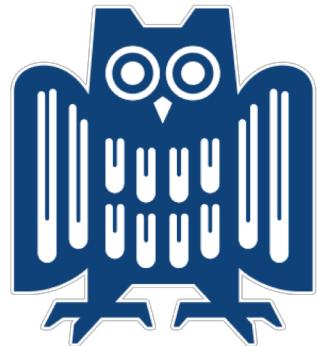


Emotional Assistant



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Matthias Hock, Tobias Louia, Teresa Naredi-Rainer,
Sana Nasir, Florena Raja, Irina Vetter, Anna Welker



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1.1 Summary

- Core idea: Virtual therapy pet
- Goals of our project
 - Assist the user in reintegrating into workplace after burnout
- How to do that?
 - Emotional support
 - Stress reduction
- What we won't do!
 - Creating a virtual therapist



1.2 Motivation: Why is an Emotional Assistant needed for burnout patients?

Which Emotional Assistants are already available?

Information & Psychoeducation	Tracking of mood & behaviour (patterns)	Ressources & Self-help	Data transfer & Professional support
Psychoeducation for patients & relatives	Journaling	Self-help tools / exercises	Forwarding data to therapists
Informations concerning disorder, disease progression, chances of recovery...	Mood tracking	Reminder	Direct communication with coaches, psychotherapists ...
Gamifying of experience	Recognition of behaviour patterns	Crisis resources	
		Community	
		Gamifying of experience	

1.2 Motivation: Why is an Emotional Assistant needed for burnout patients?

- Burnout and depression have many aspects in common
 - Affect, affect expression & emotion regulation strategies are especially concerned
- Often long waiting times between inpatient clinic and outpatient psychotherapy
 - Bridging by an outpatient / mobile assistant
 - Early introduction to aspects of day-to-day life in clinic



1.3 Burnout – what is this?

Burnout-Triade (Maslach)

- **Emotional depletion**
 - Avoiding interactions / human contact
 - Feeling physically + emotionally weak and lifeless
- **Depersonalization / Cynicism**
 - Seeing problems in interactions with people instead of problems
 - Losing respect for patients / humans
- **Feeling of reduced efficiency**
 - Concerning all parts of life, not only workplace

A large, bold, black word "Burnout" is set against a background of white smoke and fire. The letters are partially obscured by flames at the bottom, with orange and yellow hues visible.

1.4 Training emotionaler Kompetenzen (TEK)





1.5 Animal assisted therapy (AAT)

- „Easy“ non-verbal communication
 - No need to talk
- Physical contact
 - Feeling & touching
- Unconditional friendship
 - Always staying by your side
- Sensitive and precise detection of affect / emotional state





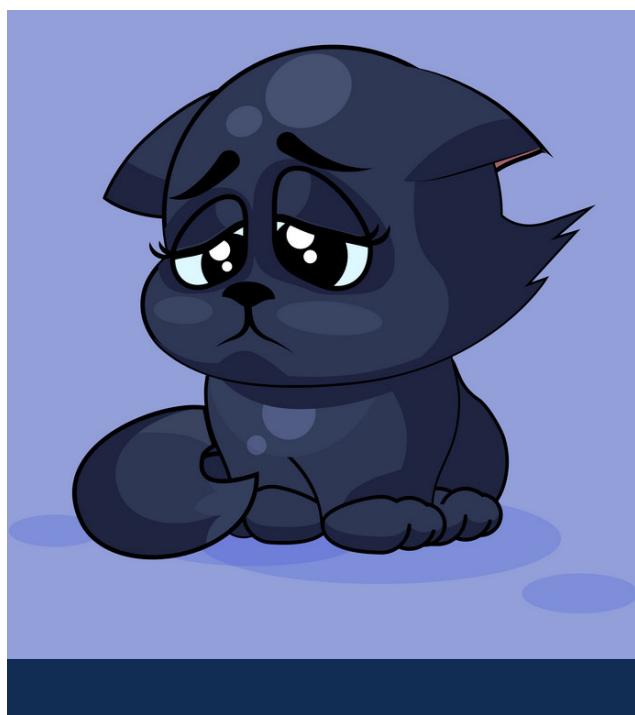
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2. First ideas concerning implementation



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2. First ideas concerning implementation



Implementation of aspects of the TEK program:

- First: Short dialogue „Are you stressed, how was your day?“
- App suggests the most appropriate point of the TEK-program (e.g. muscle relaxation, show self-compassion)

2. First ideas concerning implementation



- Input
 - Detect affective state + stress levels
 - Sentiment analysis → Voice input
 - Optional:
 - Camera → Multisensory fusion
 - Touch / Speech recognition
- Output
 - Audio-visual cues & showing basic emotions
 - Optional: Natural language generation & text to speech

2. First ideas concerning implementation



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- Dialogue / Interaction management
 - Interactive talking session → Pet reacts to user's emotions
 - Scripted relaxation sessions (muscles & breathing)
 - Optional: semantic analysis of speech

→ Supporting step 3 in TEK: non-evaluative perception
(Bewertungsfreie Wahrnehmung)

- Problem:
 - Reduced affective state & dynamic range of depressive / burnout patients
 - (Pitch analysis might not work)

2. First ideas concerning implementation



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- Bonuses
 - More pets / other cartoony characters
 - Extend PC-based prototype to mobile app
 - Feedback via vibrations
 - Portable & always by your side
 - Purr (Schnurren)
 - Tokens (variable reward scheme)

Your own ideas? → Discussion !

3. Outlook & next steps

- How to motivate the user to open up emotionally
- Technical details & implementation
- Deepening + enhancing psychological knowledge of how therapy (with animals) works



Your own ideas? → Discussion !



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4. Time schedule

Date	Group	CS	PS
15.11.		Choice of implementation tools	Figure out how to motivate the user to open up emotionally (Interaction design)
20./25.11	1st version; raw-model	Cartoony character modelled with a few simple emotions	Planning a design-user study
10.12.	Exchange psychologists' input + implementation of other / further functions	Raw model with all functions / steps of TEK-Program	
19.12.	Present raw model with all steps + emotions	Possible interaction: Character responds to user's input; typing dialogues	First tests → trial and error processing
End of January:	Fine-tuning Implementation of missing functions → Finalized application	Write report	



5. Literature

- Berking, M. (2010). *Training emotionaler Kompetenzen* (2. Aufl.). Heidelberg: Springer.
- Berking, M. & Znoj, H. J. (2008). Entwicklung und Validierung eines Fragebogens zur standardisierten Selbsteinschätzung emotionaler Kompetenzen (SEK-27). *Zeitschrift für Psychiatrie, Psychologie und Psychotherapie*, 56, 141-152.
- Berking, M., Meier, C. & Wupperman, P. (2010). Enhancing emotion-regulation skills in police officers: Results of a controlled study. *Behavior Therapy*, 41, 329-339.
- Berking,M.,Wupperman,P.,Reichardt,A.,Pejic,T.,Dippel,A.&Znoj,H.(2008).Generalemotion-regulation skills as a treatment target in psychotherapy. *Behaviour Research and Therapy*, 46, 1230-1237.
- Bourgeois, P., & Hess, U. (2008). The impact of social context on mimicry. *Biological psychology*, 77, 343-352.
- Grawe, K. (1992). Komplementäre Beziehungsgestaltung als Mittel zur Herstellung einer guten Therapie- beziehung. In: Margraf, J. & Brengelmann, J. C. (Hrsg.), *Die Therapeut-Patienten Beziehung in der Ver- haltenstherapie* (S. 215-244). München: Röttger.
- Grawe, K. (1995). Grundriss einer Allgemeinen Psychotherapie. *Psychotherapeut*, 40, 130-145.
- Grawe, K. (1998). *Psychologische Therapie*. Göttingen: Hogrefe.
- Grawe, K., Donati, R. & Bernauer, F. (1994). *Psychotherapie im Wandel. Von der Konfession zur Profession*. Göttingen: Hogrefe.
- Grawe, K. & Grawe-Gerber, M. (1999). Ressourcenaktivierung: Ein primäres Wirkprinzip für die Psychotherapie. *Psychotherapeut*, 44, 63-73.
- Grosse Holtforth, M. & Grawe, K. (2000). *Fragebogen zur Analyse Motivationaler Schemata (FAMOS)*. Göttingen: Hogrefe.
- Grosse Holtforth, M. & Grawe, K. (2003). Der Inkongruenzfragebogen (INK). Ein Messinstrument zur Anayse motivationaler Inkongruenz. *Zeitschrift für Klinische Psychologie und Psychotherapie*, 32 (4), 315- 323.
- Reeves, B., & Nass, C. I. (1996). *The media equation: How people treat computers, television, and new media like real people and places*. Cambridge university press.



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Appendix

Effective factors in psychotherapy

(Wirkfaktoren der Psychotherapie, Klaus Grawe)



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1. Problem update
2. (Motivational) clarification
3. Therapeutic relationship
4. Resource activation
5. Problem solving



→ 5 pillars why psychotherapy works



Problem update

- To experience the **problem area** in a therapeutic situation as intensely and with as many of its facets as possible
- Activation of the complete network of **intrapsychic representations**, which are associated with the disorder
 - Integrate as many modalities as possible (sensory, emotional, cognitive, somatic, etc.)



Problem update

"Principle of real experience":

- Assumption: problem-relevant information-processing-schemes must be activated in order to understand & change them
- Therefore:
 - Choose a setting in which the problem occurs:
 - (e.g. group for interactional problems, exposure situations for anxiety)
 - see also "Transfer" in psychoanalysis
- Therapist should know as many methods as possible for problem updating, not only one



(Motivational) clarification

General:

- Creation of cognitive representation of problem-relevant facts (cognitions, emotions, goals)
- Conveying of a functional understanding of one's own problems (plausible fault model, acceptance & change components)

Motivational Clarification:

- Vertical behavioural analysis
- Development of the individual target-system behind the problem behaviour



Therapeutic relationship

Complementary relationship design (Grawe):

- Design of the therapeutic relationship complementary to the individual needs, motivations and goals of the patient
 - E.g. the need for autonomy → leaving decision-making freedom
 - Patient experiences contact as conducive to achieving personal goals
- Usually makes patients like their therapists and feel comfortable in contact
- Complementary relationship design increases the "relationship credit"

Therapeutic relationship

Goal

- not: Maximizing the relationship credit
- but: To manage with relationship credit in such a way, that therapy goals are achieved





Resource activation

Definition:

- Explicit and implicit use of the patient's strengths, abilities, potentials, possibilities, goals, positive moods, etc. (Grawe & Gerber, 1998)
- „Als Ressource kann jeder Aspekt des seelischen Geschehens und darüber hinaus der gesamten Lebenssituation eines Patienten aufgefasst werden, also z. B. motivationale Bereitschaften, Ziele, Wünsche, Interessen, Überzeugungen, Werthaltungen, Geschmack, Einstellungen, Wissen, Bildung, Fähigkeiten, Gewohnheiten, Interaktionsstile, physische Merkmale wie Aussehen, Kraft, Ausdauer, finanzielle Möglichkeiten sowie seine zwischenmenschlichen Beziehungen... Als positives Potential, das dem Patienten zur Befriedigung der Grundbedürfnisse zu Verfügung steht.“

Resource activation





Problem solving

- Concrete steps of change, that adjust sustaining conditions
- The patient learns through "active help for problem solving" strategies & competences to deal better with his disorders
- Distinction between:
 - **Disturbance-specific skills** (e.g. stimulus confrontation in phobics)
 - **Cross-disorder skills** (e.g. emotion regulation competence, social competence)





Problem solving

- **Prerequisite:** Patient must feel taken seriously with his problems
- Experience of increasing independence and competence & improvement of action competence
- Increase of individual **self-efficacy expectations**
 - (important indicator for therapy success)

Modell des konstruktiven Umgangs mit Gefühlen

