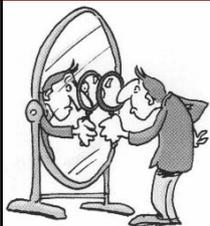


Short web-based manipulation
of self-focused attention:

a comparison of Attention
Training and mindfulness



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Self-focused attention

- *"an awareness of self-referent, internally generated information that stands in contrast to an awareness of externally generated information derived through sensory receptors"* (Ingram, 1990)
- self-focused attention associated with negative affect (depression, anxiety) (Mor & Winquist, 2002)



Measuring self-focused attention

- Self-report scales

Situational Self-Awareness Scale

- Example of items
 - Right now, I am keenly aware of everything in my environment.
 - Right now, I am conscious of my inner feelings.

Likert: 1 - strongly disagree to 7 - strongly agree

Measuring self-focused attention

- Self-report scales
- assessing implicit aspects of self-focus
 - self-focus Stroop task
 - visual word recognition latencies (IRAP?)
 - selection of a pronoun that best fits a sentence

Linguistic Implications Form

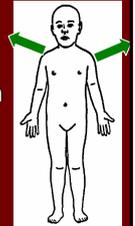
- Example of items:
 - All of (our, my, his) answers matched the ones in the back of the book.
 - At first it didn't seem to make any difference, but by later that night the noise from the party was entirely too loud to allow (her, me, us) to sleep.
 - The salesman tried to persuade (me, her, us) to buy a set of encyclopedias.

How to decrease self-focused attention?

- training attention to external stimuli
 - Attention Training Treatment (ATT- Wells, 1990)
- modifying the interaction with internal and external stimuli
 - Mindfulness

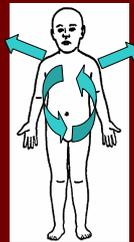
Attention Training Treatment (Wells, 1990)

- decreasing self-focused attention by training attention to external stimuli
- Auditory stimuli
 - Selective attention
 - Attention switching
 - Divided attention
- Not distraction, but the capacity to sustain attention to something else than me, my sensations, thoughts, emotions (i.e. opposite to self-focused attention)



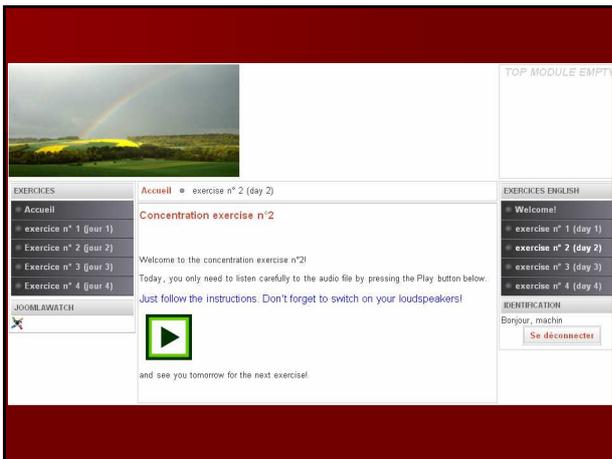
Mindfulness

- modifying the interaction with internal stimuli (thoughts, memories, sensations, emotions) and external stimuli
- awareness, but non-judgmental



Experiment

- A web-site
- 4 exercises across 4 days (audio files to listen)
- Questionnaires
- Every action recorded (IP address, any link clicked, time on each page, answers to the questionnaires)



Audio files = independent variable

- ATT
 - ambiance sounds (street, restaurant, countryside, shop) with sound events to track (a frog, a ringing phone)
- Mindfulness
 - traditional 3 minutes mindfulness exercise

Measures

- Acceptance and Action Questionnaire (AAQ-II, Bond et al.)
- Mindfulness Attention Awareness Scale (MAAS, Brown & Ryan, 2003)
- Beck Depression Inventory (BDI-II, 13 items version, Beck et al., 1996)
- State-Trait Anxiety Inventory (STAI-YA and STAI-YB; Spielberger, 1983)
- Situational Self-Awareness Scale (SSAS, Govern & Marsch, 2001)
- Linguistic Implications Form (LIFE2, Wegner & Giuliano, 1983)

Procedure

↓

- Day 1: questionnaires + 3 mns audio file
- Day 2: 3 mns audio file
- Day 3: 3 mns audio file
- Day 4: 3 mns audio file + questionnaires

50 participants did the first day ex, but only 15 finished the whole procedure

Results

Group	Total MAAS 1	Total MAAS 2
ATT	~62	~65
Mindfulness	~68	~71

MAAS: higher score = more mindfulness

➢ Increase for both group, but not significant (ATT, $p=0.22$; Mindfulness, $p=0.56$)

Group	Total AAQ 1	Total AAQ 2
ATT	~45	~45
Mindfulness	~50	~50

AAQ: higher score = more psychological flexibility

➢ Stand still for both group

Group	Total LIF 1	Total LIF 2
ATT	~6.5	~6.0
Mindfulness	~8.0	~2.5*

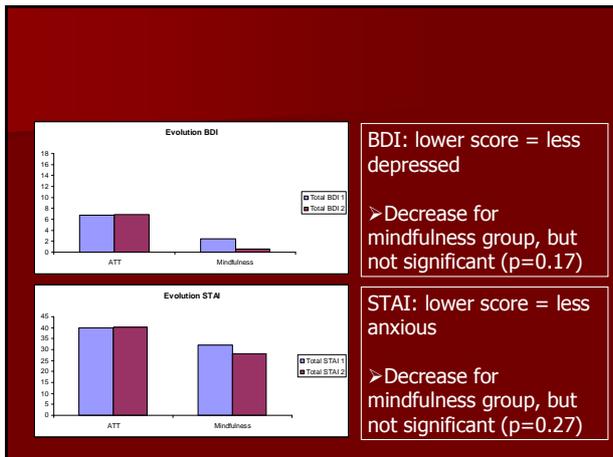
LIF: lower score = less self-focused attention

➢ Decrease for mindfulness group ($t=3.47$; $p<0.05$)

Group	Total SSAS Private factor 1	Total SSAS Private factor 2
ATT	~12	~12
Mindfulness	~12	~8

SSAS: lower score = less self-focused

➢ Decrease for mindfulness group, but not significant ($p=0.12$)



Summary

- Mindfulness increased for both group – not significantly, but tendency clearer for ATT
- Self-focused attention decreased significantly only for mindfulness group
- Differences with 4 * 3 minutes exercises (and very small sample...)

Discussion

- **Question: Is being exclusively focused on external stimuli always a problem?** At first sight, ATT seems to equal distraction. But:
 - Flow concept: "*holistic experience that people feel when they act with total involvement*" (Csikszentmihalyi, 1975)
- **Question: Is being judgmental about oneself always a problem?** What about problem-solving, self-regulation, self-knowledge, psychological adjustment (Takano & Tanno, 2009)?

Conclusion

- A very short manipulation can modify attention and relationship to private events
- Distribution of attention to internal and external stimuli + metacognitive functions may be composite processes:
 - > No definitive method
 - > We need more results, particularly to evaluate if a method is more efficient than the other, depending on the context.

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Thank you for your focus....

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Conclusion

- **Question:**
 - Focusing to internal perceptions because it hurts (i.e. survey, struggle), therefore neglecting external reinforcement sources OR
 - External stimulus not reinforcing, then focusing on internals?