



## Case Report

## Strategies for disclosing a concealable stigma: Facts and feelings?☆

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## ABSTRACT

Disclosing a concealable stigma has the potential for both positive outcomes, such as receipt of social support, and negative outcomes, such as being the target of prejudice. Identifying a disclosure strategy that minimizes prejudice while increasing the likelihood of social support can build theory regarding the underpinnings of stigma and provide guidance to those with concealable stigmas. Across three experiments, we tested a theory-driven disclosure strategy (perceiving emotional content vs. purely factual content) for stigmatizing conditions that elicit sympathy or disgust. These experiments ( $N = 363$ ) revealed that for disgust-eliciting stigmas, disclosing with feelings in addition to factual information leads to higher social support, compared to only disclosure of factual information. We tested and replicated this effect across disclosure of both medical and physical health conditions. This research advances our theoretical understanding of disclosure of stigma and offers pragmatic and implementable suggestions for stigma disclosure.

Given that many stigmatizing conditions can be concealed or hidden from others, this can create the dilemma of whether or not and how to disclose. There are many reasons why one might want to disclose a concealable stigmatizing characteristic. Even briefly concealing one's identity can be distracting and lead to deficits in interpersonal, intellectual, physical, and executive functioning (Critcher & Ferguson, 2014; Smart & Wegner, 1999). Disclosing allows a person to gain new or better opportunities for social support and access to health services or resources (Greene, Derlega, Yep, & Petronio, 2003; Ragins, 2008). However, there are also several reasons why one might *not* want to disclose a stigmatizing characteristic. Disclosing a stigmatizing attribute puts one at risk for a host of negative consequences (e.g., Ragins, 2008), including increased risk of social isolation, avoidance, prejudice and discrimination, relationship termination, eviction, job loss, and in extreme cases, hate crimes (Clair, Beatty, & MacLean, 2005; Greene et al., 2003; Pachankis, 2007).

Thus, while there are many positive effects of disclosure, these benefits are contingent upon an environment that promotes tolerance and acceptance (e.g., Griffith & Hebl, 2002; King, Reilly, & Hebl, 2008). As a result, scholars have called for more research on how one can disclose a concealable stigma without the costs of discrimination, thereby facilitating the benefits of disclosure (Chaudoir & Fisher, 2010;

Schmader & Stone, 2008). However, most studies on disclosing concealable stigmas have primarily focused on public outreach or awareness of these stigmas (Rüsch, Angermeyer, & Corrigan, 2005), or have catalogued varying disclosure strategies (Link, Mirotnik, & Cullen, 1991; c.f., Schmader, Croft, Whitehead, & Stone, 2013; c.f., Stone, Schmader, Whitehead, Lazarewicz, & Fernandez, 2007). Thus, there is little understanding regarding how to disclose in ways that limit discrimination. The present research addresses this gap in the literature.

We first consider that the form prejudice takes varies between different stigmatized groups, suggesting disclosure strategies might be differentially effective as a function of what is being disclosed. Consistent with traditional conceptualizations of stigma, the present research uses a broad definition encompassing any socially devalued or “discrediting” characteristic that leads an individual to be “disqualified from full social acceptance” (Goffman, 1963). Specifically, we focus on concealable stigmatized attributes: socially devalued characteristics which the bearer has greater discretion in whether to hide or disclose to others. This conceptualization includes stigmas that elicit approach intentions as well as those more often associated with avoidance tendencies. For example, some stigmatized characteristics are seen as relatively warm and elicit sympathy (e.g., cancer diagnosis; Martinez, White, Shapiro, & Hebl, 2015), an emotion that tends to facilitate

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approach responses and social support (Cottrell & Neuberg, 2005; Cuddy, Fiske, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002). Importantly, while characteristics may elicit sympathy, they are nevertheless stigmatizing, in that they limit a person's ability to be fully participate and be accepted in social contexts and can result in discrimination (e.g., Martinez et al., 2015). In contrast, other stigmatized characteristics are seen as repellent, eliciting disgust (e.g., sexually transmitted illnesses; Cottrell & Neuberg, 2005; see also Harris & Fiske, 2006; Harris & Fiske, 2011), which facilitates physical or psychological avoidance and rejection (Cuddy et al., 2007). The present research targets concealable stigmas that are relatively high in disgust-eliciting characteristics because the people possessing them are at the greatest risk for experiencing rejection upon disclosure.

In order to reduce the likelihood of rejection and distancing, we propose a disclosure intervention that demonstrates discloser honesty and authenticity - including how the discloser feels (e.g., "going to treatment has been frustrating to me"), as compared to purely factual information (e.g., "I have been going to treatment"). We anticipate that for disgust-eliciting stigmas, this strategy will result in increased social support intentions. In contrast, we expect that for sympathy-eliciting stigmas, including how the discloser feels will not influence reactions to the discloser, as these conditions already tend to elicit approach tendencies from others (Cottrell & Neuberg, 2005). We test these hypotheses across three experiments and multiple concealable stigmas.

## 1. Experiment 1

Experiment 1 tested whether information about the discloser's emotional response to possessing a stigmatizing characteristic (compared to only factual information) resulted in greater social support for someone disclosing a disgust-eliciting concealable stigma. Given that cancer tends to elicit sympathy (Martinez et al., 2015) and sexually transmitted diseases tend to elicit disgust (e.g., Cottrell & Neuberg, 2005), female participants evaluated a person disclosing either breast cancer or genital herpes. Across all three experiments, we first report pilot testing conducted to determine stigmatized conditions and then detail the focal experiment methods and results.

### 1.1. Methods

#### 1.1.1. Pilot study

To identify two stigmatized conditions, 351 women reported sympathy and disgust toward one of six concealable stigmas or a control condition in which nothing was disclosed. Of these, two conditions emerged in analyses: Disclosure of breast cancer elicited significantly more sympathy ( $M = 5.46$ ,  $SD = 1.43$ ) compared to control [ $(M = 1.69$ ,  $SD = 1.13)$ ,  $t(78) = 12.80$ ,  $p < .001$ , Cohen's  $d = 2.92$ ] and marginally more sympathy compared to genital herpes [ $(M = 4.97$ ,  $SD = 1.46)$ ,  $t(117) = 1.75$ ,  $p = .08$ , Cohen's  $d = 0.34$ ]. Genital herpes elicited significantly more disgust ( $M = 3.32$ ,  $SD = 1.71$ ) compared to control [ $(M = 1.30$ ,  $SD = 0.57)$ ,  $t(75) = 5.14$ ,  $p < .001$ , Cohen's  $d = 1.58$ ], and breast cancer [ $(M = 1.05$ ,  $SD = 0.22)$ ,  $t(75) = -5.87$ ,  $p < .001$ , Cohen's  $d = 1.85$ ].<sup>1</sup>

#### 1.1.2. Participants and design

We recruited 104 participants who completed the study for course credit. Participant recruitment continued until the end of the academic quarter, at which point data collection ended. Suspicion was assessed with an open-ended question asking participants to report what they thought the study was about. It was critical that participants believed their interaction partner was real in order for the focal dependent variable—social support intentions—to be meaningful. Based on a priori

<sup>1</sup> Experiment 1–3 pilot study materials and additional analyses are available in the Supplement.

exclusion criteria, participants who reported believing that the ostensible interaction partner was a recording and not real were removed prior to analyses ( $N = 21$ ). The final sample included 83 female participants (see Table 1 for Experiment 1–3 participant demographics).<sup>2</sup> A sensitivity power analysis using G\*Power 3.1 indicates the experiment has 80% power to detect a minimum effect size of Cohen's  $d = 0.622$  and critical  $F = 3.96$ .

The design was a 2 (Stigma Type: Genital Herpes [disgust-eliciting stigma]/Breast Cancer [sympathy-eliciting stigma])  $\times$  2 (Disclosure Strategy: Factual/Factual-plus-Feelings) between-participant design with random assignment to condition.

#### 1.1.3. Procedure

Participants learned they would be participating in a first impressions task with another student. Participants were told they would (1) record their responses to a series of interview questions, (2) listen to their interaction partner's interview responses, and (3) meet their partner in person (adapted from Silver, Wortman, & Crofton, 1990). In actuality, the other student was a female research assistant whose audio interview responses were previously recorded. Participants first answered ten get-to-know-you questions that included, for example, where they were born and whether they had a job. Participants then listened to the ostensible partner's responses to the same questions. The pre-recorded responses were identical across conditions for questions 1–9.

Question 10 asked the respondent to describe something they had been struggling with recently. In the *factual disclosure condition*, only basic information about the diagnosis and treatment was disclosed. Participants read: "I hadn't been feeling well for a while and when I went to the doctor I found out it was [breast cancer/genital herpes]. When I got the diagnosis they [had to remove a mass and I've been in chemo for the past month/treated my last outbreak of sores, but there isn't really a cure for it]. I have symptoms almost every day, but now I'm just trying to focus on work."

Participants in the *factual-plus-feelings disclosure condition* heard the

**Table 1**  
Demographics for participants included in Experiment 1–3 data analyses.

Characteristic	Experiment 1 <sup>2</sup>	Experiment 2	Experiment 3
Total N in Analyses	83	151	129
Women	83	N/A	100
Men	N/A	151	29
Mean Age (std dev)	19.72 (1.18)	22.64 (4.51)	20.33 (2.11)
Race and Ethnicity			
Asian	51.8%	41.1%	45.7%
White	19.3%	22.5%	23.3%
Latino/a	13.3%	20.5%	13.2%
Black	6.0%	0.6%	1.6%
Native American		0.6%	
Pacific Islander		0.6%	
Alaskan Native		0.6%	
Middle Eastern		1.3%	
Multi-Racial <sup>1</sup>	4.8%	7.3%	11.6%
Other	3.6%	4.0%	4.7%
Did not know		0.6%	

<sup>1</sup> Coded by the research team for any participant who self-identified with more than one race or ethnicity.

<sup>2</sup> One participants did not provide their age or race/ethnicity.

<sup>2</sup> Participant exclusions by condition were as follows: breast cancer/factual  $N = 1$ , breast cancer/factual-plus-feelings  $N = 6$ , genital herpes/factual  $N = 4$ , genital herpes/factual-plus-feelings  $N = 10$ . The pattern of data remains the same when including participants who expressed suspicion that the interview recording was not real, and the interaction term remains statistically significant,  $F(1,100) = 4.152$ ,  $p = .044$ ,  $\eta_p^2 = 0.04$ .

factual disclosure content in addition to affective reactions that included both positive (e.g., “My reaction to having [breast cancer/genital herpes] has changed from the fear and panic that I originally experienced to an attitude of acceptance.”) and negative (e.g., “I remember the day I got the diagnosis I pretty much freaked out.”) content (content was identical across health conditions).

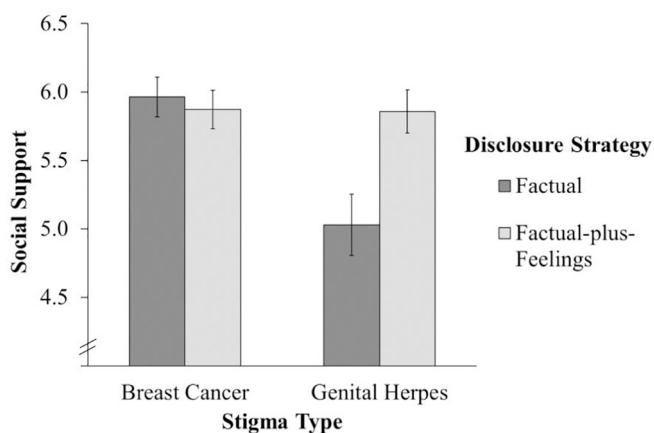
## 1.2. Measures

### 1.2.1. Social support

Participants completed 8 items ( $\alpha = 0.83$ ) measuring support for their interaction partner. Four items were adapted from Westmaas and Silver (2001), measured on a scale from 1 (strongly disagree) to 7 (strongly agree). Sample item: “I would not accept this person into my social group” (reverse scored). Four items were adapted from Schwarzer and Weiner (1991), measured on a scale from 1 (not very willing) to 7 (very willing). Sample item: “How willing would you be to console and reassure the other student if they were upset?”<sup>3</sup>

## 1.3. Results and discussion

A Stigma Type (Genital Herpes/Breast Cancer) X Disclosure Strategy (Factual/Factual-plus-Feelings) Analysis of Variance (ANOVA) on intended social support revealed main effects of both stigma type ( $F(1, 79) = 5.18, p = .02, \eta_p^2 = 0.06$ ) and disclosure strategy ( $F(1, 79) = 9.63, p = .003, \eta_p^2 = 0.11$ ), qualified by the predicted interaction,  $F(1, 79) = 8.10, p = .006, \eta_p^2 = 0.09$ . In the factual disclosure condition, social support intentions were higher for breast cancer ( $M = 5.81, SD = 0.70$ ) compared to genital herpes ( $M = 4.96, SD = 0.93$ ),  $F(1, 79) = 12.53, p = .001, \eta_p^2 = 0.14$ . For breast cancer, the addition of the discloser’s feelings did not change social support intentions ( $M = 5.85, SD = 0.66$ ) compared to factual disclosure,  $F(1,79) = 0.036, p = .849$ . However, consistent with predictions, for herpes disclosure, the addition of feelings significantly increased willingness to offer social support ( $M = 5.95, SD = 0.73$ ) compared to factual disclosure ( $M = 4.96, SD = 0.93$ ),  $F(1, 79) = 16.25, p < .001, \eta_p^2 = 0.17$ . Further, the inclusion of feelings in the disclosure resulted in no difference in intended support between the disclosure of genital herpes and breast cancer,  $F(1, 79) = 0.17, p = .681$  (see Fig. 1).



**Fig. 1.** Social Support as a function of stigma type (Breast Cancer vs. Genital Herpes) and disclosure strategy (Factual vs. Factual-plus-Feelings). Error bars indicate standard errors. (Experiment 1).

<sup>3</sup> We report all measures, manipulations, and exclusions in these experiments. Experiment 1–3 scale items are available in the Supplement.

Experiment 1 provides initial support for our hypothesis that when disclosing a disgust-eliciting stigma, including information about how one feels, in addition to factual information, can elicit greater social support.

## 2. Experiment 2

The goal of Experiment 2 was to replicate and extend Experiment 1. Given the focus on women participants in Experiment 1, it is difficult to generalize the findings to both men and women. That is, women may be more likely than men to have a positive response to the disclosure of personal, emotional content (e.g., Diener, Sandvik, & Larsen, 1985; Grossman & Wood, 1993) or to offer social support to others experiencing a crisis (e.g., Eagly & Wood, 1991; Goldsmith & Dun, 1997). Thus, Experiment 2 focuses on men. We contend that the inclusion of feelings (as opposed to only factual information) when disclosing a disgust-eliciting stigma should increase social support intentions, regardless of participant gender.

### 2.1. Methods

#### 2.1.1. Post-hoc Pilot

We anticipated that male-focused diagnoses would elicit the same responses of sympathy and disgust as female-focused diagnoses in Experiment 1 and did not conduct a pilot study. However, to test this assumption, we completed a post-hoc study. Male participants ( $N = 62$ ) were randomly assigned to one of two vignettes in which an individual disclosed a concealable stigma – either their diagnosis of testicular cancer or genital herpes. Participants then reported how grossed out (disgust) and sympathetic they would feel interacting with this person (scale from 1 (Not at all) to 7 (Extremely)). As anticipated, disclosure of testicular cancer elicited significantly more sympathy ( $M = 5.45, SD = 1.39$ ) compared to genital herpes ( $M = 4.66, SD = 1.29$ ),  $t(60) = 2.33, p = .023$ , Cohen’s  $d = 0.59$ . Genital herpes elicited significantly more disgust ( $M = 2.93, SD = 1.53$ ) compared to testicular cancer ( $M = 1.64; SD = 0.99$ ),  $t(60) = -3.99, p < .001$ , Cohen’s  $d = 1.01$ .

#### 2.1.2. Participants and design

Men ( $N = 151$ )<sup>4</sup> completed a field study in exchange for a piece of candy. We did not exclude any participants.<sup>5</sup> A sensitivity power analysis using G\*Power 3.1 indicates the experiment has 80% power to detect a minimum effect size of Cohen’s  $d = 0.458$  and critical  $F = 3.91$ . The design was a 2 (Stigma Type: Genital Herpes [disgust-eliciting stigma]/Testicular Cancer [sympathy-eliciting stigma]) X 2 (Disclosure Strategy: Factual/Factual-plus-Feelings) between-participant design with random assignment to condition.

#### 2.1.3. Procedure

Participants were approached on a large public university campus in the western United States, asked to participate in a study on first impressions, and handed one of four survey packets from a stack of surveys (randomized by the research team). Participants were informed that

<sup>4</sup> For Experiments 2 and 3, a priori power analyses used to calculate the needed sample size for a desired statistical power level of 0.80, with medium effect size of 0.25 for a between-participant ANOVA design using G\*Power3.1 suggested a minimum sample size of 128 (Faul, Erdfelder, Lang, & Buchner, 2007). We further conducted a priori power analyses using the smallest effect size from Experiment 1 to verify this determination, which identified a minimum sample size of 125.

<sup>5</sup> As a manipulation check, the survey included an item asking participants what the study was about. Participants did not spontaneously express suspicion regarding the authenticity of the supposed interaction partner’s responses, and thus, we did not exclude participants from Experiment 2. However, note that there was not a specific question as to whether participants thought the written responses were generated by former participants (as per the cover story).

they were reviewing the responses of former participants and providing their first impressions of these individuals. The packet included responses to eight interview questions from an ostensible previous participant (in reality, these were adapted from Experiment 1). Answers to interview questions 1–7 were identical across conditions. In question 8, participants learned that the respondent had recently been diagnosed with either testicular cancer or genital herpes. The *factual disclosure condition* was identical to Experiment 1, except for the inclusion of testicular cancer rather than breast cancer.

In the *factual-plus-feelings* disclosure condition, participants received the factual disclosure above in addition to how the discloser felt in response to the diagnosis: “Having [testicular cancer/genital herpes] has been scary and is really difficult to deal with. I freaked out at first and I definitely feel stressed and sad about it. But I’m just trying to deal with it and make the best of what I have.” The feelings disclosure comprised only a small fraction of what the participant learned about the target—it was three sentences in one of eight questions that otherwise were identical in content and length. Participants then completed dependent variables, demographic items, and were debriefed.

## 2.2. Measures

### 2.2.1. Social support

Participants completed 9 items ( $\alpha = 0.84$ ) assessing social support. Seven items were identical to Experiment 1: Four items adapted from Westmaas and Silver (2001) and three items adapted from Schwarzer and Weiner (1991).<sup>6</sup> Two new items measured on a scale from 1 (not at all) to 7 (very much so) were included to capture additional behaviors: “How willing would you be to chat with the other person in an online chat room?” and “How willing would you be to help distract the other person from their personal struggle?”

## 2.3. Results and discussion

A Stigma Type (Genital Herpes/Testicular Cancer) X Disclosure Strategy (Factual/Factual-plus-Feelings) ANOVA on intended social support for the interaction partner revealed only a significant interaction,  $F(1, 147) = 6.57, p = .01, \eta_p^2 = 0.04$  (see Fig. 2). As anticipated, in the factual disclosure condition, participants reported a greater willingness to offer social support to the discloser of testicular cancer ( $M =$

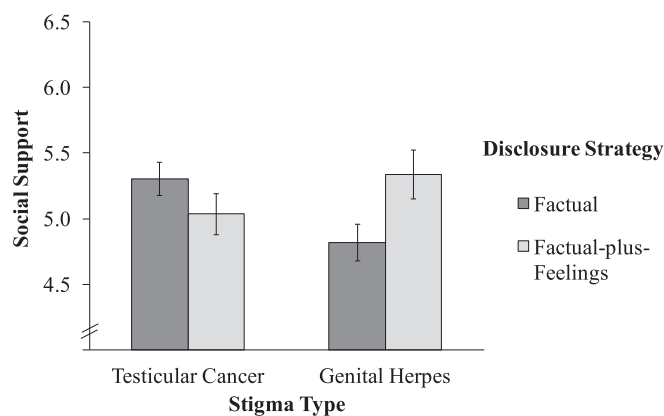


Fig. 2. Social Support as a function of stigma type (Testicular Cancer vs. Genital Herpes) and disclosure strategy (Factual vs. Factual-plus-Feelings). Error bars indicate standard errors. (Experiment 2).

<sup>6</sup> One item from Schwarzer and Weiner (1991) used in Experiment 1 was accidentally omitted from the study.

5.30,  $SD = 0.78$ ) compared to genital herpes ( $M = 4.82, SD = 0.84$ ),  $F(1, 147) = 4.89, p = .03, \eta_p^2 = 0.03$ . Including how the discloser of testicular cancer felt did not alter social support ratings ( $M = 5.04, SD = 0.98$ ) compared to factual disclosure ( $M = 5.30, SD = 0.78$ ),  $F(1, 147) = 1.55, p = .22, \eta_p^2 = 0.01$ . However, consistent with predictions and Experiment 1, compared to the factual disclosure of genital herpes ( $M = 4.82, SD = 0.84$ ), the inclusion of how the discloser of genital herpes felt led participants to report a greater willingness to offer social support ( $M = 5.34, SD = 1.13$ ),  $F(1, 147) = 5.58, p = .02, \eta_p^2 = 0.04$ . Indeed, when feelings were included in the disclosure, there was no difference in willingness to offer social support to the discloser of testicular cancer ( $M = 5.04, SD = 0.98$ ) compared to genital herpes ( $M = 5.34, SD = 1.13$ ),  $F(1, 147) = 1.97, p = .16, \eta_p^2 = 0.01$ .

Thus, Experiment 2 replicated Experiment 1 with male participants, providing further evidence that when disclosing a disgust-eliciting stigma, including information about how one feels (versus only factual information) elicits greater social support from others.

## 3. Experiment 3

Experiment 3 extends Experiments 1 and 2 by examining the proposed phenomenon in a novel context: focusing on mental health stigma rather than physical health stigma. In addition, the present study recruited both men and women participants, further generalizing the results from Experiment 1 and 2. Lastly, the conditions used in Experiment 1 and 2 (i.e., a sexually transmitted illness compared to cancer) may have differed in the degree to which they were perceived as controllable, the degree to which the discloser was seen as blameworthy for their condition, and in contagion. We account for this possibility in Experiment 3, where the stigma conditions do not differ along these characteristics.

### 3.1. Methods

#### 3.1.1. Pilot studies

We conducted two pilot studies to identify two concealable stigmas that differentially elicited sympathy and disgust, but were matched on type of stigma (e.g., two mental illnesses), perceived controllability, perceived communicability, and blameworthiness. In Pilot Study 3a, 213 participants read a vignette in which an individual disclosed one of seventeen concealable stigmas (e.g., addiction, bulimia) or did not reveal anything (control). Participants then reported how grossed out (disgust) and sympathetic they would feel interacting with this person. Two mental health conditions emerged as similar on perceived responsibility for possessing the stigmatized characteristic ( $t(22) = -1.47, p = .16$ ): Post-Traumatic Stress Disorder (PTSD) and pica (described to participants as “eating non-food substances - e.g., dirt, glass, pebbles, toilet paper”). Further, participants reported more disgust toward pica ( $M = 2.83, SD = 1.53$ ) compared to control [ $(M = 1.27, SD = 0.59), t(25) = 3.66, p = .001, \text{Cohen's } d = 1.41$ ] and PTSD [ $(M = 1.25, SD = 0.045), t(22) = 3.44, p = .002, \text{Cohen's } d = 1.40$ ]. Participants also reported greater sympathy toward PTSD ( $M = 6.17, SD = 0.83$ ) compared to control [ $(M = 2.33, SD = 1.40), t(25) = 8.37, p < .001, \text{Cohen's } d = 3.24$ ] and pica [ $(M = 3.92, SD = 1.31), t(22) = -5.01, p < .001, \text{Cohen's } d = 2.05$ ].

Pilot Study 3b included 80 participants to pre-test the disclosure language and replicate Pilot Study 3a. Participants read a vignette in which an interaction partner revealed a diagnosis and definition of either pica (“Having Pica means I eat things like dirt, glass, or sometimes toilet paper.”) or PTSD (“Having PTSD means I avoid thinking about details from certain times in my life. I’ve been having bad dreams and reoccurring flashbacks.”). Participants reported more disgust when the partner disclosed pica ( $M = 3.10, SD = 1.48$ ) compared to PTSD ( $M = 1.23, SD = 0.54$ ), ( $t(77) = -7.42, p < .001, \text{Cohen's } d = 1.67$ ) and less sympathy when the partner disclosed pica ( $M = 4.95, SD = 1.50$ ) compared to PTSD ( $M = 5.72, SD = 1.05$ ), ( $t(77) = 2.63, p = .01$ ,

Cohen's  $d = 0.59$ ). There were no statistical differences between PTSD and pica in perceived controllability ( $t(76) = -1.41, p = .16$ ), responsibility ( $t(76) = -1.72, p = .09$ ), or communicability ( $t(76) = -1.33, p = .19$ ).

### 3.1.2. Participants and design

We recruited 168 participants who completed the experiment for course credit. Thirty-nine participants expressed suspicion that their interaction partner was not real while listening to the audio interview, and were excluded from analyses.<sup>7</sup> Our final sample included 129 participants who completed the experiment for course credit. A sensitivity power analysis using G\*Power 3.1 indicates the experiment has 80% power to detect a minimum effect size of Cohen's  $d = 0.498$  and critical  $F = 3.91$ .

The study design was a 2 (Stigma Type: Pica [disgust-eliciting stigma]/PTSD [sympathy-eliciting stigma])  $\times$  2 (Disclosure Strategy: Factual/Factual-plus-Feelings) between-participant design with random assignment to condition.

### 3.1.3. Procedure

Experiment 3 used the same procedure as Experiment 1. Participants first recorded answers to ten questions and then listened to their ostensible interaction partner's responses to these questions. The focal manipulations were in question ten.

The *factual disclosure condition* was taken from Experiment 1 and included the disclosure of either PTSD or pica. For the *factual-plus-feelings disclosure condition*, participants heard the factual disclosure described above in addition to how the discloser felt in response to the diagnosis (identical to Experiment 2, with reference to PTSD and pica rather than testicular cancer and genital herpes). After listening to the interview, participants completed the dependent measures and were debriefed and probed for suspicion.

## 3.2. Measures

### 3.2.1. Social support

Participants completed 8 items assessing social support ( $\alpha = 0.83$ ), as in Experiment 1.

## 3.3. Results and discussion

We conducted a 2 (Stigma Type: Pica/PTSD)  $\times$  2 (Disclosure Strategy: Factual/Factual-plus-Feelings) ANOVA on participants' intended social support for their interaction partner. Analyses revealed only a significant interaction,  $F(1, 125) = 4.27, p = .04, \eta_p^2 = 0.03$  (see Fig. 3).

Consistent with Experiment 1 and 2, simple effects analyses revealed that participants in the factual disclosure condition reported a greater willingness to offer social support to a person disclosing PTSD ( $M = 5.69, SD = 0.74$ ) compared to pica ( $M = 5.26, SD = 0.72$ ),  $F(1, 125) = 4.61, p = .03, \eta_p^2 = 0.04$ . Furthermore, for PTSD, the inclusion of the discloser's feelings did not significantly change intended social support ( $M = 5.60, SD = 0.77$ ) compared to the factual disclosure ( $M = 5.69, SD = 0.74$ ),  $F(1, 125) = 0.251, p = .617$ . In contrast, and consistent with predictions, for a person disclosing pica, the inclusion of feelings significantly increased participants' willingness to offer social support ( $M = 5.73, SD = 0.89$ ) compared to the factual disclosure ( $M = 5.26, SD = 0.72$ ),  $F(1, 125) = 5.69, p = .02, \eta_p^2 = 0.04$ . Indeed, there was no difference in social support intentions between the person disclosing

<sup>7</sup> Participant exclusions by condition were as follows: PTSD/factual  $N = 11$ , PTSD/factual-plus-feelings  $N = 6$ , Pica/factual  $N = 14$ , Pica/factual-plus-feelings  $N = 8$ . The pattern of data remains the same when including participants who expressed suspicion that the interview recording was not real, however, the interaction term is no longer statistically significant,  $F(1, 164) = 2.13, p = .147$ .

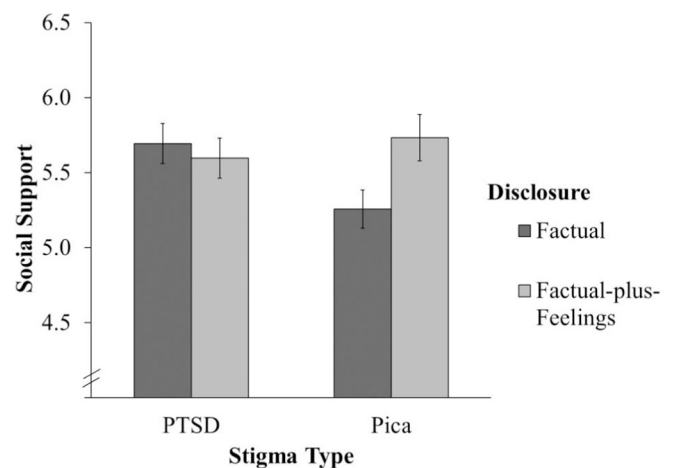


Fig. 3. Social Support as a function of stigma type (PTSD vs. Pica) and disclosure strategy (Factual vs. Factual-plus-Feelings). Error bars indicate standard errors. (Experiment 3).

pica and PTSD when the disclosure included feelings,  $F(1, 125) = 0.53, p = .468$ .

Experiment 3 provides additional support for our hypothesis that when disclosing a disgust-eliciting stigma, including affective information, in addition to factual information, can elicit greater social support. In addition, Experiment 3 generalizes the findings by examining a novel context (mental health stigma) in a sample of men and women participants.

## 4. Experiment 1–3 meta-analysis

Together, Experiments 1–3 suggest that the inclusion of affective information when individuals disclose a disgust-eliciting stigma can increase social support intentions relative to when disclosure is purely factual. To estimate the overall effect size of this finding and address concerns about lower sample sizes in some comparisons, we performed an internal meta-analysis on Experiments 1–3. This is consistent with recent practices and recommendations to include a meta-analysis following a series of replications within a single manuscript (Braver, Thoemmes, & Rosenthal, 2014; Goh, Hall, & Rosenthal, 2016).

For this analysis, we examined participants' intention to provide social support to a partner who disclosed a disgust-eliciting stigma with either only factual information or factual information and affective responses. Analyses used a fixed-effects model and entered means, standard deviations, and sample sizes for Experiments 1–3 into Comprehensive Meta-Analysis software (Borenstein, Hedges, Higgins, & Rothstein, 2009; Rosenthal, 1991). Results revealed a highly reliable overall effect, Hedges'  $g = 0.685$ , 95% CI = [0.33, 1.06],  $Z(3) = 3.72, p < .001$  (Table 2). This supports our hypothesis that participants' intended to provide greater social support to their interaction partner when their partner disclosed the disgust-eliciting stigma with the addition of emotional content, relative to only factual content.<sup>8</sup>

## 5. General discussion

Concealable stigmas introduce a difficult dilemma for those

<sup>8</sup> The meta-analysis using a random-effect model for intended social support for the interaction partner following factual or factual-plus-feelings disclosure of a disgust-eliciting stigma also showed a reliable significant overall effect such that there was greater intended social support following disclosure with emotional content relative to only factual content, Hedges'  $g = 0.685$ , 95% CI = [0.33, 1.04],  $Z(3) = 3.76, p < .001$ .

**Table 2**

Meta-analytic effects of disclosure strategy (factual vs. factual-plus-feelings) on intended social support for interaction partner disclosing a disgust-eliciting stigma.

Experiment	Hedges' g	95% Confidence interval	Z-Value	p-Value
Experiment 1 (N = 17)	1.17	[0.49, 1.85]	3.38	0.001
Experiment 2 (N = 36)	0.52	[0.05, 0.98]	2.19	0.029
Experiment 3 (N = 29)	0.57	[0.07, 1.07]	2.22	0.026
Overall estimated effect (fixed model)	0.67	[0.36, 0.97]	4.30	<0.001

possessing them of whether or not to disclose to others. On the one hand, disclosure increases opportunities for social support and greater closeness and connection with others, yet it also increases the likelihood of experiencing rejection and discrimination. Here we argue that research should move away from this common question of whether or not to disclose, and instead consider the question of *how* to disclose in ways that minimize the likelihood of discrimination and maximize the likelihood of opportunities. Drawing on a discrete emotions approach to understanding prejudice and discrimination (Cottrell & Neuberg, 2005; Cuddy et al., 2007; Fiske et al., 2002), we predicted and found that the inclusion of information on how the discloser feels about their condition facilitated social support intentions similar to those commonly offered to sympathy-eliciting stigmas.

There are both theoretical and practical implications of the present research. Theoretically, this research fills an important gap in the disclosure literature by focusing on disclosure content and disclosure to unfamiliar others. The present findings reveal that the one-size-fits-all approach to disclosure may be less successful than an approach that tailors the disclosure content to the specific emotions underlying prejudice. Second, this research fills an important gap in prejudice research. Although a small amount of research finds that members of stigmatized groups assume impression management strategies will be most successful when they target specific prejudices, like disgust (e.g., Neel, Neufeld, & Neuberg, 2013), research to date has yet to examine the extent to which this targeted approach is beneficial and how unfamiliar others may react to such disclosure. This study is some of the first research to do so.

Practically, the disclosure strategy tested here—factual information combined with how the discloser felt about the condition—is relatively straightforward and can be readily implemented. The phrases were not disease-specific and did not reveal the severity of the condition. Importantly, the feelings shared about the condition across these studies were predominantly negative. That is, we did not simply try to make the discloser appear more likeable by being cheerful or using exclusively positive emotions. Rather, these findings suggest that disclosers can be honest about their challenges, which is a critical component to receiving support.

### 5.1. Limitations and future research

There are some limitations and outstanding issues in the present research. The present experiments utilized extensive pilot testing and a data-driven approach to identifying comparison conditions for the experiments. Doing so, we matched characteristics along condition type (i. e., physical or mental health) and other factors (controllability, contagion, & responsibility in Experiment 3) while varying the degree to which they elicited sympathy and disgust. Despite this, it is not possible to rule out several potential confounding factors that may inform these results.

One consideration is that amongst the selected health conditions, some are more familiar and commonly experienced in this young adult age group (e.g., genital herpes) than others (e.g., cancer, pica). Thus, one alternative account of the data is that emotional disclosures may be

more effective amongst less commonly experienced or less commonly disclosed stigmas, as emotions provide context and detail. We aimed to partially address the commonness of stigmatized conditions across studies by varying whether the disgust- or sympathy-eliciting stigma was more or less common in our sample. For example, in Experiment 1 and 2 the disgust-eliciting stigma is relatively more common and familiar (sexually transmitted illness amongst college students) relative to the sympathy-eliciting stigma (cancer). In contrast, Experiment 3 examined a disgust-eliciting stigma that is less familiar and common (pica) relative to the sympathy-eliciting stigma (PTSD). Together, Experiments 1, 2, and 3 reveal the same pattern of results despite relative differences across these factors. Relatedly, it is likely that individuals disclose disgust-eliciting stigmas less frequently than sympathy-eliciting stigmas and thus, that others may encounter the *disclosure* of disgust-eliciting stigmas less frequently. In fact, the reduced tendency to disclose is partially what motivated this research—past theory, limited research and anecdotal evidence suggest that individuals with disgust-eliciting stigmas require and benefit from social support but are less likely to solicit or receive that social support as a function of their stigmatized condition. While we vary commonness of the stigmatized condition across experiments, the overall prevalence and disclosure of PTSD, pica, and cancer is lower relative to sexually transmitted illnesses in the age group of our sample. Future research should aim to account for how familiar and common stigmatized conditions are when examining disclosure strategies amongst various populations.

Second, across experiments, pilot studies revealed that the disgust-eliciting stigma activated both disgust and sympathy amongst respondents. It is quite rare in the real world to encounter mental or physical health conditions that elicit only disgust from others without also activating some degree of sympathy. As such, to increase the generalizability and real-world relevance of these findings, we examined disgust-eliciting stigmas that elicited disgust but were not devoid of sympathy (as documented by the pilot data). We anticipate that strong social norms supporting the expression of sympathy toward individuals experiencing medical conditions may explain why sympathy was high across all conditions. Similarly, norms against expressing disgust may have restricted participants' range of negative responses. Future research can build on the present findings by examining the complex network of emotions that different stigmatized conditions activate and social norms in a given context, thereby informing a discrete emotions approach to stigma disclosure.

Third, the present experiments examined potential mediators but does not identify a robust and reliable mechanism.<sup>9</sup> One factor that may be worth attention are participants' perceptions that the interaction partner needs or desires support from others, as this may undermine participants' automatic prejudices against disgust-eliciting stigmas and enable social support. Alternatively, the emotional content may increase participants' tendency to humanize individuals who, due to their disgust-eliciting stigma, would otherwise be dehumanized or distanced in society. This would be consistent with research highlighting the dehumanization of social groups who elicit disgust (Harris & Fiske, 2009). This line of research will benefit from future work that establishes causal mechanisms for the documented phenomenon.

Finally, the present research only examined the processes concerning disclosure to strangers, rather than close others. Examining disclosure to strangers is necessary and valuable as social support is not always available to stigmatized individuals from their immediate social network, thus necessitating that they look to acquaintances or strangers for support (Westmaas & Silver, 2001). For example, online communities may be beneficial for individuals seeking support, and these forums are increasingly common for all conditions. In addition, individuals need to, at times, disclose stigmatizing conditions in professional spaces (e.g., to bosses, co-workers, classmates, medical care

<sup>9</sup> See supplement for analyses of perceived partner warmth.

providers), such as when requiring accommodations and support. For example, the Americans with Disabilities Act of 1990 requires disclosure to obtain workplace accommodations, and students in universities must disclose some degree of information to supervisors in order to receive academic accommodations. Future work should examine the extent to which disclosure strategies vary in content and consequence as a function of disclosing to close or distal others.

In sum, there are several generative paths forward. Future research would benefit from investigating the ideal amount and type of emotional disclosure (i.e., specific positive or negative emotions). In addition, examining disclosure strategies for stigmas that are not health conditions (e.g., homelessness), that vary in the degree of sympathy and disgust elicited, and that vary in degree of concealability will be beneficial. Indeed, research shows that merely acknowledging visible stigmas can reduce discrimination for some conditions (e.g., physical disability, race; Barron, Hebl, & King, 2011; Hebl & Kleck, 2002), but not necessarily for visible stigmas that elicit disgust (Hebl & Kleck, 2002), thereby adding to the theoretical and practical complexity of disclosure efforts. Future research would benefit from further examining the boundary conditions associated with disclosure that includes emotional information.

## 6. Conclusion

The present research is amongst the first to empirically develop and test a strategy for minimizing prejudice during social interactions involving disclosure of a stigmatized condition. To the extent that someone can share some personal emotional content when disclosing a stigmatized condition, it may be possible to gain many of the rewards of disclosure while mitigating its costs.

## Author contributions

All authors contributed to the development of the study concept and study design. Testing, data collection, and analyses were performed by I. Jurcevic and L. H. Wong under the supervision of J. R. Shapiro. I. Jurcevic and L. H. Wong drafted the paper, and J. R. Shapiro and C. Dunkel Schetter provided critical revisions. Jurcevic, Wong, and Dunkel Schetter approved the final version of the paper for submission. We report all measures, manipulations, and exclusions in these experiments.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jesp.2021.104187>.

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