

Unraveling mechanisms of contagious itch

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Introduction

- Observing someone else scratching or talking about itch can result in the perception of itch and scratching behavior of the observant, i.e. contagious itch [6]. Patients with chronic itch are more susceptible to contagious itch [6].
- Empathy and self-consciousness are associated with itch contagion [6].
- Recently, the behavioral immune system (BIS) has been suggested to play a role in contagious itch [7]. The BIS is a psychological mechanism that detects and behaviorally acts upon cues potentially indicating infectious pathogens [5]. Triggering the BIS may induce contagious itch to remove potential parasites from one's own skin.

Aim: Investigating the extent to which visibility of a skin disease, talking about itch, and scratching can induce itch, and how dispositional empathy, self-consciousness, and pathogen disgust (reflecting BIS) are involved.

Methods

376 adults from the general population have been included

- Age M=31 y, SD=17; range 18-91 y
- 15% secondary education; 84% tertiary, 1% other
- 77% female; 22% male; 1% other/not reported
- Baseline spontaneous itch (NRS 0-10): M=0.9, SD=1.6, range 0-9.
- 23% experience with chronic itch; 25% with chronic skin condition; 57% knows someone with a chronic skin condition.

Questionnaires included Self-Consciousness Scale [3], Interpersonal Reactivity Index measuring empathy [2], and Pathogen Disgust Scale of the Three Domains of Disgust Scale [4] reflecting BIS activation.

Methods (continued)

Using Qualtrics, various online video vignettes were shown (including vignettes for stigma research, not presented here).

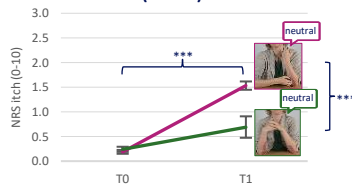


- T0: neutral topics discussed; skin condition not visible.
- T1: neutral topics discussed; visible psoriasis plaques either without or with scratching
- T2: talking about itch; visible psoriasis plaques either without or with scratching

After each vignette, participants reported levels of itch and urge to scratch they perceived.

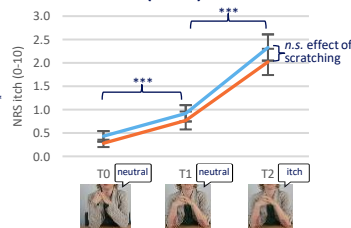
First results

Fig. 1 Itch evoked by observing a patient's skin condition with/without scratching (n= 376)



***: $p < 0.001$
n.s.: not significant

Fig. 2 Itch evoked by observing a patient talking about itch with/without scratching (n=150)



Introduction

First results (continued)

Although a substantial proportion of participants did not experience contagious itch, overall, contagious itch was significantly induced by merely observing someone's skin condition (T1 versus T0; Fig 1 and 2), and more so when this person is also scratching (Fig. 1) and/or talking about itch (Fig. 2). Scratching by the patient in the vignette did not have a significantly additive itch-inducing effect when this patient talked about itch (Fig. 2). Findings for the outcome urge to scratch are comparable.

An increase in contagious itch from T0 to T2 was significantly correlated to higher levels of public and private self-consciousness, some aspects of dispositional empathy, and pathogen disgust.

Discussion

Results confirm that dispositional empathy and self-consciousness play a role in contagious itch. The behavioral immune system has now for the first time been empirically linked to contagious itch, indicating that individuals reporting higher levels of disgust upon exposure to pathogens experience more itch contagion. Future research should investigate how these individual characteristics interact as well as whether and how contagious itch may contribute to itch in patients with chronic itch.

Literature

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Authors have no conflicts of interests to declare.

