

Cultural adaptation of digital health interventions for improving foot health and self-management in adults with diabetes: a rapid scoping review

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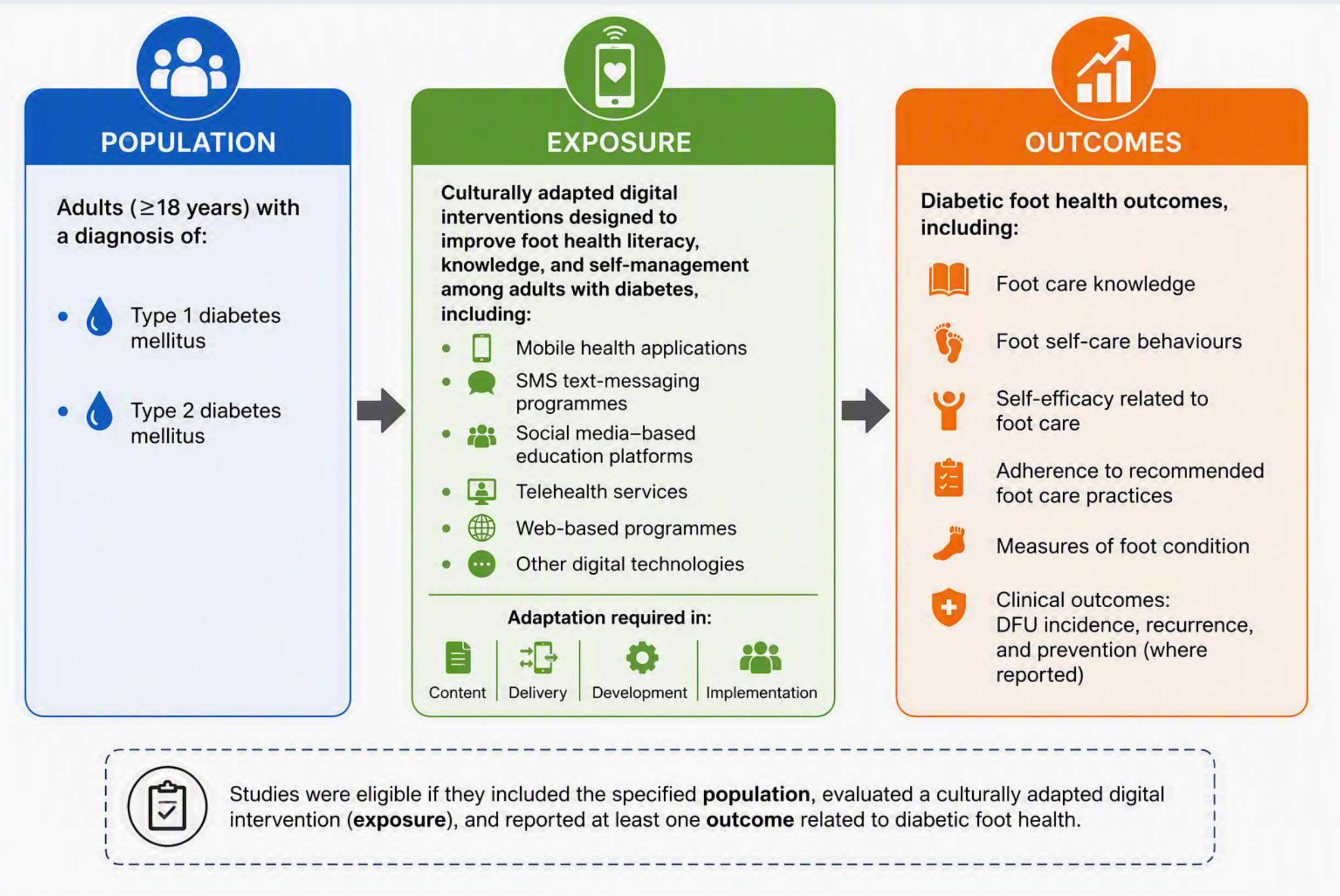
1. Introduction

- Digital health interventions (DHI) can improve foot-care self-efficacy and self-care behaviour in older adults with type 2 diabetes (Chen & Wu, 2023) and support early risk detection and clinical escalation (Minty et al., 2023).
- The aim of this rapid review was to map cultural adaptation of DHI seeking to improve foot health literacy and / or self-care behaviours in adults with diabetes.

2. Methods

- Systematic literature search was conducted in MEDLINE and CINAHL in July 2025.
- Study selection was conducted independently by two reviewers at both title/abstract screening and full-text review.
- Cultural adaptation was mapped against pre-determined taxonomy (Spanhel et al, 2021).
- The Population, Exposure and Outcomes framework is presented in Figure 1.

Figure 1 Population, Exposure and Outcomes



3. Results

- Of the 13 research studies, two were conducted in Indonesia, Taiwan, and the USA and one conducted in New Zealand, China, Malaysia, Jordan, Turkey, Brazil, Portugal.
- Seven studies focused specifically on foot care in diabetes and six focused on diabetes self-management, which included foot care.
- Six studies reported on adults with Type 2 diabetes, three studies reported type 1 and type 2, and four studies did not define diabetes type.
- Targeted communication to persons (WHO Framework Code 1.1.2 and 1.1.3) was the most dominant approach to DHI, followed by Person-to-Person communication (1.3.1).
- Cultural adaptation of interventions is presented in Figure 3a & 3b. The content components of interventions (illustration, language and treatment) were the most frequently reported, 12 of 13 studies reported translation and 6 of 13 reported language adaptation.

Figure 2 Interventions mapped to the World Health Organisation Classification of digital interventions, services and applications in health

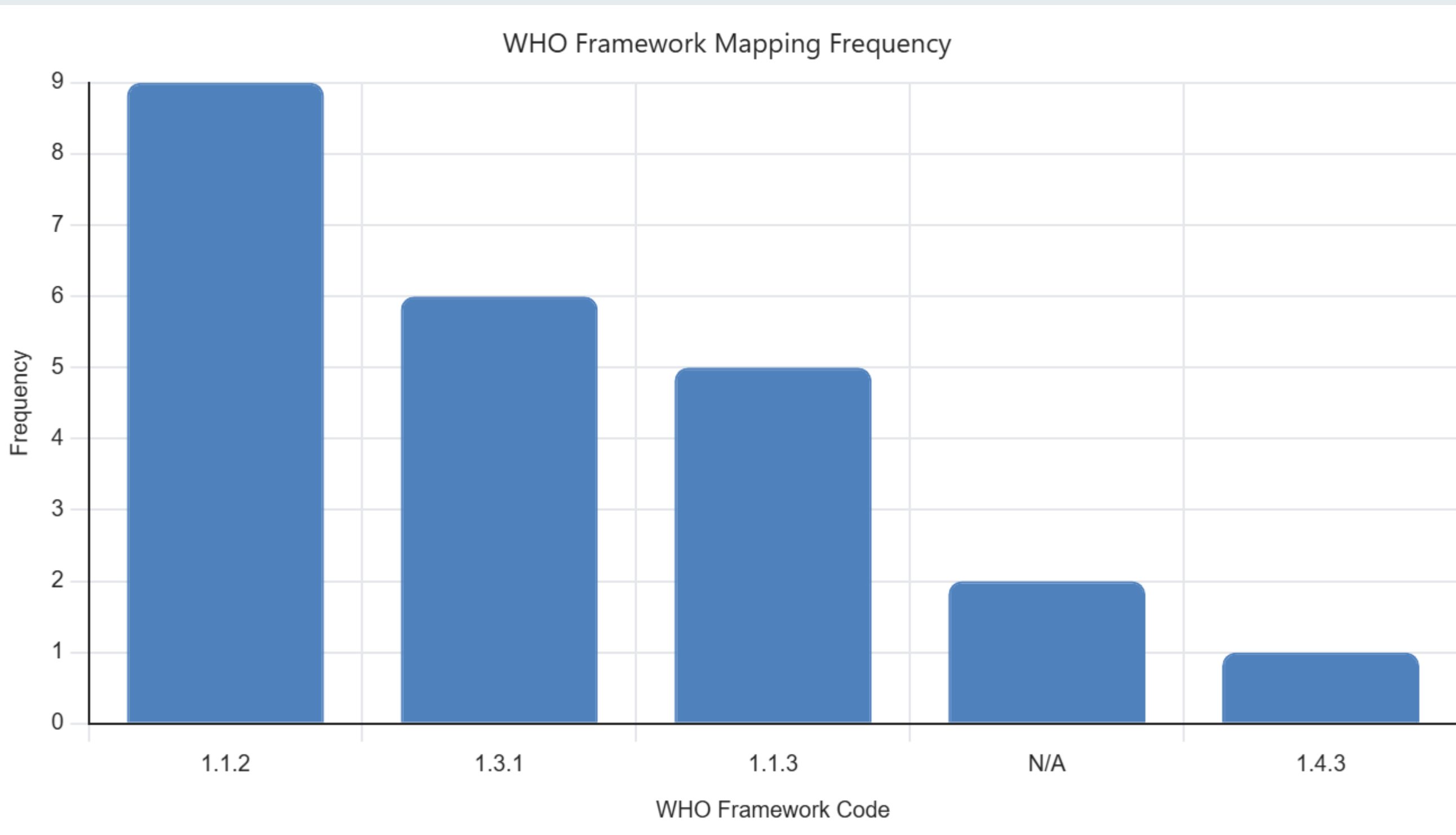


Figure 3a Cultural adaptation of interventions. Interventions mapped to WHO classification of digital interventions.

Intervention mapped to WHO classification of digital interventions, services and applications in health	Cultural adaptation: content components									
	Characters	Activities	Environment	Values	Translation	Tailoring	Visualisation	Concepts	Goals	Methods
(i) Transmit targeted health information to person(s) based on health status or demographics	0	2	2	2	5	4	0	0	4	0
(ii) Transmit targeted alerts and reminders to person(s)	0	1	0	0	4	2	0	0	2	0
(iii) Peer group for individuals	0	2	2	1	4	1	0	0	1	0
(iv) Active data capture / documentation of an individual	0	0	0	0	1	1	0	0	0	0
(v) Other	1	0	1	0	2	1	0	0	1	0

Figure 3b Cultural adaptation of interventions. Interventions mapped to WHO classification of digital interventions.

Intervention mapped to WHO classification of digital interventions, services and applications in health	Cultural adaptation: methodological components				Cultural adaptation: procedural		
	Structure	Functionality	Design	Guidance	Information	Persons	Theoretical framework
(i) Transmit targeted health information to person(s) based on health status or demographics	0	1	0	0	3	6	0
(ii) Transmit targeted alerts and reminders to person(s)	0	1	0	0	2	3	0
(iii) Peer group for individuals	0	2	0	0	3	4	0
(iv) Active data capture / documentation of an individual	0	0	0	0	0	1	0
(v) Other	0	0	0	0	1	2	0

4. Summary

- Surface level adaptations were the most common, cultural and population level adaptations were sparsely reported.
- Careful tailoring of DHI is important to improve the relevance, acceptability, and effectiveness of interventions.
- We recommend the development of a foot care oriented cultural adaptation framework.

5 . References

- Classification of digital interventions, services and applications in health: a shared language to describe the uses of digital technology for health, second edition. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO.
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