Managing your health through self-tracking

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17 February 2022
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Outline

i. introduction

ii. study design & findings

iii. the patient-manager

i. introduction

- ST to enhance self-care
- ST is never just ST
- Data sharing

Gabriels, K., & Coeckelbergh, M. (2019). 'Technologies of the Self and Other': How Self-Tracking Technologies Also Shape the Other. *Journal of Information, Communication and Ethics in Society 17* (2), special issue "Creating, Changing, and Coalescing Ways of Life with Technologies", DOI 10.1108/JICES-12-2018-0094

https://www.nature.com/articles/nature21056

https://www.bbc.com/news/health-50857759

https://www.technologyreview.com/2021/07/30/1030329/machine-learning-ai-failed-covid-hospital-diagnosis-pandemic/

ii. study design & findings

Original Paper

Exploring Entertainment Medicine and Professionalization of Self-Care: Interview Study Among Doctors on the Potential Effects of Digital Self-Tracking

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http://www.jmir.org/2018/1/e10/

123RF.com

https://www.indiamart.com/proddetail/manual-blood-pressure-machine-7143249191.html

Classic versus digital self-tracking (1)

Main differences:

data sharing

who takes the initiative to track

1. **Classic ST:** data are usually collected for private use only while sharing is generally limited to care providers and mostly paper-based. The care provider typically initiates the request to self-track and, at least in some cases, provides the device or gives recommendations on which device to use and how to track (*cf*. 'pushed' self-tracking, i.e., the incentive to self-track comes from an external actor)

Classic versus digital self-tracking (2)

2. **Digital ST** is most often Internet-connected, smartphone-based, and designed from the start for data sharing. Members of the QS-movement share their data with each other through social media (*cf.* 'communal' self-tracking, i.e., the practice of sharing data with a community of trackers). It is usually the patient or healthy user who initiates the tracking. In some cases, the app takes over the care provider's role. Coaching apps are designed to motivate behavioral change. Collected data can easily be shared with care providers and become part of patients' electronic health record (EHR)

The distinction is not clear-cut: situated on a continuum, which facilitates comparison

See also Lupton D. Quantifying the Body: Monitoring and Measuring Health in the Age of mHealth Technologies. *Critical Public Health* 2013; 23 (4): 393-403. DOI: 10.1080/09581596.2013.794931.

Interview guide

1. Frequency of use
2. Initiative to self-track
3. Choice and quality of device
4. Data interpretation
5. Positive and negative results or effects of self-tracking

6. Differences between classic and digital self-tracking
7. Data sharing
8. Inclusion (health disparities)

4 major themes

1. The patient as health manager
2. Health obsession
3. Information management
4. Shifting role of the doctor and impact on healthcare organization

1. The patient as health manager

The patient as health manager: patients are offered numerous possibilities to control and self-manage their health, leading to both opportunities and difficulties. Subthemes are patient autonomy, dropout rates, and the gap between measuring and attaining actual behavioral changes.

2. Health obsession

Health obsession: the interviewees express concern about a focused use of self-tracking by healthy people, thus creating a "worried well" cohort and widening health disparities. They are critical of the broader medicalization trend in society. Another subtheme is "entertainment medicine," which refers to questioning the usefulness of digital self-tracking in terms of medical necessity.

3. Information management

Information management: data production, analysis, and interpretation methods change with intensified self-tracking. In this context, providers describe opportunities but also new pitfalls. Subthemes are quality and reliability (of devices and data), importance of context, and data sharing.

"At one point, a Saturday evening at 11pm, I received an e-mail that contained a deviated heart rate measurement. I think 'hmm this is strange'. So I send him an e-mail and he lets me know that he was at a reception, where he met someone who said that he suffered from a heart rhythm disorder and he subsequently gave him his smartphone to try the technology" (12, cardiologist)

4. The shifting role of the doctor and impact on healthcare organization

Shifts in the roles of the doctor and impact on the health care organization: the impact of digital self-care data on the clinical practice, leading to shifts in terms of data interpretation and the role of the physician. Subthemes are data overload, responsibility, and the importance of in-person contact.

"If I receive all this [these data], I am responsible. It is the same with a blood test: if I have not looked at the data, it is my fault. While if I never received the data, I cannot be held responsible" (2, GP)

"These patients lead to an overload of medical consumption that is completely unnecessary. For me, the more health information, the better. However, the more crappy data you can leave out, the better" (9, cardiologist)

iii. the patient-manager

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Patient-manager discourse

Driven by **cost-efficiency**

- *'Silver tsunami'* – aging population and increase in chronic diseases
- Healthcare will become unaffordable
- **Solution**: patient-manager
- Patients will take care of their own health
- Crucial role for **technology**
- Autonomy? Empowerment?

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Autonomy?

- Dependency shift to technology
- Outsourcing of autonomy
- Nudging/behavioral change

Empowerment?

- Education?
- Self-reflection?
- Support for ‘independent’ living – ‘technology-dependent’ living