

BACKGROUND

Mental defeat

“A sense of a **loss of autonomy, agency and human integrity**” (Tang et al., 2010, p.547)

- Mental defeat is an important concept in clinical psychology (e.g. **chronic pain, depression, PTSD, psychosis, suicidality**)

Gesture

- Gestures can depict abstract concepts (for example, defeat) through metaphorical use of space and body (McNeill, 1992)
- In fact, victory triggers upward body movements even in congenitally blind athletes (Tracy & Matsumoto, 2008)
- Defeat is typically followed by a display of submissive postures (Allan & Gilbert, 1997)



- This suggests that **the direction and location of gestures may be an important part of gestural representation of defeat**
- The aim of this study was to investigate embodied representations of mental defeat through the observation of how gestures depict defeat experiences.

Hypotheses

Gestures when talking about **defeat** experiences will be:

- In low gesture space (**height**)
- Move downwards more often (**vertical direction**)
- Close more often (**lateral direction**)

METHOD

- 20 participants were instructed to describe their own **experiences in which they felt defeated and victorious**
- They were asked to describe **how they felt about the event**
- We analysed the **movement properties of hand gestures** that spontaneously accompanied the descriptions
- Specifically, we **compared the height and direction (vertical, lateral)** of gestural movements between the **defeat and victory** conditions



Example gesture coding

Height: 4 (highest category)

Vertical: downwards

Lateral: neutral (not closing or opening)

“...high level of excitement and expectation basically went down to frustration and a feeling of defeat”

- Only gestures produced to accompany speech where participants were describing their **thoughts/feelings at the time of the event** were used in the current analysis
- **Paired t-tests** were used to compare the height and direction (vertical and lateral) of gestures for the defeat and victory conditions

RESULTS

	Defeat mean	Victory mean
Height (1=low, 4=high)	2.6	2.8
Vertical (0=up, 1=down)	0.28	0.33
Lateral (0=open, 1=close)	-0.06	-0.24

Table of means for height, vertical direction, and lateral direction for defeat and victory conditions (*within subjects*)

- **Height: marginally significant (p<0.1) in predicted direction**
- **Vertical:** wrong direction, non-significant
- **Lateral:** right direction, non-significant

BUT...

	Defeat < victory	Defeat = victory	Defeat > victory
Height (1=low, 4=high)	12	4	4
Vertical (0=up, 1=down)	7	1	12
Lateral (0=open, 1=close)	6	4	10

Number of participants with scores where defeat > victory, defeat = victory, and defeat > victory. **Note: always in predicted direction**

- **Height:** majority of participants have lower height scores for defeat than victory
- **Vertical:** majority of participants have higher downwards score for defeat than victory
- **Lateral:** majority of participants have higher closing score for defeat than victory
- **Preliminary results indicate a difference between gesture height (defeat = lower) and direction (vertical (defeat = downward) and lateral (defeat = closing)) for the defeat and victory conditions**

CONCLUSIONS & FUTURE DIRECTIONS

- **Our preliminary results indicate that defeat and victory may be embodied in different ways**
- It is important to probe embodied representation of mental defeat because of **potential clinical application**
- If mental defeat is associated with particular body movements, then this knowledge could be used to design a **body-movement-based intervention** to help **tackle mental defeat**
- We will now be exploring different ways of coding the videos, as well as coding more data and participants.

REFERENCES

- Allan, S. & Gilbert, P. (1997). Submissive behaviour and psychopathology. *British Journal Of Clinical Psychology*, 36(4), 467-488.
- McNeill, D. (1992). *Hand and mind*. Chicago: University of Chicago Press.
- Tang, N., Goodchild, C., Hester, J., & Salkovskis, P. (2010). Mental defeat is linked to interference, distress and disability in chronic pain. *Pain*, 149(3), 547-554.
- Tracy, J. & Matsumoto, D. (2008). The spontaneous expression of pride and shame: Evidence for biologically innate nonverbal displays. *Proceedings Of The National Academy Of Sciences*, 105(33), 11655-11660

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