Computer-aided functional language analysis shows promise for tracking co-recovery in online support groups

Big White Wall™ Big Black Box?: Making sense of online peer support for depression

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INTRODUCTION

- Internet support fora can help fill the mental health treatment gap
- Mechanisms of action are unclear, though perspective-taking seems to be key

METHODS

1. Collected 5000 anonymized posts from a large RCT of moderated peer support for depression & anxiety
2. Extract language features and relational frames from clinical questionnaire* items
3. Topic-Modelling of the conversations
4. Iterative annotation and feedback to train a verbal behavioural classifier using human-in-the-loop learning
5. Test whether the model can discriminate between patterns of chronicity and therapeutic 'pivots' in interactions

PRELIMINARY RESULTS

- Collaborative Machine Learning increased coders' understanding of markers of mindfulness and resolved ambiguity and uncertainty to improve reliability
- Explainable AI techniques using Natural Language Processing can improve speed, transparency and perhaps prediction of response

DISCUSSION

- Can we determine whether a participant has internal focus or is able to attend to others?
- Does taking someone else's point of view help improve one's own psychological flexibility?
- We need to ensure clinical validity by getting feedback from practitioners, patients and carers
- Larger datasets will be used to test the link with wellbeing
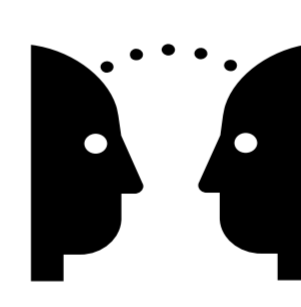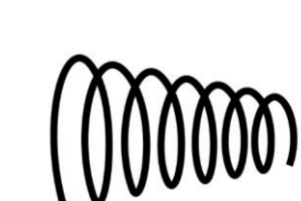
*Bootstrapped Measures

- Cognitive Fusion Questionnaire
- Self as Context Scale
- Self Experience Questionnaire
- Reno Inventory of Self Perception
- 3 Selves Scale
- Kentucky Inventory of Mindfulness Skills
- Five Facets of Mindfulness Questionnaire

N.B. Main classifications inspired by Atkins & Styles (2016) Functional Self Discrimination Measure (FSDM)

The Three Selves Model

Relational Frame Theory account of Empathy

1. Perspective Taking
2. Emotional Connection
3. Flexible Responding

Identification - Contrast model of Social Comparison
(Buunk, 2017)

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