

Onomatopoeia-Based Self-Monitoring for Early Detection of HIV: A Human-Centered Approach Integrating Patient-Reported Outcomes and Subjective Symptom Tracking

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Abstract:

HIV is a virus that primarily infects immune cells and continues to replicate, gradually leading to immunodeficiency in those infected. However, the symptoms of early HIV infection resemble those of other infectious diseases, making it difficult to distinguish. As a result, diagnosis often occurs only after the immune system has significantly deteriorated in the AIDS stage. To address the challenges faced by people living with HIV, the short-form version of the HIV Disability Questionnaire has been developed as a patient-reported outcome measure in clinical practice. It is used to assess health-related challenges and their changes over time, promoting interdisciplinary approaches to care. Recognizing and analyzing subjective symptoms—such as pain and discomfort—is also essential for understanding disease progression. The authors have developed an application software that allows users to record their daily physical and mental states using a single word in the form of an onomatopoeia or metaphor. This enables easy, quantifiable tracking of health conditions. In this presentation, we will explain our application software to support the early detection of HIV by facilitating the daily collection of personal health data, including information that may be difficult to communicate in person to healthcare providers.

Keywords:

HIV Early detection, Patient-oriented questionnaire system, Subjective symptoms of Pain/Mental states, Onomatopoeia, Personal health data.