; Krishna et al., 2009; Sharma et al., 2011; Shet and De Costa, 2011).

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According to a recent survey conducted in the US, 78% of adolescents use mobile phones. The preferred way of communication is text messaging compared to voice calls, social sites, e-mail and even face to face talking. This survey also reports that compared with boys, frequency of receiving and sending text message is comparatively high in girls (Madden et al., 2013).

A literature review by Joyce and Weibelzahl (2006) has discussed several barriers among youth in seeking help from counseling services related to fear, privacy, shame, guilt, embarrassment, lack of trust in others, the feeling that one should be able to cope on one's own and not knowing what support is available or how to get it.

However, in youth outreach services, young adults find the use of mobile phone and text messages a safe and practical way of maintaining contact and coordinating meetings with mental health professionals (Furber et al., 2011). Youth have also found it acceptable to have data about their daily activities, behaviors and attitudes collected through an automated text system (Garcia et al., 2014).

India already has several mHealth pilot programs in place and is working to integrate mHealth into its health care systems (Ganapathy and Ravindra, 2008). These include maternal and child health services, tuberculosis treatment services and anti retroviral therapy adherence programs. Many studies in India, have reported mobile phone communication as an effective and acceptable tool in management of diseases such as Type-2 diabetes, tuberculosis, epilepsy and HIV for both patients and health care providers (Ramachandran et al., 2013; Elangovan and Arulchelvan, 2013; Bigelow et al., 2013; Shetty et al., 2011; Bali and Singh, 2007; Gautham et al., 2014).

Based on current research in India, it appears that text messages are the most preferred mode of communication (Priyaa et al., 2013; Prasad and Anand, 2012). Text messages rather than pamphlets are preferred for educational information related to oral health, prevention of communicable and non-communicable diseases such as HIV/AIDS, tuberculosis and addressing sexual risk behaviors (Sharma et al., 2011; Deglise et al., 2012; Schneider et al., 2012). Researchers have shown that adherence to treatments for HIV, diabetes and tuberculosis has improved with sending regular text messages and SMSs reminders to patients (Elangovan and Arulchelvan, 2013; Shetty et al., 2011; Rodrigues et al., 2012; Manoharan et al., 2012; Sidney et al., 2012). Bali and Singh (2007) in their study in a rural area of northern India, found that people used their mobile phones for seeking medical consultations and help was sought mainly for skin, respiratory, mental health and sexual problems.

Aggarwal (2012) in his recent review has discussed how mobile technologies are a valuable method for mental health interventions in South Asian counties. The wide usage and cultural acceptability of mobile phones can be harnessed for enhancing mental health literacy and ensuring help seeking in these countries. In specific situations mobile phones may have an added advantage, such as among women who are often denied access to mental health care in patriarchal societies and in remote areas where mental health services are not available (Farooqi, 2006). Mobile phones can also be a useful way of seeking information in situations where stigma can prevent information and help seeking, among those who are psychologically disturbed (Gulliver et al., 2010). In low and middle income countries, smart phones are still not affordable by the large majority and there is a need to rely on text messaging using a basic handset as a means of communication.

While using mobile phones may be an acceptable way of addressing mental health in young women, ethical issues in the use of mHealth in the South Asian context, such as confidentiality of the text messages, the need to inform the user to delete the messages, consent issues and the privacy of minors who may seek counseling without parental consent also need to be addressed (McGee, 2011). Issues such as the need for caller identification so that those at the receiving end are assured of a legitimate service and concerns related to its use among adolescents less than 18 years old are other issues that need to be examined.

There have been recommendations that before mHealth is used widely, there is a need for more qualitative studies among users. The questions that need to be addressed include – how comfortable do users feel about discussing mental health issues using text messages, how does one communicate in low literacy situations, what barriers might need to be overcome while using text messages for mental health, what are the confidentiality concerns and what is the nature of content that is most acceptable? Understandably, the answers to these questions might be different for men and women, for different age groups and for different clinical conditions.

Research from India has shown high rates of mental health problems and suicidal behavior in youth population (Pillai et al., 2009; Sidhartha and Jena, 2006). A study conducted among rural and urban young people from Goa, India, indicated that rates of suicidal behavior were higher among girls than boys. Gender discrimination from the society and from parents, physical violence, sexual abuse/violence and psychological distress were factors that were found related to increasing suicidal behavior among young people (Pillai et al., 2009). Many young people do not seek help for mental health problems due to various personal and structural barriers such as: fear of stigma associated with mental health disorders (e.g., it is seen as a weakness); concerns about confidentiality; lack of knowledge about services; the idea that symptoms of psychological distress reflect only a temporary age crisis; and lack of appropriate responses from both peers and adults. Many of these barriers relate to limited mental health literacy. There is extensive need to improve awareness, to plan interventions to improve recognition and enable help-seeking for mental health problems.

While studies from India indicate that mHealth is feasible and acceptable in illness management, not much is known about its utility in mental health interventions. There is also a lack of data on what youth feel about mHealth interventions.

This paper is an offshoot of a larger study entitled – mental health of girls growing up (*MOGGU* – flower bud) which focused on various low cost interventions in order to promote mental health and enable early help seeking among young women living in low income urban settings.

The main objective of the study was to assess feasibility and acceptability of using mobile phone text messages as a means of sending information on positive mental health and providing a helpline service to young women in low income settings.

2. Methodology

As a first step, focus group discussions were conducted with 26 girls (eight in three groups) and 20 mothers (six in three groups), to understand the issues and concerns of young women between the ages of 16 and 19 years, living in urban slums. Feasible and low cost mental health interventions were also discussed and most group participants, including mothers felt that the mobile phone was a friendly and acceptable tool for interventions.

Based on the findings from the focus group discussions, the current study was initiated. Forty girls from low-income families who were attending the same college located in an urban slum gave consent for the study. Consent of a parent or guardian was also taken if the girl was below 18 years of age. All the young women gave consent for receiving mobile messages and a