

KALMER: HEALTHCARE PROFESSIONALS' PERSPECTIVES ON THE USABILITY AND IMPLEMENTATION POTENTIAL OF A DBT-INFORMED ECOLOGICAL MOMENTARY INTERVENTION APP FOR NON-SUICIDAL SELF-INJURY

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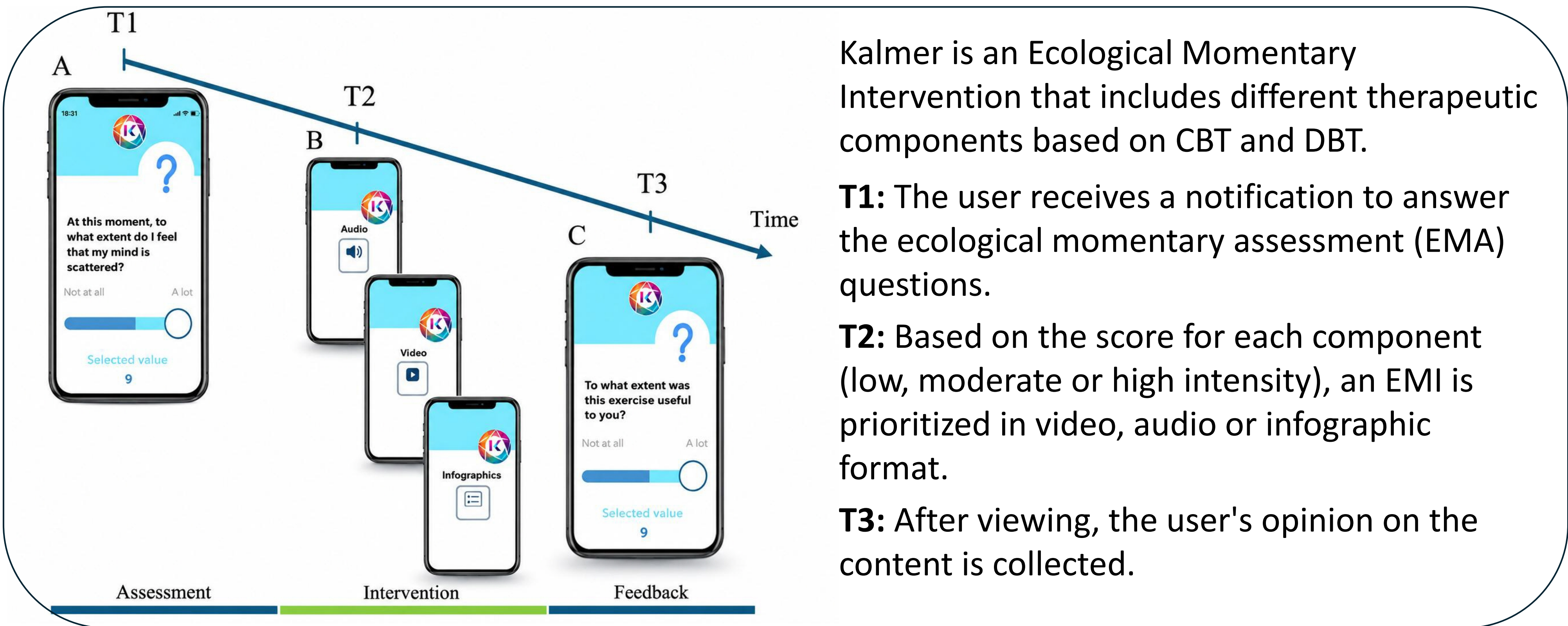
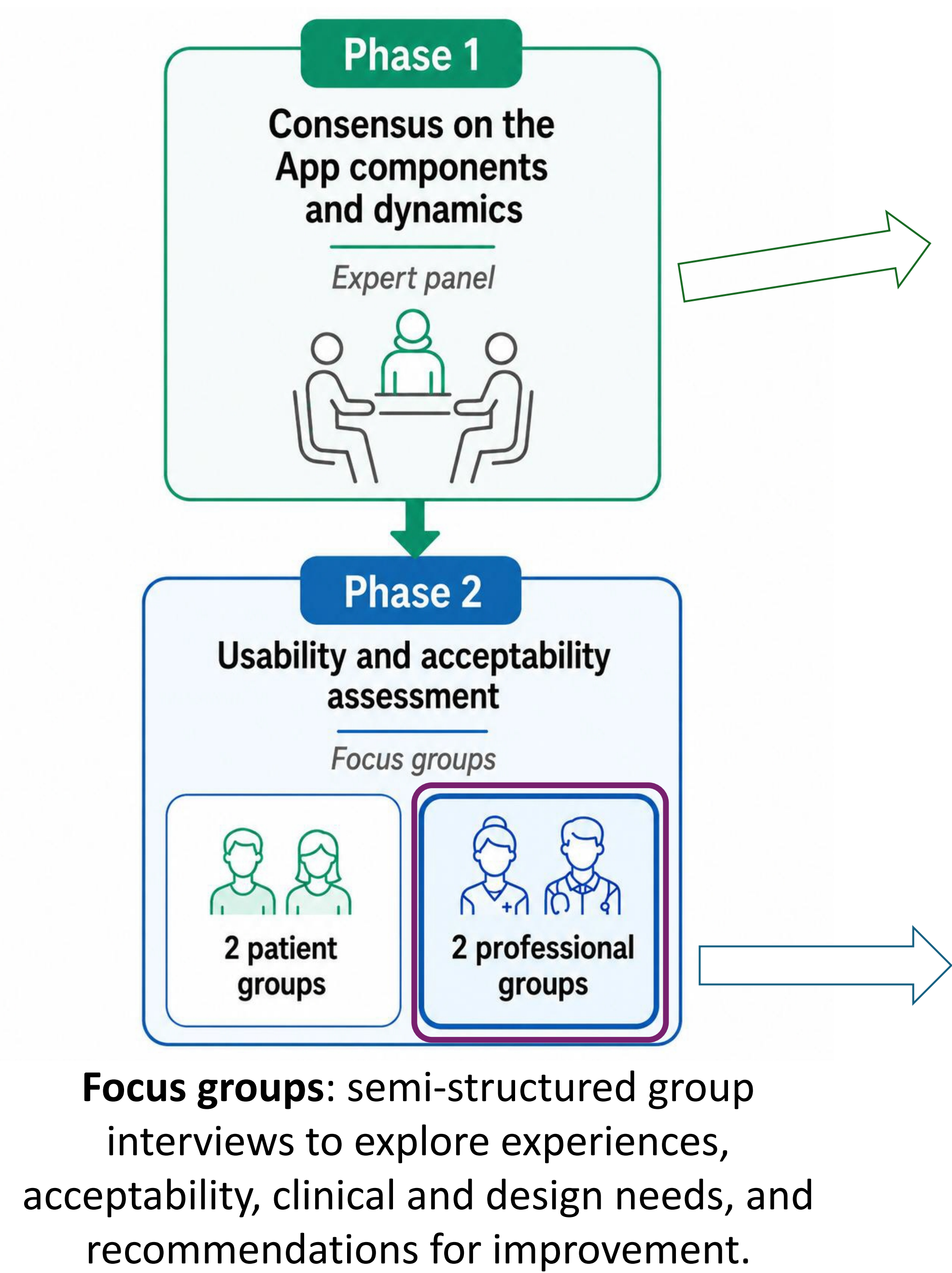
1. Introduction

Non-suicidal self-injury (NSSI) is a public health problem among young people, given its high prevalence, its clinical impact and its association with an increased risk of suicide (1). Despite the availability of empirically supported treatments (e.g., Dialectical Behavior Therapy), significant access barriers persist that limit their reach (2). Ecological Momentary Interventions (EMIs) integrated into smartphones emerge as a promising alternative. They enable real-time monitoring and intervention in the patient's natural environment, offering the possibility of acting within the critical windows that precede the problem behavior (3).

Objective: To describe the development and preliminary evaluation of Kalmer, an EMI app for adolescents and young adults with NSSI that includes expert-consensus components, assessing its usability and acceptability through mixed methods.

2. Method

Design: Development and evaluation phases



Sample

- The sample included **14 healthcare professionals**: 7 from primary care services and 7 from mental health services.
- $M_{age} = 39.79 \pm 6.49$
- Females = 11 (78.6%)
- Psychology (n=6); Nurse (n=2); Primary Care physician (n=2); Social Worker (n=2); Psychiatry (n=2)

Instruments

- **System Usability Scale (SUS):** a standardized 10-item questionnaire assessing perceived usability, ease of use and learnability of the mobile app, from 0 to 100 (4).
- **Mobile Application Rating Scale (uMARS):** assessment of quality and acceptability, from 1 to 5 (5).

3. Results

Kalmer achieved a mean SUS score of 80.18 (SD = 10.76), placing it in the good-to-excellent range and indicating high user acceptability. On the uMARS, professionals rated the app highly for Information quality (4.57) and Engagement (4.30), with more moderate scores for Recommendation (3.64) and Perceived impact (3.57). Notably, perceived impact was stronger for raising awareness and motivation than for producing direct behavioral change.

Four themes emerged from two focus groups:

- **Immediate emotional anchor:** daily check-ins help users pause, interrupt escalation, and self-regulate.
- **Complement, not replacement:** valued to reinforce therapy between sessions, with clear boundaries and clinician training.
- **Pragmatic fit:** a way to "do something rather than nothing" and bridge gaps in an overstretched system, given protocols and institutional support.
- **From content to therapy:** needs warmer design, natural voices, configurable notifications, progress visualization, psychoeducational content, emotion-coping links, and a safety plan.

4. Conclusions

Professionals regarded Kalmer as an acceptable and useful complementary support tool for adolescents and young adults engaging in NSSI, especially within an overstretched public mental health system. To fulfill this role, however, the app needs design and engagement refinements that move it from a collection of digital exercises toward a more guided therapeutic tool. Kalmer is currently being evaluated in an ongoing randomized controlled trial (6).

5. References

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