Fearful responding to the Ebola outbreak:
Further examining the role of disgust in health anxiety

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Introduction

Disgust sensitivity (DS; the tendency to experience disgust across multiple domains) is related to clinical (Weck et al., 2014) and non-clinical (Brady et al., 2014) health anxiety.

Previous studies have not examined DS as a predictor of health anxiety related to illness epidemics. Understanding what drives fearful responding to epidemics may inform case conceptualization and treatment.

2014 witnessed the largest global Ebola virus outbreak. Although the U.S. had only 4 confirmed cases, 66% of U.S. residents feared a domestic Ebola outbreak.

The present study examined the relationship between DS and fearful responding at the peak of the 2014 Ebola outbreak. We hypothesized that greater DS would predict Ebola fear and related safety behaviors above and beyond contamination concerns and general distress.

Participants and Procedure

Undergraduates (*N*=107) participated in this IRB-approved study between October and December 2014.

Consenting participants completed a randomized online battery of self-report measures.

Measures

Ebola Fear Inventory (EFI; α = .86**).** The EFI was constructed to assess fear associated with the Ebola virus. Respondents rate their agreement with 10 statements on a 1 (*not at all*) to 5 (*very much*) scale.

Ebola Safety Behavior Checklist (ESBC; α = .93**).** The ESBC is a 9-item checklist assessing respondents' utilization of safety behaviors designed to prevent contracting Ebola (e.g., washing hands).

Depression Anxiety Stress Scales-21 (DASS-21; Antony et al., 1998; α = .93**).** The DASS-21 assesses distress over the past week. Participants self-report how each of the 21 statements apply to them on a 0 (*rarely*) to 4 (*very much, or most of the time*) scale.

Contamination Cognitions Scale (CCS; Deacon & Maack, 2008). The CCS measures trait contamination estimates related to commonplace objects (e.g., stairway railings). Participants separately rate the likelihood (CCS-L; α = .96) and severity (CCS-S; α = .97) of contamination for each item on a 0 (*not at all*) to 100 (*extremely*) scale.

Disgust Scale-Revised (DS-R; Olatunji et al., 2007; α = .81**).** The DS-R is a 25-item measure of disgust sensitivity. Participants rate the degree to which they might find a number of scenarios (e.g., "you see maggots on a piece of meat in an outdoor garbage pail") disgusting on a scale of 0 (*strongly disagree*) to 4 (*strongly agree*).

Results

The EFI and ESBC were significantly correlated with all measures (*ps* < .01, *r*s ranged .11 to .38) but the DASS-21.

Tables 1 and 2 present simultaneous linear regression models predicting EFI and ESBC scores. The CCS-S and DS-R emerged as significant unique predictors in both models, but the DASS-21 and CCS-L did not.

Table 1

Simultaneous Prediction of Ebola Fear (EFI Scores)

	B	*SE*$_B$	β	*t*	*p*
DASS-21	.03	.03	.11	1.17	.245
CCS-L	-.02	.03	-.06	-.55	.582
CCS-S	**.09**	**.03**	**.26**	**3.1**	**.002**
DS-R	**1.71**	**.82**	**.20**	**.21**	**.039**

Table 2

Simultaneous Prediction of Ebola Safety Behaviors (ESBC Scores)

	B	*SE*$_B$	β	*t*	*p*
DASS-21	.09	.05	.16	1.92	.058
CCS-L	-.35	.05	-.07	-.65	.519
CCS-S	**.20**	**.06**	**.38**	**3.51**	**.001**
DS-R	**4.62**	**1.60**	**.26**	**2.89**	**.005**

Conclusions

DS and contamination *severity* overestimates predicted fearful responding to the threat of a domestic Ebola outbreak.

Neither general distress nor overestimating the *likelihood* of contamination predicted Ebola fear or safety behaviors.

Our findings highlight the role of DS in health anxiety in reaction to discrete, low-probability outbreaks (e.g., Ebola).

Study limitations include the cross-sectional design, reliance on self-report, and geographic homogeneity of our sample.

Future research should examine the prospective role of DS in subjective and behavioral measures of health anxiety to other epidemics using more representative samples.

Studies examining the utility of targeting DS during treatments for health anxiety are also warranted.

References

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