

Disgusted, Embarrassed, Afraid: Affective predictors of colonoscopy avoidance.

**Presented by Lynne Klasko-Foster, PhD, MS
Brown University, USA**



Objectives

- Discuss psychosocial barriers to colonoscopy as typically measured
- Highlight the importance of affective determinants of colonoscopy decision making
- Discuss clinical recommendations for encouraging patients at average risk to complete colonoscopy screening as recommended



Colorectal Cancer in the US



3rd most common cancer among men and women

45 is the
NEW 50.

Get your colonoscopy.

25% of adults have not been screened as recommended



Late stage diagnosis leads to increased mortality



Cognitions in Behavior Change Theory

- Expected utility weighing, cost/benefit, self-efficacy
- Many interventions to increase colonoscopy behavior
- Still see low colonoscopy coverage in US, with persistent disparities in early detection
- Affect is can act as a signal to drive behavior









Psycho-social Predictors of Colonoscopy Intentions

Klasko-Foster, et al., 2018, *Behavioral Medicine*

Cognitive Factors		
Predictor	β	p Value
Benefits	0.16	<0.001
Barriers	-0.18	<0.001
Self-efficacy	0.13	<0.05
Knowledge	0.09	<0.05
Absolute risk	0.11	<0.05
Comparative risk	0.02	0.69
Affective Factors		
Predictor	β	p Value
Pos. affect. associations	0.11	<0.05
Neg. affect. associations	-0.06	0.24
Fear of colonoscopy	-0.03	0.69
Perceived risk (worry)	0.08	0.07
Perceived risk (afraid)	0.10	<0.05



Affective Predictors of Colonoscopy Intentions

Affective Associations		β	Significance
	Happy	0.39	p < 0.01
	Delighted	0.42	p < 0.01
	Disgusted	-0.04	p < 0.01
	Angry	0.04	p = 0.76
	Satisfied	0.38	p < 0.01
	Relaxed	0.39	p < 0.01
	Annoyed	0.01	p = 0.96
	Sad	0.20	p = 0.14
	Embarrassed	-0.05	p < 0.01
	Afraid	-0.09	p < 0.01
	Ashamed	0.09	p = 0.48



Disgust and Colonoscopy

- Negative emotion signaling withdrawal from a health threat
- Disgust regarding contamination and integrity of the body is associated with avoidance or delayed decision making
- Two components to colonoscopy: Preparation and procedure
- Incomplete preparation impairs efficacy and/or ability to complete colonoscopy



Disgust: a multi-faceted construct

- Colonoscopy-associated disgust
- State disgust
- Trait disgust
- Disgust sensitivity



Research Questions:

- How are situational and dispositional disgust associated with the following intentions:
 - Prep completion
 - Colonoscopy completion
 - Provider conversation
- How does dispositional disgust interact with situational disgust to inform colonoscopy decision making?



Methods:

- Participants recruited from Mturk (n=296)
- Read information about the colonoscopy procedure, including the Prep procedure
- Completed an electronic survey including the disgust measures
 - Colonoscopy-associated disgust: “When you think about colonoscopy, how disgusted do you feel?” (8-point Likert, Crites, 1994)
 - State Disgust (DES): “Right now, in this moment, how much do you feel like something stinks or puts a bad taste in your mouth” (3 items, 5-point Likert, Izard, 1993)
 - Trait Disgust (DS-R): “I never let any part of my body touch the toilet seat in public restrooms.” (20-items, 5-point Likert, Olatunji, 2007)
 - Disgust Sensitivity (DPSS-R): “I think disgusting items could cause me illness/infection.” (8-items, 5-point Likert, van Overveld, 2006)
- Regression analysis was used to assess main effects
- Moderated multiple regression analyses using simple slopes analyses were conducted for significant interactions, adjusting for age, race, and sex

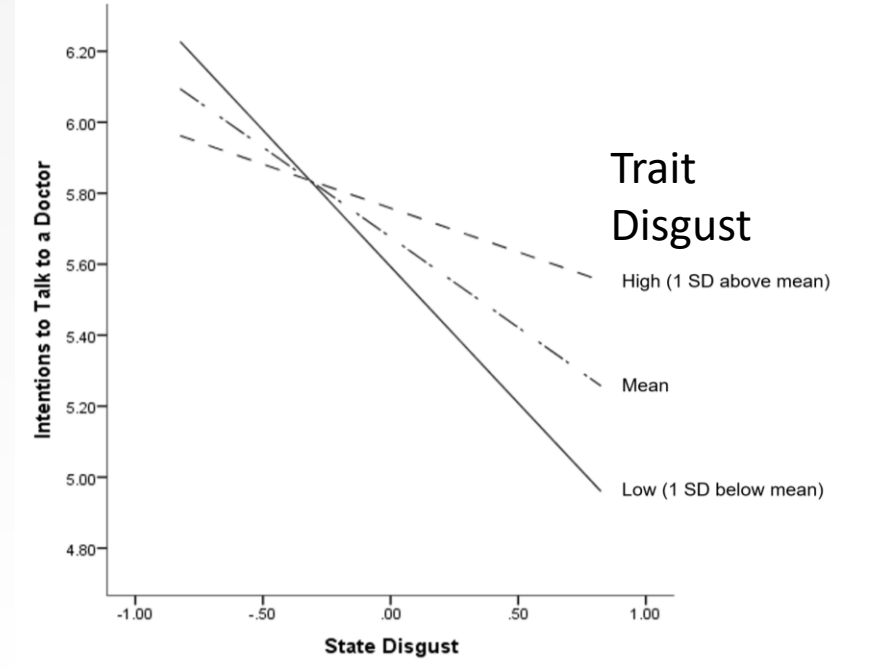
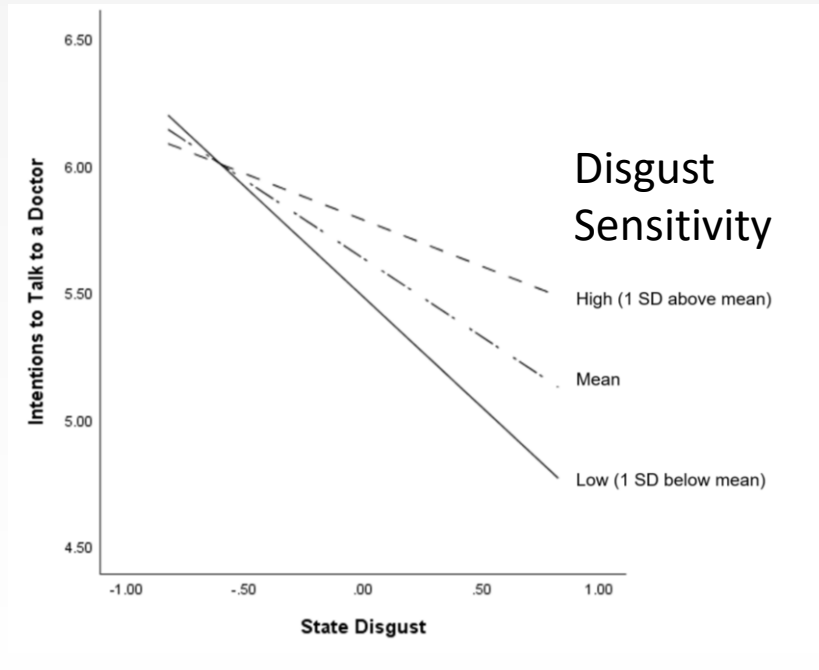


Results: Univariable

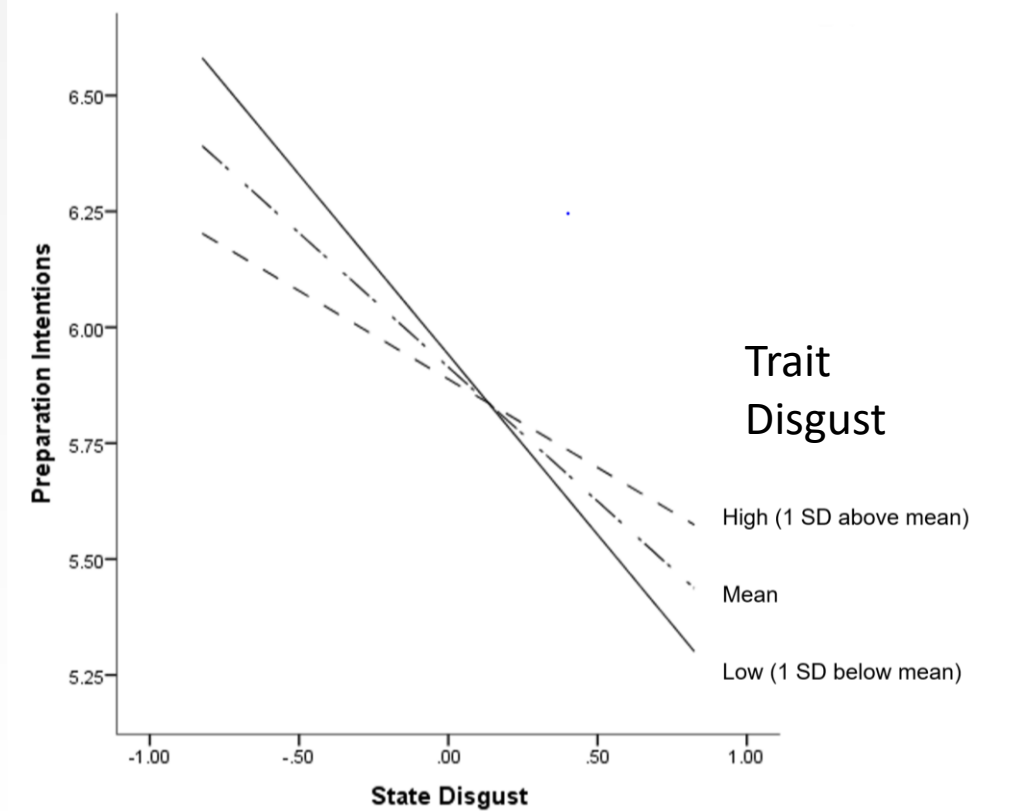
	Screening			Preparation			Talk to Provider		
Variable	B	SE	β	B	SE	β	B	SE	β
Colonoscopy Disgust	-.15	.05	-0.21**	.10	.0	-0.15*	.12	.04	-0.18*
State Disgust	-.46	.10	-0.25**	.52	.10	-0.30**	.41	.10	-0.25*
Disgust Sensitivity	-.09	.12	-.05	-.20	.11	-.11	-.05	.11	-.03
Trait Disgust	-.01	.01	-.07	-.01	.01	-.08	.000	.01	-.002



Results: Moderation



Results: Moderation



Discussion

- Greater levels of situational disgust, but not dispositional disgust were associated with greater intentions
- Disgust associated with colonoscopy may have more to do with procedures than people
- The mechanism by which state disgust influences colonoscopy intentions may relate to more generalized disgust tendencies
- Understanding the decision-making processes underlying disgust experiences requires not only examining knowledge and beliefs about colonoscopy but also the degree to which one associates the feeling of disgust with the procedure and experiences disgust when thinking about the procedure.



Clinical Implications

- Disgust associated with colonoscopy could be minimized using affect regulation techniques
- Providers could prepare patients for the disgust eliciting aspects of the procedure first, but then draw focus to positive affective associations (e.g., relief gained by knowing personal risk of colorectal cancer)
- Reducing situation disgust in the clinical setting may increase chances of prep and colonoscopy completion



Limitations

- Cross-sectional, self-report study
- Mean age of participants was 35 years
- Racial/ethnic representation is weak



Conclusion

- There is more to the story of colonoscopy intentions than cognitions alone
- Additional work is needed to establish whether decreasing disgust affectively associated with colonoscopy or influencing the environment to minimize state disgust increases screening behavior.



Acknowledgements

- Marc Kiviniemi, PhD
- Deborah Erwin, PhD
- Maria Keller

