

Survey Planning

Clustering-based Health Indicators to support Self-Reported QoL

Goal and Research Questions

The goal of this survey is to validate with researchers and practitioners the method proposed to calculate the proposed health indicators. In the thesis, six indicators were proposed: daily mobility, physical activity level, sleep quality, loneliness level, stress level, and social mobility level. These health indicators were proposed because the QoL inference mechanism presents only results similar to most QoL questionnaires: an integer value (0 - 100).

Although this score represents how good the patient's QoL is, it is not self-descriptive. Thus, the patient needs more information to understand it. Therefore, the proposal to use health indicators should assist users in understanding which aspects deserve attention.

With this empirical method, it is expected to get evidence to answer the following RQ:

- **RQ1:** What is the relationship level between the health indicators and the physical and psychological Quality of Life domains?
- **RQ2:** Considering that there is no consensus on how such indicators should be calculated, at what level can the proposed method represent the actual condition of a given person's health indicators?

Decisions

- **Instrument:** questionnaires with open and closed questions
- **Sampling:** researchers and practitioners who have experience with IoT and Health
- **Sampling strategies:** probabilistic sampling considering the authors of the papers selected in our literature review (cluster sampling), and non-probabilistic sampling considering a purposive strategy in our work contacts

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Dear,

We are researchers of the Group of Computer Networks, Software Engineering, and Systems (GREat) at the Federal University of Ceará (UFC) and Laboratory of Software Optimization and Testing (LOST) at the Federal University of Piauí (UFPI).

The reason for our contact is to invite you to participate in a survey to evaluate a method proposed to calculate six health indicators: daily mobility, physical activity level, sleep quality, loneliness level, stress level, and social mobility level. These indicators are valuable to support a patient in understanding the result obtained in self-reported Quality of Life questionnaires, considering two specific domains: physical and psychological.

Your contribution is valuable to us!

Although your participation is entirely voluntary and you can withdraw at any time, **we will raffle a Xiaomi Mi Band 6** among those who complete the survey to encourage participation. But do not worry! Your answers do not influence the draw in any way. Thus, you can answer truthfully.

This survey has three parts. Part 1 is about your professional experience. Part 2 focuses on the evaluation of the proposed method, and, finally, Part 3 you will be asked about any suggestions.

The survey will take your time for almost **10 minutes**.

Confidentiality and Consensus Term

The information you provide is strictly confidential, and no personal identification is permanently stored after the completion of this research. Your contact details will be used for administration purposes only, and email you the summary results. Also, the results will be presented and discussed in an aggregate form, with NO personal identification.

Finally, this research does NOT represent any risk to the participants' health and that participation is voluntary. If you agree with these terms, please continue. **Thank you!**

Part 1: Your professional experience

1. What is your name, email address, and country? (Open)
2. What is your level of education?
<https://ilostat.ilo.org/resources/concepts-and-definitions/classification-education>
3. What is your main knowledge area? (Health or Technology)
4. How much is your experience (in years) in your main knowledge area? (Open)
5. Considering your current occupation, how would you define yourself?
Researcher or Practitioner
6. If you are a student, what is the name of your current course? (Open)
7. If you are an employed professional, what is your role or job? (Open)

Part 2: Methods to calculate the health indicators

1. Classify the relationship level between each health indicator and the physical and psychological Quality of Life domains.

a. Not at all relationship	e. Moderately relationship
b. Low relationship	f. High relationship
c. Slightly relationship	g. Extremely high relationship
d. Neutral	
2. Based on your experience, at what level can the proposed method represent the actual condition of a given person's health indicators?

a. Not at all	e. Moderately
b. Low	f. High
c. Slightly	g. Extremely high
d. Neutral	

Part 3: Your observations/suggestions

1. Is there any other health indicator that you think we should incorporate in this list?
2. Is there another method that can unify the calculation of health indicators? Which?
3. As an end user, would you use a solution that applies the method proposed in this study?
4. Do you have any comment, suggestion or consideration about this survey?