# Identifying Female Community Health Volunteers' Understanding and Motivations About Blood Pressure Control 

# A Prerequisite for Developing Community-Based Interventions for Hypertension in Nepal 

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#### Abstract

Background: Health literacy and attitudes of female community health volunteers (FCHV) toward hypertension management in the context of Nepal are not well understood. Therefore, it is important to explore the potential for the effectiveness for blood pressure screening and perceptions on their likely ability to promote a blood pressure reduction at community level.


Objective: The study aims to explore the knowledge and attitudes of FCHV related to hypertension prevention and control.

Methods: A cross-sectional survey was conducted with FCHV located inside Lekhnath municipality. A total of 113 FCHV were interviewed in the survey using a questionnaire on knowledge and attitudes related to hypertension and risk factors.

Results: The percentages of FCHV with low, medium, and high levels of knowledge about hypertension were $43 \%, 24 \%$, and $31 \%$, respectively. Almost all of the respondents considered hypertension a major problem in their community and they would like to receive training for blood pressure screening. No significant differences were observed in the knowledge and attitudes related to hypertension in relation to demographic characteristics of FCHV. A majority of FCHV agreed that smoking (69.8\%), alcohol (77.8\%), low physical activity ( $42.4 \%$ ), high salt intake ( $65.4 \%$ ), high fat intake ( $78.7 \%$ ), and genetics ( $53.9 \%$ ) are major risk factors for hypertension.

Conclusions: Our study demonstrates that there is a background need to improve the health literacy for blood pressure management. There is also a need for development and implementation of a community-based intervention aimed at mobilizing female community health volunteers for detection and management of hypertension at the community level in Nepal. Our study demonstrated a high level of interest and readiness for blood pressure prevention, control, and management in community settings.


#### Abstract

The estimated prevalence of hypertension in Nepal is approximately $30 \%$ [1]. The burden of hypertension has tripled within the last 30 years and is most likely due to a shift toward unhealthy life styles and sedentary behaviors [2]. Risk factors for the higher hypertension rate in the country have been previously identified in a population study; for example, a nationwide survey found $19 \%$ were active smokers, $99 \%$ consumed $<5$ daily servings of fruit and vegetables, and $21 \%$ were overweight [3].The tobacco and alcohol consumption rate among adults in Nepal is considered higher than that of its South Asian neighbors. The number of female smokers in Nepal is also higher compared with other countries in the region [4]. As the prevalence of hypertension is likely to be increasing with the


influence of Western diets, smoking, and sedentary behaviors, there is a perceived need to develop regular surveillance and community-based intervention programs. We suggest that the primary health care collaborative network would be effective to address prevention, control, and management of hypertension. Because of the high costs of curative and rehabilitative care toward hypertension-related stroke and heart failure, a population-based preventive approach to target early hypertension would likely be cost-effective [5]. A community-based hypertension prevention program aimed at modifiable risk factors has been found to be effective at a community level [6]. There would be return on an investment in community blood pressure management; for example, a population-wide reduction of 3 mm Hg in blood

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pressure could reduce stroke risk by about one-third [7] and similarly a minor reduction in blood pressure may reduce coronary heart disease events [6]. Hardy et al. [8] demonstrated in theoretical models that a $1-\mathrm{mm} \mathrm{Hg}$ populationwide systolic blood pressure reduction would be associated with 20.3 and 13.3 fewer heart failure events per 100,000 person-years in African Americans and whites, respectively.

Blood pressure management strategies are unique to each population. We have previously proposed to shift prevention, diagnosis, and treatment of hypertension to community health workers (CHW) [9]. Due to the trustworthiness of CHW in the community, CHW have the potential to influence community attitudes [10], particularly with respect to the ability to adopt healthy lifestyles via health promotion and education [11]. Earlier studies from Bangladesh, Guatemala, Mexico, and South Africa have demonstrated that community health workers without formal professional training could be adequately trained to effectively screen for, and identify, people at high risk of hypertension [12].

We have previously made the suggestion that a blood pressure management strategy in Nepal could be implemented via female community health volunteers (FCHV) [13]. The FCHV are a type of CHW [14]. FCHV are selected by members of Mothers' Groups for Health with the assistance of local health facility staff. FCHV receive 18 days of basic training in 2 steps ( $9+9$ days), covering selected primary health care components. The current role of the FCHV is to promote maternal health, such as safe motherhood, child health, and family planning [15]. Health literacy and attitudes of FCHV toward
hypertension in the context of Nepal have recently been explored via qualitative assessments of opinions and understanding [16]. Here we are specifically interested in quantifying responses by CHW to their understanding of risk factors and their ability to promote a blood pressure assessment and reduction community program. Thus, this study aims to explore the knowledge and attitudes of FCHV related to hypertension in the context of establishing an intervention program in the community.

## METHODS

## Study design and setting

A cross-sectional survey was conducted among FCHV of Lekhnath municipality, Nepal, from March to May 2014. The study area is located about 180 km west of Kathmandu. Total population of the municipality was 58,816 per the 2011 census. The municipality is divided into 15 smaller wards that share geography, lifestyle, ethnicity, and culture. The municipality is a semi-urban area with limited health services that possesses 1 primary health care center, 3 subhealth posts, and 2 urban health care centers. FCHV located inside the municipality were eligible to participate in the study $(\mathrm{n}=123)$.

## Method and tools of data collection

The interview questionnaire of this study was developed in English first and then translated into Nepali. The details about the formulation of the questionnaire are presented in Figure 1. It consists of 2 sections: knowledge questionnaire


FIGURE 1. Hypertension knowledge and attitude questionnaire. KQ10, knowledge questionnaire with 10 questions; AQ19, attitude questionnaire with 19 questions.

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