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**DEVELOPMENT AND VALIDATION OF A FOCUS GROUP  
DISCUSSION GUIDE TO ASSESS THE NEEDS AND EXPECTATIONS  
OF HYPERTENSIVE PATIENTS FOR SELF MANAGEMENT  
THROUGH MOBILE APPLICATIONS**

RAKSHA KAMATH

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DISCUSSION GUIDE TO ASSESS THE NEEDS AND EXPECTATIONS  
OF HYPERTENSIVE PATIENTS FOR SELF MANAGEMENT  
THROUGH MOBILE APPLICATIONS**



A dissertation submitted in partial fulfillment of the award of

**MSc. Health Information Management**

Degree to

**MANIPAL ACADEMY OF HIGHER EDUCATION**

By

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## ABSTRACT

**Background:** Hypertension, which is also called as elevated blood pressure, is a serious medical condition that will significantly increase the risks of heart, brain, kidney, and other diseases. Hypertension affects more than 15% of the global population and is a major global public health and socioeconomic challenge. It is defined as the chronic medical condition relating to an elevation in the blood pressure. The mobile health technology, usually referred as the mHealth which includes the smart devices like, tablets, smartphones, digital laptops, personal computers which are highly prevalent in the management of the chronic illness. The usage of the smart phones has been increased, and even the number of smartphone apps and internet- based platforms are used in helping patients control hypertension has increased. These systems will help the patients manage their hypertension by setting reminders and timed alerts for patients to take their medications, connecting patients' BP reports to their electronic medical record for their doctors to review, giving feedback to patients regarding their blood pressure patterns, and operating as point-of-care blood pressure sensors are all ways that M-health apps assist patients control high blood pressure and hypertensive diseases. Hypertensive patients are increasingly using mobile health (mHealth) services to assist them effectively manage their condition. Mobile health (mHealth) services are becoming more widely available to help hypertensive patients improve their self-management behaviour's, such as adherence to pharmacotherapy and lifestyle changes. WHO has rated hypertension as the most predominant cause of premature deaths worldwide.

**Objectives:** To design and develop a focus group discussion questionnaire or guide to assess the needs and expectations among hypertensive patients in mobile based health application and to validate the developed guide with Lawshe content validity ratio

**Methodology:** A prospective observational study was conducted. The focus group discussion (FGD) guide was developed based on the literature survey along with the specific key words (Hypertension, Mobile health, eHealth, Medication adherence, Self-management, Patient Acceptance of Healthcare, Blood pressure) related to the needs and expectations in the mHealth application among hypertensive patients to assess their understanding of hypertension and readiness to utilize the mHealth app for self-monitoring and self-management of hypertension. The developed draft guide was validated by the experts. The experts were given a brief summary about the study, and the tool was validated. The developed guide was content validated using Lawshe content validity ratio.

**Statistical Analysis:** Microsoft Excel 2016, was used to determine the critical value (Content validity Ratio [CVR] and content validity Index [CVI])

**Results:** Out of total number of experts, there were 4 males and 6 females. Content validity (CVI and CVR) calculation was carried out for the draft guide prepared with 17 questions. CVI (Critical) for a panel size (N) of 10 is 0.871. The average CVR value was 0.8. This indicates that the developed questionnaire is appropriate, and further the focus group discussion can be conducted among the hypertensive patients

**Conclusion:** The developed questionnaire has been proved to have appropriate properties for self-management in patients with hypertension thus, will help in assessing the expectations of the hypertensive patients and develop a customized mHealth application accordingly.