Discussion of Health in HCI

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Designing AI for medical decisions

- Investigated clinicians' perceptions of using AI-based decision support tools for antidepressant treatment decisions.
- Methods
  - Iteratively designed a prototype of a decision support tool for making prognostic predictions and treatment selection recommendations
  - Invited primary care providers to interact with the prototype and get feedback
- Discussion
  - Creating multi-user systems (both clinicians and patients) for collaborative decision-making
  - Need for evidence-based methods to validate the tool, rather than individual explanations from the model features
  - On-demand explanations for contrasting information

Discussion

- **How can DSTs account for societal factors that might impact patients' medication habits?**

*"I think **my fundamental issue with the whole concept of the DST / ML to predict patient dropout is that it doesn't account for societal frameworks such as race/ethnicity/gender/social class which are all potential factors for why someone could stop a medication**. ie. someone may not just stop using a medication because they do not like the effects of said medication on their body, they may also drop out because their insurance stopped working or feelings of uncomfortability with the healthcare provider in general. **How can complex circumstances such as these be predicted/accounted for by DST's**?" (Whitney)*

Discussion

- Problem they are trying to solve: Needing ML rather than better education?
- This isn't really ML? It's just a flowchart decision tree?
- They haven’t linked years of practice to anything
- Guideline Inconsistency: US switched to Canadian guidelines

Discussion

- What disciplines within and outside HCI does this paper draw from?
- What of the typical HCI research contributions is this paper making?
- What are the things that you liked or disliked about this paper?
- What are some main takeaways from this paper?

Health Data in Fertility Care: An Ecological Perspective

- Mayara Costa Figueiredo and Yunan Chen. CHI (2021).
- **An ecological perspective on fertility data practices and opportunities to counter-influence broader environmental systems through data tracking**
  - Self-tracking and personal data have typically been seen as individual-driven or self-oriented
  - (In) Fertility data are considered very private
  - (In)Fertility involves relationships, institutional needs, and societal taboos
  - Self-tracked data influence and are influenced by relationships and contexts

Health Data in Fertility Care: An Ecological Perspective

- Areas of Inquiry
  - Human-centered computing
    - Human computer interaction (HCI)
    - Empirical studies in HCI
    - Collaborative and social computing
    - Empirical studies in collaborative and social computing
  - Applied computing
    - Life and medical sciences
    - Health informatics
- Method
  - A mixed inductive and deductive approaches in 2 stages of analysis
  - Theoretical framework: Ecological Systems Theory (Bronfenbrenner, 1977, 1992)
  - Individual - Microlayer - Exolayer - Macrolayer

Health Data in Fertility Care: An Ecological Perspective

The HCI research contributions this paper is making is a theoretical contribution.

This contribution was appropriate as the author's goal of the paper was to provide a theoretical framework (EST) to understand the layers of relationships people have with exterior people (surrounding environment), and how this pertains to fertility data tracking.

Main Takeaways

- Fertility data tracking can benefit from being viewed from a EST perspective
- The EST lens may lead to better ways of supporting an individual fertility perspective
- The macrolayer, exolayer, and microlayer all play a role in defining, supporting, and limiting people's data practices
- Data can be used to counter-influence (inside out)

Discussion

- Who do you think is the main audience for this paper?
- The author's propose that self-tracking data has potential for social and political impacts in the exo and macrolayer? What is one way that you may see this play out (from the inside out)?
- What and how technology could support inside activities and could potentially influence the outside layers? Any further application on other research areas?