I see your fears: The role of empathy and mental imagery in contagious worries

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BACKGROUND

Epidemiological data suggest that several mental illnesses spread within social networks (Bastiaanssen, Allison, & Chan, 2013; Haeffel & Hames, 2014), but we lack experimental paradigms that can probe the mechanisms underlying this contagion. Evidence shows that (i) people learn that stimuli are threatening by observing others reacting fearfully to them, (ii) this learning is mediated by feelings of empathy, and (iii) vivid mental imagery amplifies the emotional impact of situations (Holmes & Mathews, 2005; Olsson et al., 2016; Shu et al., 2015).

As such, do these basic social/affective processes explain the contagious spread of worry (repetitive negative thoughts about potentially threatening situations)?

Q1) ARE WORRIES CONTAGIOUS?

Research Questions

1. Can an experimental paradigm induce contagious worries?
2. Do empathy and/or mental imagery drive worry contagion?

Methods

Study 1
- Amazon Mechanical Turk (N = 165) told they would see negative images that might make them very upset and could cause "flashbacks."
- Ps provided pre-exposure anxiety ratings (average of how distressed, upset, scared, nervous, afraid, anxious, and worried they felt on 7-point scales).
- Ps wrote their thoughts and feelings about the upcoming study for 60s. Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2001) used to quantify their pre-exposure anxious, sad, and anger word use.
- Ps then saw emotion ratings and text ostensibly from another participant. These were actually manipulated across subject to assign them to one of two conditions:
  - Worried partner
  - Neutral partner

Tbh I’m feeling really worried about what’s going to happen next. I don’t really know what kind of pictures I’m gonna see and that freaks me out. I really thought the HIT would be less intense, and I just keep thinking that I’m going to have the pictures stuck in my head for a long time. I really hope that doesn’t happen cuz I bet it would be distracting and will make me feel bad for a long time after I’m done...

Tbh I’m feeling fine about what’s going to happen next. I don’t really know what kind of pictures I’m gonna see and that freaks me out. I really thought the HIT would be less intense, and I just keep thinking that I’m going to have the pictures stuck in my head for a long time. I really hope that doesn’t happen cuz I bet it would be distracting and will make me feel bad for a long time after I’m done...

Ps then provided post-exposure anxiety ratings using same scale as above and again wrote their thoughts and feelings to quantify post-exposure anxious, sad, and anger word use.

Ps then informed that no images would be shown and were debriefed on deception.

Study 2
- A separate set of fMRI Ps (N = 218) completed the same methods above. Ps then answered questions assessing:
  - Empathy in response to the partner. Personal distress, empathic concern, and perspective taking
  - Mental imagery i.e., how frequently and how vividly they imagined “in their mind’s eye” the negative images they thought they would see during the study

References


Q2) WHY ARE WORRIES CONTAGIOUS?

Study 2
- Exposure to a worried partner moderated the impact of vivid mental imagery on worry contagion: Associated with increased anxiety only after exposure to the worried partner

Similar pattern for imagery frequency

Exposure to a worried partner condition

Interaction p < .001
Worried partner condition: r = .58, p < .001
Neutral partner condition: r = .18, p = .271

SUMMARY & CONCLUSIONS

- Two studies show that an experimental design can induce the interpersonal spread of worries
- Empathic processes (specifically personal distress) mediated this contagious spread
- Worry contagion was strongest in Ps who were both exposed to a worried partner and also had frequent and vivid mental images
- Targeting both empathic responding and interpretations of one’s mental images might inoculate individuals against contagious worries

REFERENCES & ACKNOWLEDGEMENTS

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