Promoting the Research of Health Behavior Change in Chinese HCI Community

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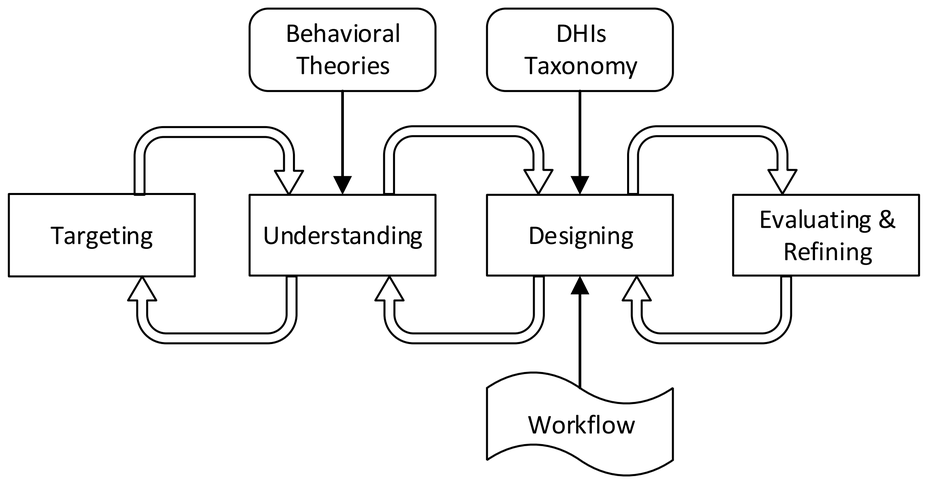
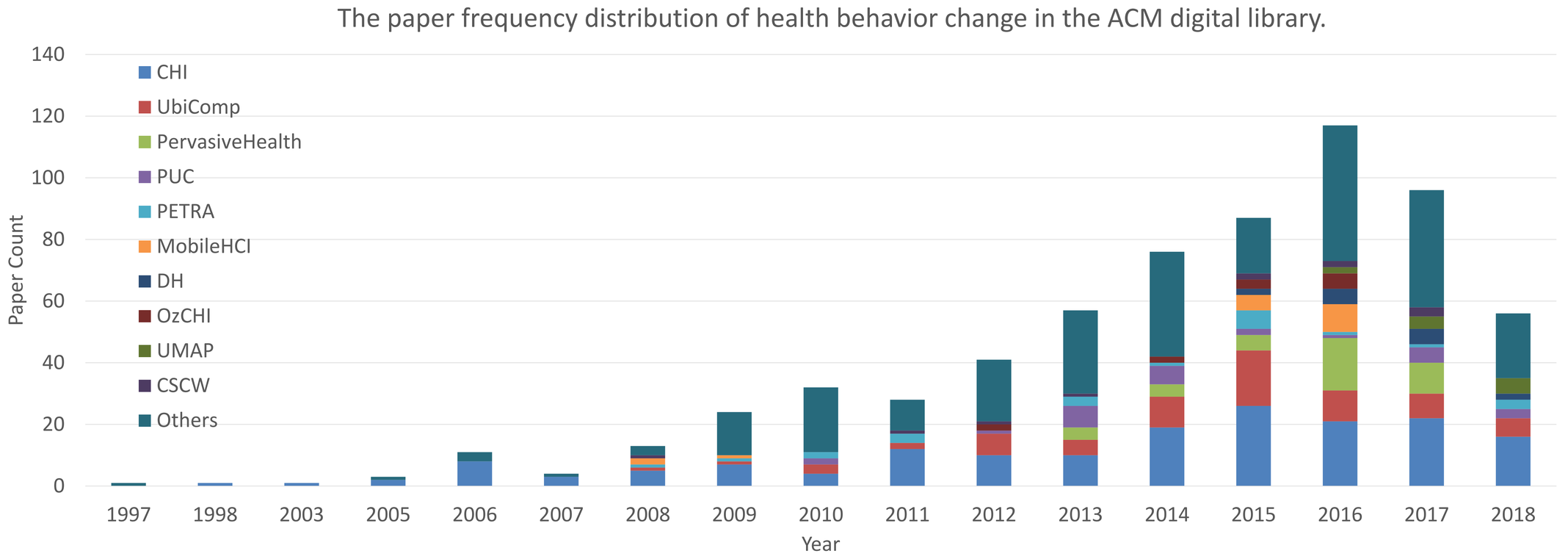
HCI Research Holds Great Potential for Health Behavior Change

- Many lifestyle-caused chronic diseases - e.g., cardiovascular disease, type 2 diabetes, obese, and musculoskeletal pain - have led to heavy burdens on patients, their family, and the whole society.
- The research of health behavior change (HBC) refers to any theoretical and practical work on improving individuals' health-related behaviors to prevent diseases and improve health.
- HCI researchers could contribute to HBC research by designing and studying digital health interventions (DHIs). The figure rightward shows our TUDER framework [1] for health behavior change.



The Research of Health Behavior Change in HCI Community Keeps Growing in The Past Decade



The original data were extracted on August 23, 2018, when some conferences (e.g., UbiComp) for that year had not taken place. The majority of the papers are from conference proceedings, while a small part of them are from journals (e.g., Personal and Ubiquitous Computing or PUC in the figure). This figure is adapted from our previous work [2].

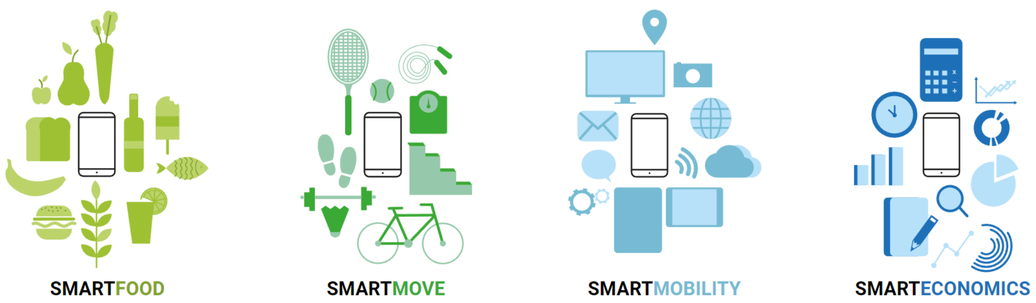
Health Behavior Change In China: Current State

- Among the 75 selected studies in our review [2], no one was conducted in mainland China. Although the article database limits our review, the result is in line with another systematic review [3], reflecting the lack of HBC research in the HCI community in China.
- Although HBC research is very limited in China, mobile health applications and services keep growing in the Chinese market (see [4,5]).

Health Behavior Change In China: Opportunities

- The health culture rooted in Traditional Chinese Medicine (e.g., 上医治未病).
- The technology acceptance rate and speed are high in the Chinese market.
- The vast user groups in the Chinese market have diverse needs for health behavior change research and products.
- HCI researchers in China have advantages regarding cross-discipline collaboration.

SMARTACT Project: An Inspiration



References
[1] Yunlong Wang, et al. 2019. Integrating Taxonomies into Theory-Based Digital Health Interventions for Behavior Change: A Holistic Framework. JMIR Res Protoc 2019;8(1):e8055.
[2] Yunlong Wang, et al. 2019. Health Behavior Change in HCI: Trends, Patterns, and Opportunities. arXiv:1901.10449.
[3] Rita Orji and Karyn Moffatt. 2018. Persuasive technology for health and wellness: State-of-the-art and emerging trends. Health Informatics Journal 24, 1: 66–91.
[4] Jeffrey Hsu, et al. 2016. The Top Chinese Mobile Health Apps: A Systematic Investigation. Journal of medical Internet research 18, 8: e222.
[5] Huijun Li, et al. 2014. Mobile health in China: Current status and future development. Asian Journal of Psychiatry 10: 101–104.

The authors are involved in the SMARTACT project (https://www.uni-konstanz.de/smartact/), which is an ongoing collaborative research project (2015-2021) aiming to improve the long-term health behavior by using mobile technologies (e.g., smartphones). It is funded by the German Federal Ministry of Education and Research (BMBF) and consists of research groups of HCI, psychology, and economics from three universities in Germany. Our goal in SMARTACT project is to develop and evaluate a module-based toolbox to study and improve users' eating behavior and physical activity through the lenses of individual factors (e.g., motives, emotions, stress, goal-setting, and action planning) and social context triggers (in the family and the job context). The scientific advisory board includes 13 international professors in the domains of health science, computer science, psychology, economics, and public health.

For More Information:
https://hci.uni-konstanz.de
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