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## USE OF MOBILE PHONES TO PROMOTE PHYSICAL ACTIVITY IN A RURAL POPULATION OF DELHI, INDIA

**Malvika Sharma<sup>a</sup>, Bratati Banerjee<sup>a</sup>, G.K Ingle<sup>a</sup> and Suneela Garg<sup>a</sup>**<sup>a</sup>Maulana Azad Medical College, India

**Introduction:** The rising trend of non-communicable diseases (NCDs) has led to a “dual burden” in low and middle-income (LAMI) countries like India which are still battling with high prevalence of communicable diseases. Insufficient physical activity is one of the behavioural risk factors responsible for development of NCDs. Mobile phone technology is viewed as a promising communication channel that offers the potential to promote behaviour change among vulnerable populations. An advantage of mHealth interventions is that they can be delivered to many individuals in a cost-effective manner and in a shorter time.

**Methods:** A community-based “Before-and-After” Intervention study was conducted on 400 subjects, over a period of one year in Barwala village, Delhi, India. A mHealth intervention package consisting of weekly text messages and monthly telephone calls addressing lifestyle modification for behavioural risk factors of NCDs was given to the intervention group, compared to no intervention package in control group. Primary outcome of the study was the change in level of physical activity. Secondary outcomes were change in physiological risk factors (BMI and blood pressure) and metabolic risk factors (Fasting blood glucose, total cholesterol, LDL and HDL cholesterol). The study was registered with Clinical Trials Registry of India (CTRI/2017/03/008264)

**Results:** Physical activity was found to increase significantly in intervention group as compared to control group (60.7 MET-mins/week vs 0.3 MET-mins/week). The proportion of participants engaging in insufficient physical activity (<600 MET-mins/week as per WHO recommendations), decreased by 6% in the intervention group while it remained constant in control group. BMI, blood pressure, fasting blood sugar and HDL cholesterol level also showed significant difference in the intervention group as compared to controls.

**Conclusions:** The study demonstrated the usefulness of mHealth for health promotion and lifestyle modification at community level in a LAMI country. With the growing burden of NCDs in the community, such cost effective and innovative measures will be needed that can easily reach the masses.

### Biography

Malvika Sharma is currently enrolled in a three-year post-graduate program in Community Medicine at Maulana Azad Medical College one of the top medical colleges of India. She has been involved in multiple departmental projects in various fields such as environmental pollution and mental health. The current study is a part of Master's Thesis and pertains to adoption of mobile phone technology for modification of risk-factors of non-communicable diseases.

malvika.sharma@live.com

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