Developing A Feature-Phone Based Female Community Health Volunteer Program for Hypertension Control in Rural Nepal: Assessment Phase

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INTRODUCTION

Hypertension is a major modifiable risk factor for cardiovascular disease, the leading cause of death and disability in Nepal. The reported prevalence of hypertension in Nepal varies from 22.4% to 38.6%[1], and the prevalence has tripled in the last 25 years.[2] Poor adherence to antihypertensive medication intake increases the risk of uncontrolled blood pressure and complications, contributing to poor health outcomes.[3,4] Female Community Health Volunteers (FCHVs) are central in maintaining overall community health throughout Nepal.[5] There are over 5,000 FCHVs in Nepal, and with a nearly 100% cell phone ownership rate in Nepal, cell phone technology has opened up avenues for combining traditional FCHV program with digital technologies.

OBJECTIVES

The aim of this project is to create a user-centered, feature-phone based (FPB) tool, to connect FCHVs with hypertensive patients in Nepal to reduce blood pressure. The initial assessment phase sought to answer the following three questions::
(1) What is the prevalence of hypertension?
(2) What is self-awareness of hypertensive status?
(3) What mHealth intervention is preferred?

A training session with the female community health volunteers regarding hypertension awareness and care. Taken by Rishika Gundi 07/15/2018
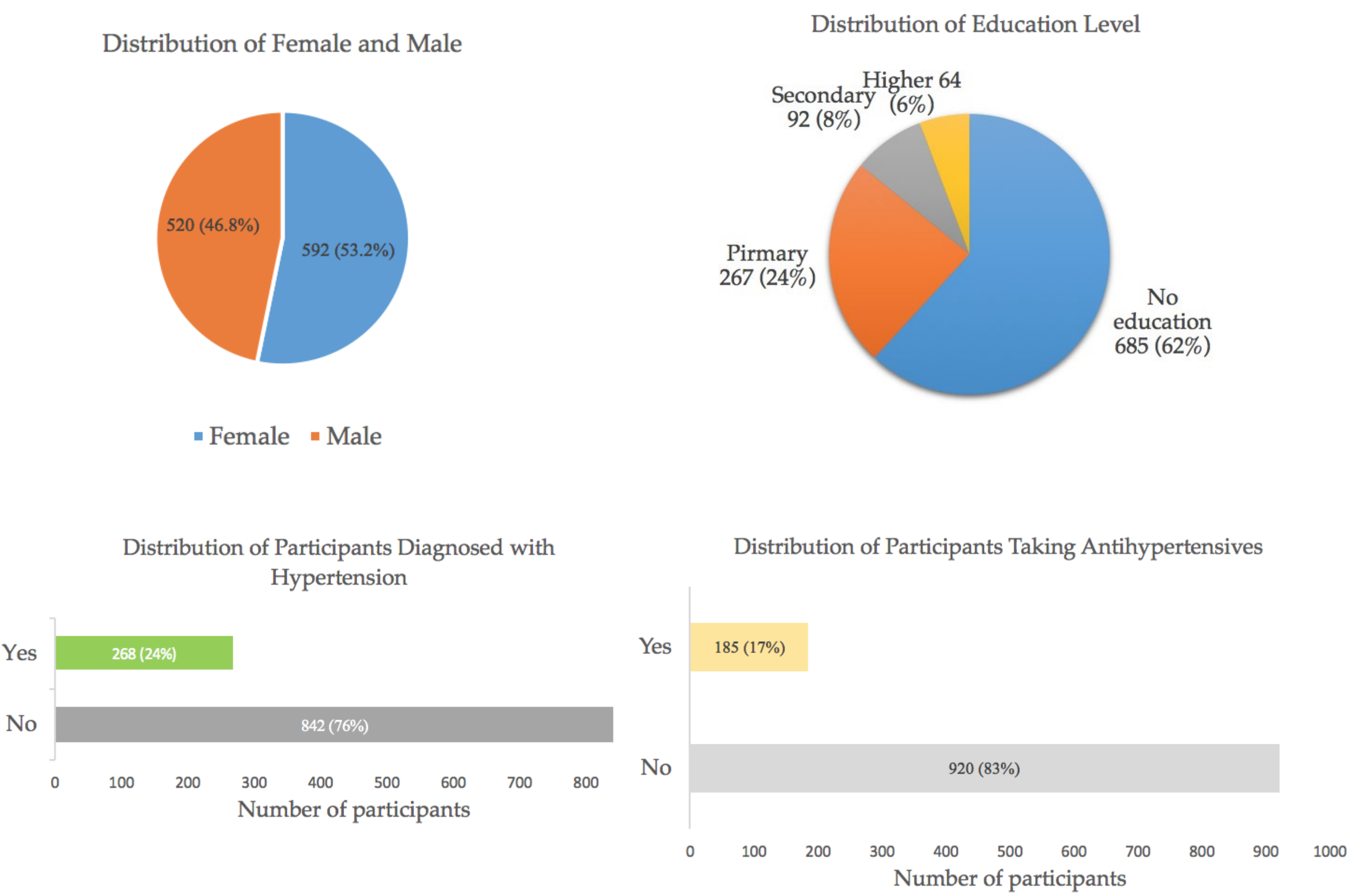
METHODOLOGY

FCHVs were recruited from two sites in Nepal, Dhunkharka and Panchkhal, and a training session was conducted regarding hypertension awareness and care. FCHVs held primary screenings in their respective wards through which a total of 1113 participants above the age of 40 were screened for hypertension. These findings were analyzed and participants with high blood pressure (above 140 systolic and 90 diastolic pressure) were selected for secondary surveys. For the second phase, each FCHV returned to their respective wards to complete a more detailed face to face survey with each screened participant. This phase was used to confirm whether these patients were hypertensive and to collect data about their lifestyle, hypertension awareness and preferred method of receiving health information.

In addition, qualitative data was also collected in the form of interviews with FCHVs, patients, hospital staff and policymakers. This was done to gather diverse perspectives from stakeholders regarding hypertension in the context of rural Nepali communities.
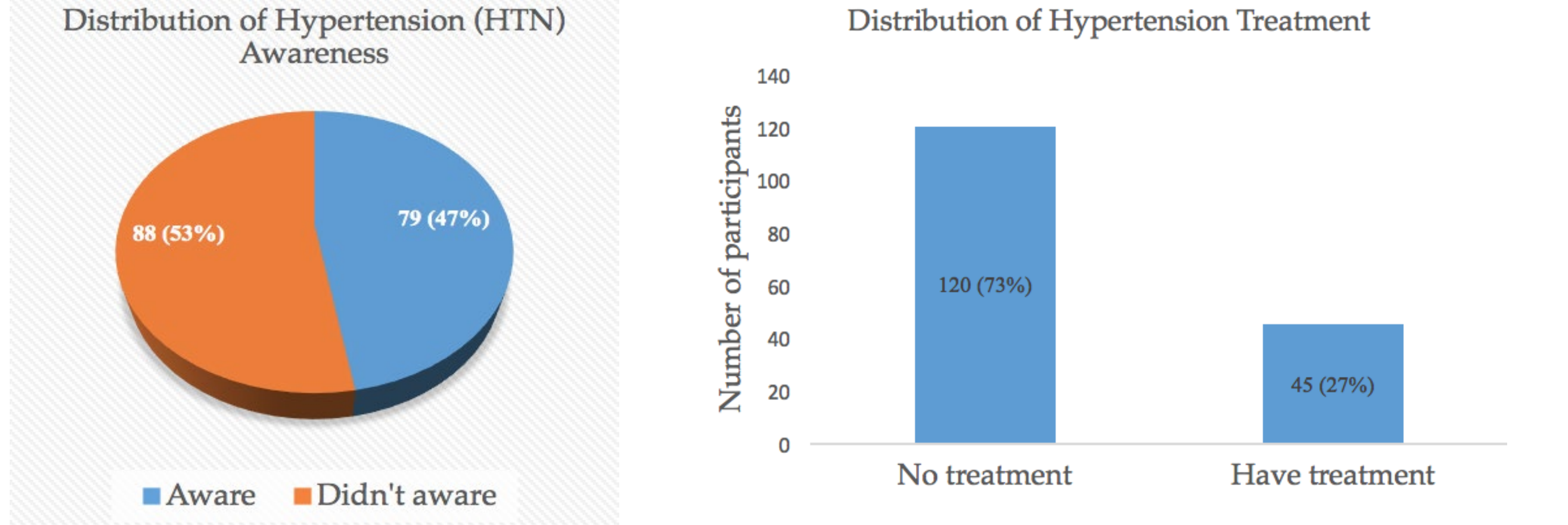
RESULTS

1. Baseline Characteristics

Distribution of Female and Male

Distribution of Education Level

Distribution of Participants Diagnosed with Hypertension

Distribution of Participants Taking Antihypertensives

2. Awareness & Treatment

Distribution of Hypertension (HTN) Awareness

Distribution of Hypertension Treatment

3. Phone Utilization

Distribution of Participants Having A Cellphone

Distribution of Participants Interested in getting health informations via Cellphone

Distribution of Participants' Preference of Receiving Health Information (Such as Medication-Taking Reminder)
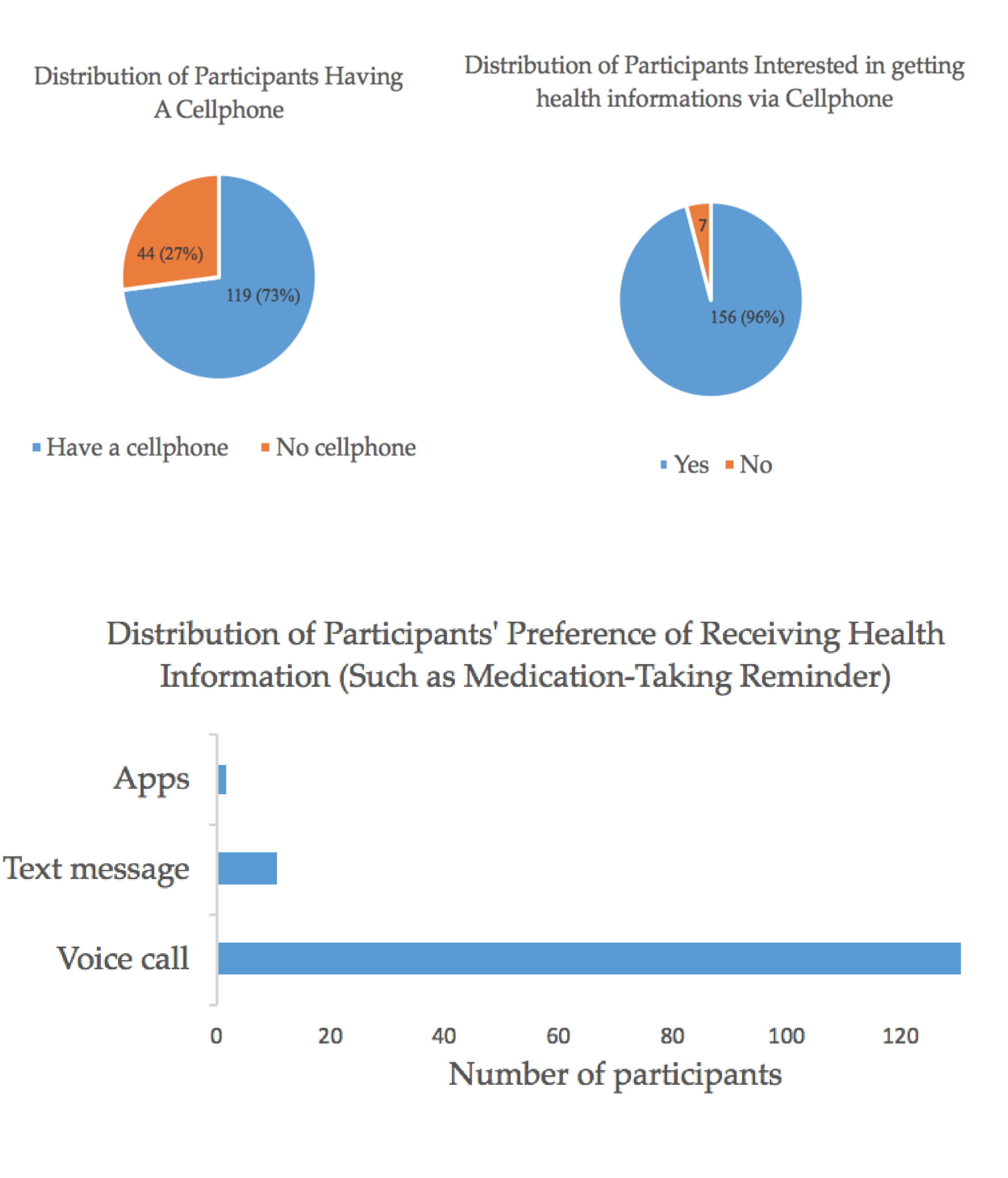
CONCLUSIONS

Hypertension management remains inadequate in rural Nepal. 53% of hypertensive patients were not aware of their hypertensive status and 73% of the patients were not taking hypertension medication. Given the high prevalence of feature-phone use among hypertensive patients in rural Nepal and their interests of getting health information via voice call, we strongly believe that a feature phone-based application using the existing female community health volunteer infrastructure in Nepal is very feasible. Future directions include analyzing qualitative data (interviews with various stakeholders and screened patients) to assess the specific risk factors for hypertension in the rural Nepali context as well as to determine the best type of feature phone-based application to develop.

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