

# Digital Literacy and Information Behaviour Among High Blood Pressure Patients Using Digital Tools for Self-Management

## Fatih Aminu Marafa

PhD Student  
School of Computing, Engineering and the Built Environment (SCEBE)  
Edinburgh Napier University  
in collaboration with the School of Health and Social Care (SHSC)  
Email : [Fatihu.aminu@napier.ac.uk](mailto:Fatih.aminu@napier.ac.uk)

## Supervisors:

-  Dr Frances Ryan (Director of Studies)  [F.Ryan@napier.ac.uk](mailto:F.Ryan@napier.ac.uk)
-  Associate Professor Alistair Lawson  [A.Lawson@napier.ac.uk](mailto:A.Lawson@napier.ac.uk)
-  Dr Sahar Khonsari  [S.Khonsari@napier.ac.uk](mailto:S.Khonsari@napier.ac.uk)

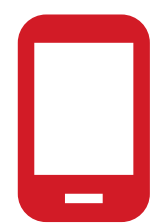
## WHY THIS MATTERS

**31%**

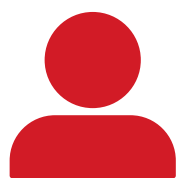
of Scottish adults aged above 16 have high blood pressure

**~70%**

of adults aged 75+ are affected



Digital tools are increasingly used for self-management.



Access does not guaranty effective use.



Skills, confidence and trust shape how people engage with health information

Source: Scottish Health Survey, 2023.

## RESEARCH AIM



To explore how digital literacy influences the ways adults with high blood pressure seek, evaluate and use digital health information for self-management.

## RESEARCH QUESTIONS

1

What are the digital literacy levels of adults with high blood pressure using digital tools and online information for self-management in the UK?

2

What information behaviours do they engage in?

3

How prepared do they feel to use digital tools and online information?

## STUDY DESIGN : MULTI-PHASE MIXED METHODS APPROACH

### PHASE 1 SURVEY



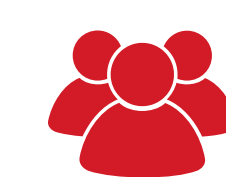
- Adults 18+ in the UK with high blood pressure
- Measured using Digital literacy (Lloyds Essential digital skills Framework), Information behaviours, tools usage and preparedness
- Quantitative analysis in SPSS; open-ended responses thematically in Nvivo

### PHASE 2 DIARY STUDY



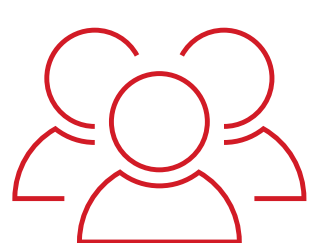
- Volunteer subset of survey participants Log real-world interactions with digital health tools for up to two weeks
- Captures naturalistic information behaviour in context
- Analysed thematically in Nvivo

### PHASE 3 INTERVIEW & FOCUS GROUPS



- Quantitative survey data analysed in SPSS
- Qualitative data from diaries, interviews and focus groups analysed thematically in Nvivo
- Mixed methods integration to generate a comprehensive understanding of digital literacy and information behaviour

## RECRUITMENT AND SURVEY DEVELOPMENT



- Recruiting through community channels, online support groups, social media and public spaces
- Survey instrument based on validated digital literacy measures and information behaviour constructs
- Ethics application in final stages

## DATA ANALYSIS



- Quantitative survey data analysed in SPSS
- Qualitative data from diaries, interviews and focus groups analysed thematically in Nvivo

## EXPECTED CONTRIBUTIONS AND IMPACT



### UNDERSTAND DIGITAL LITERACY

Generate evidence of how digital literacy shapes engagement with digital tools in the context of a chronic condition.



### EXPLORE INFORMATION BEHAVIOUR

Deepen insights into how people seek, evaluate and use health information in everyday self-management.



### INFORM INCLUSIVE DESIGN

Identify barriers and enablers across diverse skill and demographic groups and offer recommendations for more accessible and user-friendly digital health tools.



### ADVANCE THEORY AND PRACTICE

Contribute to information behaviour theory in digital health and chronic disease self-management and inform policy and practice.



This interdisciplinary research is grounded in information science, focusing on human information behaviour and digital literacy. No clinical data are collected.