

Supplementary material

Figure S1: Question Guide

Hello, I, along with other students from New York University and the University of Minerva, are researching the potential of mobile health and medical applications on smartphones. This research will help the team explore the need for these applications in Vietnamese society as well as the features users want in order to improve the healthcare system. From there, this information will be exploited by the government and potential businesses to form appropriate applications.

Interviewees will come from 3 age groups: Generation Z (1997-2012), Generation Y (1981-1996), Generation X (1965-1980).

The questions in the interview related to: The level of interest in mobile healthcare services by smartphone applications; People's expectations about the quality and content of the applications; Contribution of ideas on the conditions which help these applications develop in Vietnam.

This is not a knowledge test but just an interview to capture the requirements of the people so that the Ministry of Health or companies and startups can form a medical application that suits residents' wishes.

The personal information of the interviewee will be kept completely confidential. So please answer honestly about your thoughts.

Objectives Information To Be Extracted

1. What do people think about the necessity of healthcare apps and health system support on smartphones? Has anyone thought about it?
2. What do people think about the 4 main factors that influence the use of the above applications based on the Unified Theory of Acceptance and Use of Technology
3. Are there any particular factors related to using health apps outside of the Unified Theory of Acceptance and Use of Technology model?
4. How to make it easier for people to access and use these apps?

Questions to find out about people's understanding of mHealth

1. Have you heard of mobile health (mHealth) before? [Explain what mHealth is for people who do not know]

Definition: Mobile health (mHealth) is a service that provides health and public health activities supported by mobile devices such as mobile phones, personal tablets, smart watches, etc. - defined by WHO.

So far, have you faced any difficulties in accessing medical services? [Give examples of existed mHealth application which can solve those difficulties for people who do not know what mHealth is]

2. Have you ever used any mobile health (mHealth) apps?

Suggested questions for each goal

Objective I: Necessity and concern

What do people think about the necessity of healthcare apps and health system support on smartphones?

Has anyone thought about it?

1. In your opinion, with the current Vietnamese context, do we need more mobile health applications (mHealth) from the government or technology companies? Whether the answer is yes or no, please tell me why.
2. If a new mobile health (mHealth) app comes out and gets good reviews, do you think you'll learn or try it out? Whether the answer is yes or no, please tell me why.
3. **If 2 is yes then:** Do you think if the above application is good to use, would you recommend it to your relatives or friends?
If 2 is no then: Would you mind hearing recommendations about this app from other people?

Objective II: 4 key elements of UTAUT

What do people think about the 4 main factors affecting the use of the above applications based on the Unified Theory of Acceptance and Use of Technology

Note to interviewees:

To the following questions, if you can't think of an answer or don't want to answer it, please tell me that: "I don't know what else to say, let me move on to another question."

The questions here will not have a right or wrong answer.

Performance Expectation:

1. In your opinion, how do you need mobile health applications (mHealth) to help you?

2. In your opinion, what are people's expectations about the functionality of mobile health (mHealth) apps? Why is that?
3. **If interviews have used mHealth:** In your opinion, what are the shortcomings of current mobile health applications (mHealth) in terms of quality that you think cannot meet your health needs? Why do you think the reasons you give are important?

Effort Expectation:

1. In your opinion, how easy and convenient to use do you want a mobile health application to be?
2. Can you give an example of an easy-to-use technology product (a random application) that has changed the way you live?
3. Have you ever had any difficulty using a technology product (a random app)? Why is it so difficult?
4. **For someone who has used mHealth:** Have you had any trouble using a mobile health (mHealth) app? Why is it so difficult?

Social Influence:

1. In your opinion, does the influence of relatives, friends or people working in the medical field affect your decision to use a mobile medical application? Whether the answer is yes or no, please tell me why.
2. Are there other social factors driving your decision?

Facilitating Condition:

1. Most mobile health applications (mHealth) require a smart mobile device such as a smartphone, tablet, or laptop to work. Have you already owned these devices?
2. Most mobile health (mHealth) apps need the Internet to work. Do you often use the Internet to connect to your smart devices?
3. Do you have difficulty using the Internet?

4. Are you having trouble using your smart mobile devices?
5. Do you have any other difficulties that prevent you from accessing and using certain applications?

Objective III: Factors other than UTAUT

Are there any particular factors related to using health apps outside of the Unified Theory of Acceptance and Use of Technology model?

1. In addition to the 4 factors are:
 - Quality and content of the application
 - Accessibility and usability of the app
 - Reviews, recommendations from people around
 - Equipment, economic conditions of users

Do you think there are other factors that influence your decision to use a mobile health application (mHealth)?

2. **If yes** Why do you find this impactful?
If no *Skip.*

Goal IV: How to develop

How to make it easier for people to access and use these apps?

1. Currently, in Vietnam, there still exist a few mobile medical applications such as Wellcare, Bac si tu van, ... but most of them do not reach high spread or high efficiency, according to you:
How can new mobile health (mHealth) applications be known and cared for by more people?
2. Once known, how can this app encourage people to use it frequently?
3. *Additional question*
If you could use a popular government-built mobile health app that charges a fee for use through an increase in the price of compulsory health insurance, would you want to use this app?

Additional questions at the end of the lesson

1. Do you want to contribute anything else related to the research topic, the potential of mobile health applications (mHealth)?

Thank you for participating in this study. Your answer will be of great help to the health system and the people of Vietnam.

Questions about personal information and classification of interviewees

1. What year were you born?
2. Do you or close family members (direct family) of yours have chronic health problems?
3. What is your current academic level?
4. What is your occupation?
5. How frequent do you use the Internet?