



## **Survey Questionnaire for End-users**

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This survey is designed to get feedback from End-Users and Stakeholders on how they go about handling human-centric issues in eHealth apps' to achieve more effective usage and identify key future needs. The questionnaire is divided in two sections. The first section collects some demographic information of the participants. No identifying information is collected in this questionnaire. Then, the second section collects their views on human-centric issues in this domain.

### **Section 1: Demographic Information**

1. Country of residence:
2. Age:
3. Gender:
4. Highest qualification:
5. Area of qualification:
6. Experience (in years) in mobile app usages:
7. Current affiliations (tick all that apply):
  - a. Student
  - b. Medical practitioner (doctor/nurse/physiotherapist/psychologist/pharmacist)
  - c. Researchers (academic audience/ Software Engineering researcher/ medical domain researchers)
  - d. Patients with medical/health issues
  - e. Other service holders (banker/retail agent/lawyer)
  - f. Businessperson
  - g. Government officials
  - h. Other:

Please write here

8. Do you ever use an eHealth app?  
☐ Yes (go to next question i.e., question 9)  
☐ No (go to next section i.e., question 10)
9. What type(s) of eHealth app you used (tick all that apply):
  - a. Telehealth and telemedicine app
  - b. Health and Fitness tracking app
  - c. Mental health app
  - d. Mobile games to improve health issues
  - e. eHealth app for solving a specific health issue
  - f. Electronic Health Records (EHR)
  - g. Electronic Medical Records (EMR)
  - h. App for health IT systems
  - i. App for consumer health IT data



- j. Virtual healthcare app
- k. Mobile health decision making app
- l. App related to big data systems used in digital health
- m. Other:

Please write here

## **Section 2: Views on Human-centric Issues in eHealth Apps**

10. Do you ever listen/experience/know about the human-centric issues in mobile app?

- ☐ Yes
- ☐ No

11. Which human-centric issues do you need, or think others need, to be supported in eHealth apps (tick all that apply)?

| Issue                                       | Always | Sometimes | Rarely | Never |
|---|--------|-----------|--------|-------|
| Elderly users e.g. > 60 years of age        |        |           |        |       |
| Very young users e.g. < 16 years of age     |        |           |        |       |
| Users with accessibility issues             |        |           |        |       |
| Users with physical challenges              |        |           |        |       |
| Users with mental health issues             |        |           |        |       |
| Users with cognitive challenges             |        |           |        |       |
| Users whose language proficiency may be low |        |           |        |       |
| Users uncomfortable with technology         |        |           |        |       |
| Low socio-economic status users             |        |           |        |       |
| Different gender, gender identity of users  |        |           |        |       |
| Users with diverse cultural backgrounds     |        |           |        |       |
| Other vulnerable users                      |        |           |        |       |
| Others                                      |        |           |        |       |

- Others – please list and indicate how often need to consider:

Please write here



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12. Which of the following human-centric issues do you view/think/believe as most critical for effective eHealth app usage, and consequently its development and deployment (tick all that apply)?

| Issue  | N/A | Critically Important | Important | Not much importance |
|--|-----|----------------------|-----------|---------------------|
| <b>App reliability:</b> Trustworthiness, correctness, data source, theory and practice.  |     |                      |           |                     |
| <b>App accessibilities:</b> Text contrast, alternate text vs images, links, navigation, form, labels, table, time-outs, use of sitemap etc.  |     |                      |           |                     |
| <b>App usability:</b> Taps, landscape mode, platforms, OS versions, resolution, auto-filled customer data, unresponsiveness (for gestures), content, navigation etc.   |     |                      |           |                     |
| <b>App versatility:</b> Variety of health information or communication services at different levels in the user community domain.  |     |                      |           |                     |
| <b>User versatility:</b> End-users age, physical challenges (for example adaptive interface for the visually impaired), Mental health issues, Cognitive challenges, Language and technology proficiency, Gender variability, Socio-economic status and Cultural backgrounds. |     |                      |           |                     |
| Other:   |     |                      |           |                     |

- Others – please list and key reasons for this if any:

Please write here



13. Which human-centric issues do you find/think/believe is missing in this domain and need to be better addressed in future (Numeric value 1-easy to 5-very hard):

| Issue  | N/A | Properly Included no change required | Included but need enhancement | Missing and must be included in future development |
|--|-----|--------------------------------------|-------------------------------|--|
| <b>App reliability:</b> Trustworthiness, correctness, data source, theory and practice.  |     |                                      |                               |  |
| <b>App accessibilities:</b> Text contrast, alternate text vs images, links, navigation, form, labels, table, time-outs, use of sitemap etc.  |     |                                      |                               |  |
| <b>App usability:</b> Taps, landscape mode, platforms, OS versions, resolution, auto-filled customer data, unresponsiveness (for gestures), content, navigation etc.   |     |                                      |                               |  |
| <b>App versatility:</b> Variety of health information or communication services at different levels in the user community domain.  |     |                                      |                               |  |
| <b>User versatility:</b> End-users age, physical challenges (for example adaptive interface for the visually impaired), Mental health issues, Cognitive challenges, Language and technology proficiency, Gender variability, Socio-economic status and Cultural backgrounds. |     |                                      |                               |  |
| Other:   |     |                                      |                               |  |

- Others – please list and key reasons for this if any:

Please write here



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14. Do use additional hardware/IoT device/plugins (such as smart watch, ingestible sensors, lenses, insulin pens, APIs for visualization, Bluetooth-enabled system etc.) to address human-centric issues (such as accessibility, usability) in your mobile app for more effective usages?

- ☐ Yes (please write in the following text box)  
☐ No (go to question 15)

If you answer yes in question 14, please write the name of the hardware/IoT device/plugins that you use.

15. Do you have any ideas what would help us (both developers and users) to address challenging/missing human-centric issues in eHealth app for its more effective usages?

Please write here

16. Any other comments for us about these issues, this survey?

Please write here

17. Might you be willing to be interviewed about some of your experiences in more detail by a member of our team? This will be removed from your survey responses.

- ☐ Yes (please provide a contact name and email address in the following box)  
☐ No

Please write Name and Email address in this box if you answered yes for Question 17. This information will be removed from your survey responses.

18. Would you like to receive a report on our findings? This will be removed from your survey responses.

- ☐ Yes (please provide a contact name and email address in the following box)  
☐ No

Please write Name and Email address in this box if you answered yes for Question 18. This information will be removed from your survey responses.