

ARTIFICIAL INTELLIGENCE (AI) AS A CO-THERAPIST?

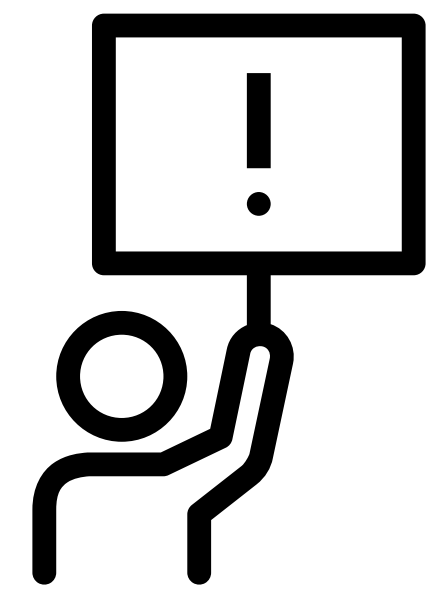
CO-CREATING ACCESSIBLE & EFFECTIVE DIGITAL MENTAL HEALTHCARE WITH PATIENTS, EXPERTS AND ARTIFICIAL INTELLIGENCE

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Problem

Unmet needs in PTSD Care

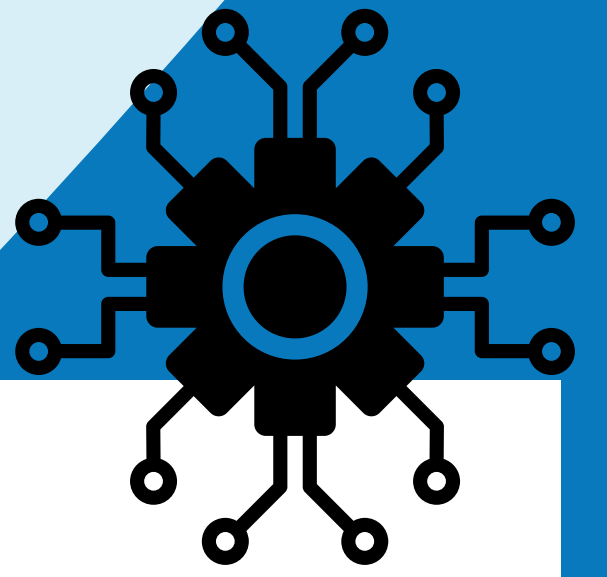
PTSD affects millions, yet many struggle to access effective, sustained therapy due to barriers like cost, stigma, and limited therapist availability. Current internet-based solutions face scalability issues from high therapist workload.



Solution

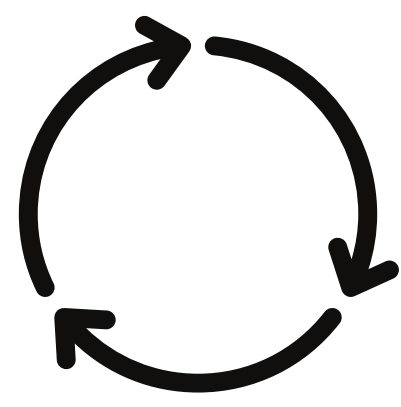
Beyond a Black Box

Development of AI-assisted Written Exposure Therapy (WET) for PTSD. This hybrid system integrates Variational Autoencoders (VAEs) for interpretable understanding of patient narratives and Retrieval-Augmented Generation (RAG) for dynamic, evidence-based therapeutic responses. This AI creates a transparent, adaptable, and clinically robust system for personalized, scalable digital mental healthcare.



A phased approach to collaboration

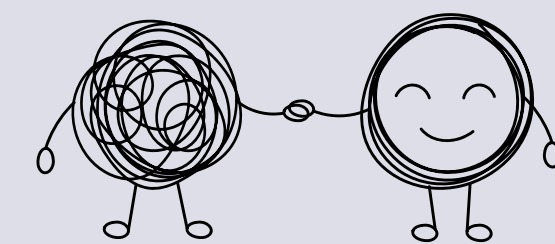
Phase A - Training of AI



Experts create synthetic therapy sessions as training data. The AI is trained on this data. AI responses are evaluated by therapists, researchers, and patient experts using a Satisfaction Rating Scale developed via expert round tables (consisting of patients, researchers, IT specialists and psychotherapists). This cycle of training, rating, and refinement enhances trauma-sensitive AI outputs.

Phase B -

Generation of Real-World Data

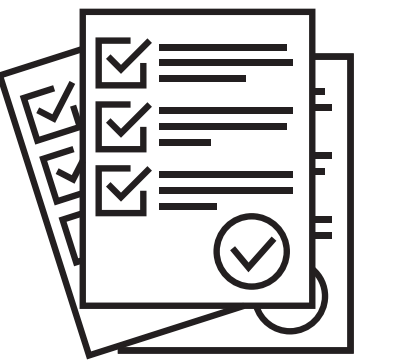


Patients and Therapists from Rehazentrum Schruns generate real-world WET data. The study design ensures gender-sensitive data collection to gather diverse insights, supported by secure communication via ESD.

Co - Creation and Co - Validation Feedback - Loops

Phase C -

Comparing AI and Therapist Responses



Patients and experts directly evaluate AI-generated responses against human responses using the developed Rating Scale. Their feedback informs AI adjustments to mitigate algorithmic bias and enhance empathy and attunement.

Co-Writing of a paper with patients and researchers of AI in psychotherapy

12 months

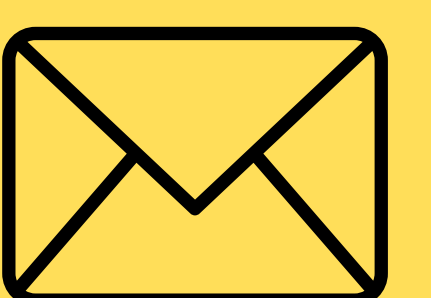
24 months

36 months

Conclusion

AI assisted online WET would increase access to care for underserved populations, reduces the burden on healthcare systems and professionals, fosters responsible and explainable AI, enables enhanced training modules for future therapists, and contributes to climate-neutral healthcare through reduced travel and energy-efficient AI.

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