

Participatory Design Framework - Validation in the Field of Mental Health

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Abstract. Participatory design (PD), i.e. the systematic involvement of stakeholders into the design process, is increasingly used for the design of digital health interventions. In this work, we assess to what extent research is reporting aspects relevant for understanding the PD process with examples from mental health.

Keywords. Participatory design, mental health, workshop, framework, reporting

1. Introduction and Methods

Participatory design (PD) actively involves stakeholders, including end-users, in the design process to ensure solutions meet their needs [1]. This approach is particularly valuable in developing digital health interventions, as it enhances acceptance, usability, and trust. To guide the implementation of PD in mental health contexts, a framework is being developed using the nominal group technique by experts from anthropology, psychology, and computer science. It focuses on key aspects such as stakeholder identification, workshop facilitation, ethics, and feedback integration. The framework comprises five categories with detailed components: participatory process (13 components), involved persons and roles (4 components), workshop definition (14 components), setting (2 components), and privacy/ethics (3 components). This work evaluates how current research reports these framework aspects, using examples retrieved from literature indexed in PubMed related to mental health and digital health.

2. Results

We identified three were empirical studies related to mental health and digital health that applied PD workshops [2-4]. Table 1 shows the number of components of the defined categories that were reported in the selected studies. *Participatory process*: Among the

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13 components, only three aspects were reported: plurality of expertise, privacy protection, and justification of the approach. Two studies described co-planning involving diverse expertise [2, 4], while two justified their selected approach [3, 4].

Table 1. Number of components of the design framework reported in the selected studies.

Reference	Participation process	Involved persons and their roles	Workshop definition	Settings	Privacy and ethics
Milton et al. [2]	1/13	2/4	8/14	0/2	1/3
Brown et al. [3]	1/13	3/4	6/14	0/2	1/3
Dederichs et al. [4]	3/13	2/4	7/14	0/2	1/3

Involved persons and their roles. All three studies detailed participant characteristics, including adults with lived mental health experience [2], individuals aged 16–24 in academic studies [2], and medical students [4]. One study mentioned providing vouchers for motivation [3]. Required skills included English proficiency [2], academic engagement [3], or medical studies participation [4].

Workshop definition. Participatory planning was described by two studies [2, 3], both outlining facilitator roles. One study reported two facilitators, a lead and a support [4]. Inclusion/exclusion criteria were addressed in all studies [2–4], while only one mentioned funding [2]. Materials included resource cards and group exercises like persona development [3, 4]. Milton et al. emphasized co-delivery and co-evaluation with lived experience input [2]. Only Dederichs et al. outlined an agenda [4].

Settings. None of the three papers reported aspects related to the setting, i.e. on appropriate material or environmental factors.

Privacy and ethics. All three studies reported on an ethics approval.

3. Discussion and Conclusions

The results of our evaluation show that research is only reporting a small part of the information on the PD approach [1] as it is suggested in the developed framework. Specifically, information on the setting and participatory process is not reported. It might be that these aspects are not well reflected in the design phase, or they are simply not reported. In conclusion, despite the importance of participatory approach in the design of digital health, particularly in mental health, the lack of information reported in the assessed studies allows us to identify the need for a framework for PD workshops and a reporting guideline for research studies to standardize reporting and reproducibility.

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