

When Knowing Fails to Heal: Rethinking Digital Health Beyond the Interface

Xi (Cassie) Wang (PhD) Faculty of Health & Environmental Sciences

In a world increasingly saturated with digital health technologies, the promise of empowerment through information has become almost axiomatic. Yet what if access does not equate to understanding, and what if the sleek interfaces and personalized nudges of today's tools merely simulate agency while displacing it? The study explores how dominant digital health models, namely the Information Deficit Model (Simonds, 1974), the Knowledge-Attitude-Practice (KAP) framework (Launiala, 2009), health literacy strategies, and behavioural nudging (Thaler, 2009), tend to obscure structural determinants of health such as time poverty, cultural tensions, and systemic inequities. It asks: what are the limits of "knowing" in digital health, and how might we reframe design and governance to better reflect lived realities? This conceptual paper draws on critical public health literature and sociotechnical theory to interrogate the epistemological and ethical assumptions embedded in these paradigms. Despite their differences, each presumes a rational, autonomous user who simply needs the right data or design to act wisely. Rather than enabling genuine sensemaking, many tools silently delegate it to the interface, bypassing the complexity of everyday life. By asking who gets to define health, who designs the algorithm, and who is excluded in the process, this study contributes to ongoing debates in digital health design, critical health communication, and public health policy. It calls for a shift in perspective: from optimizing individual behaviour toward reimagining the systems of care, communication and decision-making that surround digital tools. The real frontier is not smarter apps, but fairer governance.

In this presentation, I will unpack how these models, when taken together, form a linear but fragile logic, from data to knowledge, to belief, to action, one that too often ignores the complex social, cultural, and structural contexts in which health decisions are actually made. I will show how this chain frequently breaks down in real life, particularly among those with limited time, resources, or institutional support. It invites a shift in perspective: from designing persuasive interfaces to reimagining the systems of health communication, care, and decision-making that surround them.

Keywords

digital health, health literacy, social determinants of health, health promotion

References

Simonds, SK. (1974). Health Education as Social Policy. Health Education Monographs, 2(1), 1-10. https://doi.org/10.1177/10901981740020S102

Launiala, A. (2009). How much can a KAP survey tell us about people's knowledge, attitudes and practices? Some observations from medical anthropology research on malaria in pregnancy in Malawi. Anthropology Matters, 11(1). https://doi.org/10.22582/am.v11i1.31

Thaler, R. H., & Sunstein, C. R. (2009). *Nudge: Improving decisions about health, wealth, and happiness*. Penguin. https://doi.org/10.1016/j.soscij.2008.09.003