Shiraz E-Med J. 2025 July; 26(7): e163527 https://doi.org/10.5812/semj-163527

Published Online: 2025 July 14 **Editorial**

The Philosophy of Design in m-Health: Balancing Wisdom, Ethics, and User Needs

Kamran Bagheri Lankarani [1,*], Manoosh Mehrabi [2]

[1] Health Policy Research Center, Institute of Health, Shiraz University of Medical Sciences, Shiraz, Iran
[2] Department of e-Learning, Virtual School, Center of Excellence for e-Learning in Medical Sciences, Shiraz University of Medical Sciences, Shiraz, Iran

[*] ***Corresponding Author:*** Health Policy Research Center, Institute of Health, Shiraz University of Medical Sciences, Shiraz, Iran. Email: lankaran@sums.ac.ir

Received: 12 June, 2025; **Accepted:** 28 June, 2025

Keywords: M-Health, Design Philosophy, Human Centered Design, Design Thinking

Philosophy is the endeavor of finding wisdom, truth, and knowledge, stemming from the Greek meaning of philosophy as the love of wisdom (1). This pursuit enables us to explore the mysteries of the universe and our lives, allowing us to discern the connections between them (2). The philosophy of design is concerned with the significant process of creation. It extends beyond the mere making of a new object to the development of innovative solutions that incorporate aesthetics, performance, and ethical dimensions (3).

In mobile Health (m-Health), where applications are designed, aesthetics pertain to the visual appeal of the application, while functionality relates to its ease of use and its role within a social framework (4). Aesthetics not only enhance user engagement but also advance ethical design that neither harms nor promotes harmful levels of consumption (5). A designer's philosophy informs tool-making by embracing principles of simplicity and emotional connection, genuinely benefiting users (6).

Design philosophies such as user-centered design (UCD), human-centered design (HCD), and design thinking (DT) are fundamental in m-Health. These philosophies emphasize understanding the needs, wants, and limitations of patients and healthcare providers, using the user experience as the basis for decisions (7). Designers learn to create effective m-Health apps by engaging users to understand their challenges through interviews, surveys, or participatory sessions (8). This user-centric focus enables designers to address actual, practical user needs rather than relying on academic or theoretical assumptions (7).

When HCD and DT practices are applied to m-Health, designers follow an organized process, beginning with empathizing with users to understand their pain points. They then define the problem based on this understanding (8). If multiple stakeholders are involved, ideation can commence, leading to a variety of innovative solutions (8). Designers can prototype each idea and then instruct stakeholders to test these prototypes with users. Usability testing, involving real users, is conducted iteratively to refine the prototypes based on feedback (8). The goal is to create a learning app that is engaging, intuitive, and ultimately valuable for users (4). This cyclical process allows designers to benefit from feedback and iterative updates throughout the design process, clearly developing products that users desire (7).

To successfully implement HCD and DT in m-Health, certain principles are essential. Usability ensures that m-Health apps are navigable even by individuals with disabilities, while accessibility aims to make m-Health solutions usable by a diverse range of abilities (9). Personalization tailors the experience to each user's health preferences, engagement encourages dynamic interaction, and privacy and security ensure that sensitive health data is securely protected and complies with strict health standards (3). These principles contribute to the construction of trustworthy and functional m-Health apps.

Despite the opportunities, challenges exist for HCD and DT to succeed in m-Health. For instance, sampling bias can create a disparity between the intended users and uses of m-Health solutions, with participants not

How to Cite: Bagheri Lankarani K, Mehrabi M. The Philosophy of Design in m-Health: Balancing Wisdom, Ethics, and User Needs. Shiraz E-Med J. 2025; 26 (7): e163527. https://doi.org/10.5812/semj-163527.

representing the health population (7). The complexity of health systems, with their numerous components — workflow, policies, guidelines, and regulations — can pose challenges for m-Health solution integration (8). Developers may face tension between clinical integration goals and consumers' real-life experiences, necessitating trade-offs and compromises (7). Additionally, scalability and regulatory compliance and safety policies present further barriers to implementation (8). Low adoption by a defined user group and a lack of evidence supporting long-term utilization are also obstacles to HCD and DT objectives (7). Overall, these approaches are complex, and developers should navigate them carefully (7).

To address these challenges, multidisciplinary collaboration is key. Teams of clinicians, designers, engineers, and researchers can align clinical and user needs while meeting regulatory requirements (6). Early and continuous usability testing ensures intuitive apps, and sustainable business models support scalability. Partnerships with healthcare providers enable seamless integration into existing systems (8). By maintaining ongoing feedback loops, designers can create m-Health solutions that are innovative and enduring, embodying the philosophical pursuit of wisdom in service of human well-being (9).

Footnotes

Authors' Contribution: The authors equally contributed to drafting the final manuscript.

Conflict of Interests Statement: The authors declare no conflict of interests.

Funding/Support: The present study received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

References

1. Fenton R. What is the place for philosophy within the field of medicine? A review of contemporary issues in medical ethics. *Philos Ethics Humanit Med*. 2018;**13**(1):16. [PubMed ID: 30409214]. [PubMed Central ID: PMC6225580]. https://doi.org/10.1186/s13010-018-0070-3.
2. Altman M, Huang TTK, Breland JY. Design Thinking in Health Care. *Prev Chronic Dis*. 2018;**15**. E117. [PubMed ID: 30264690]. [PubMed Central ID: PMC6178900]. https://doi.org/10.5888/pcd15.180128.
3. Bazzano AN, Martin J, Hicks E, Faughnan M, Murphy L. Human-centred design in global health: A scoping review of applications and contexts. *PLoS One*. 2017;**12**(11). e0186744. [PubMed ID: 29091935]. [PubMed Central ID: PMC5665524]. https://doi.org/10.1371/journal.pone.0186744.
4. Rossi A, Heyman NB, Rossi MO, Wolf S, White T. Exploring the Association Between the Healthcare Design Elements and Physician Well-Being: A Scoping Review. *HERD*. 2023;**16**(3):362-78. [PubMed ID: 36722306]. https://doi.org/10.1177/19375867231151687.
5. Samara T. Dualities of Form: Considerations of Functional and Narrative Aspects of Design for Data Visualization. *Des Issues*. 2021;**37**(4):23-34. https://doi.org/10.1162/desi_a_00655.
6. Lyon AR, Brewer SK, Arean PA. Leveraging human-centered design to implement modern psychological science: Return on an early investment. *Am Psychol*. 2020;**75**(8):1067-79. [PubMed ID: 33252945]. [PubMed Central ID: PMC7709137]. https://doi.org/10.1037/amp0000652.
7. van Velsen L, Ludden G, Grunloh C. The Limitations of User-and Human-Centered Design in an eHealth Context and How to Move Beyond Them. *J Med Internet Res*. 2022;**24**(10). e37341. [PubMed ID: 36197718]. [PubMed Central ID: PMC9582917]. https://doi.org/10.2196/37341.
8. Levander XA, VanDerSchaaf H, Barragan VG, Choxi H, Hoffman A, Morgan E, et al. The Role of Human-Centered Design in Healthcare Innovation: a Digital Health Equity Case Study. *J Gen Intern Med*. 2024;**39**(4):690-5. [PubMed ID: 37973709]. [PubMed Central ID: PMC10973281]. https://doi.org/10.1007/s11606-023-08500-0.
9. Melles M, Albayrak A, Goossens R. Innovating health care: key characteristics of human-centered design. *Int J Qual Health Care*. 2021;**33**(Supplement_1):37-44. [PubMed ID: 33068104]. [PubMed Central ID: PMC7802070]. https://doi.org/10.1093/intqhc/mzaa127.