The Effects of Narratives and Disclosure Timings on Reducing Stigma and Implicit Bias Against People Suffering From Mental Illness

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Although scholars have examined how narratives encourage empathy for and favorable attitude toward the stigmatized, little is known about the efficacy of the timing of the disclosure in the narrative to reveal a stigmatized condition and facilitate destigmatization. To test these effects, we conducted a between-subjects online experiment (N = 290) comparing narratives (early- vs. late-disclosure timing) to informational messages in the context of mental illness. Additionally, the present study also examined if narratives aided in reducing implicit bias and whether disclosure timing also had an impact on reducing implicit bias. Results indicate that, narratives, regardless of the disclosure timing, aided in reducing perceived threats and increased social acceptances as compared with informational messages. However, the disclosure timing had an impact on explicit attitude levels. Additionally, narratives did not significantly reduce implicit bias. Implications and future directions are also discussed.

Keywords: Narrative communication, stigma communication, mental illness, implicit bias

Stigma is a profoundly damaging social phenomenon. Health-related stigmas can dissuade people from seeking appropriate medical help and social support. One area often studied is the stigma associated with mental illness. According to the National Institute of Mental Health (NIMH, n.d.), approximately 52.9 million adults in the United States were suffering from some form of mental illness in 2020. However, according to the National Alliance of Mental Illness (NAMI, n.d.), in 2020, only 46.2% of U.S. adults suffering from mental illness received medical help. Discrimination and prejudice often discourage people from seeking care (Corrigan, Druss, & Perlick, 2014). A meta-analysis supported the idea that stigma associated with mental illness, coupled with concerns of disclosures, are major barriers to seeking help (Clement et al., 2015).

Given the prevalence of stigma, researchers have studied various means of reducing the stigma surrounding mental illness. Some commonly used strategies are “protest,” “education,” and “contact”
Parasocial contact via mass media might be a good alternative for initiating such contact. Narrative communication is one means of parasocial contact. Kreuter and colleagues (2007) defined a narrative as “a representation of connected events and characters that has an identifiable structure, is bounded in space and time, and contains implicit or explicit messages about the topic being addressed” (p. 222). Narratives can captivate and entertain an audience in a story. These characteristics reduce the tendency to argue with the message conveyed by a told story (Moyer, 2008; Slater & Rouner, 2002). In contrast, information messages routinely use logic and facts to support the claims in the message (Kreuter et al., 2007). Additionally, narratives focus on a particular individual in specific settings (De Graaf, Sanders, & Hoeken, 2016) and allow people to experience an array of environments and characters they would otherwise not visit or meet. This experience can educate an audience, shaping or changing real-world attitudes toward certain groups or situations (Green & Brock, 2002). Previous findings show that narratives can effectively combat general social stigma and promote empathy for the stigmatized person (Oliver, Dillard, Bae, & Tamul, 2012) and can help destigmatize mental illness (Caputo & Rouner, 2011; Ritterfeld & Jin, 2006).

Although scholars have studied how narratives can change attitudes and behaviors, little is known about when in a narrative to reveal a stigmatized condition. Additionally, how this plot choice might influence the extent to which an audience likes and identifies with the protagonist is also relatively under studied. For example, a television show called You’re the Worst (Falk, 2015) disclosed the mental illness diagnosis of the female protagonist in the second season of the show, but whether this delayed disclosure affected the liking of the character or the show is unknown. Thus, understanding how to develop characters and plotlines to maximize the destigmatization effects of narratives is crucial. The aim of the current study is to explore when the audience should learn the diagnosis of the protagonist. Using the concepts central to entertainment education (i.e., identification, transportation, character liking), we explored the timing of stigma disclosure and its impact on destigmatization. Our logic is built on previous literature on morally ambiguous character (Krakowiak & Oliver, 2012), and the continuum model of impression formation (Fiske & Neuberg, 1990). We argue that delaying disclosure might aid in liking of the character and identifying with the character (as there has been some connection that has already been established between the reader and the protagonist) and revealing the stigma later in the narrative might not skew subsequent impressions.

Overall, most studies on narratives have examined the effects using self-reported explicit measures (example: Caputo & Rouner, 2011; Oliver et al., 2012; Ritterfeld & Jin, 2006). However, when it comes stigma, overt expressions of prejudice maybe less common, especially when the prejudice is politically incorrect. The present study also aims to understand if narratives can reduce stigma against mental illness at an implicit level (an indirect attitude measurement). We also explored the effects of narrative communication and disclosure timing on implicit attitudes toward mental illness.
Literature Review

Stigma and Stigmatization

According to Link and Phelan (2001), stigma unfolds when "labeling," "stereotyping," "alienating," "status loss," and "discrimination" converge (p. 367). These interacting elements indicate that stigma is a complex phenomenon with myriad dimensions.

Smith (2007) defined stigmatization as "the (a) recognition of a person's categorization into a group based on a distinguishing characteristic, or mark, and (b) subsequent devaluation of the marked person" (p. 466). This definition suggests that stigmatization is a form of discrimination that separates the deviant individual from the rest of the community and aids in their dehumanization, leading to their devaluation.

Smith (2007) argued that for an individual or group to become stigmatized, the nonstigmatized group must first identify and communicate the stigma. Smith (2007) suggested that four "cues" (p. 468) help communicate a stigma to the nonstigmatized group: "marks" (i.e., elements that distinguish the deviant from rest of the group), "labels" (i.e., stereotyping or categorizing the bearer of the stigma), "responsibility" (i.e., attributing the cause of the stigma to the stigmatized individual), and "peril" (i.e., danger associated with possessing the stigma). Disseminated in a community, these cues can evoke fear, anger, and disgust, leading in-group members to perceive the stigmatized individuals as out-group members (Smith, 2007). When people consider a stigma something that an individual could have avoided, empathy toward the stigmatized decreases.

Narratives

Narratives are stories that people share to communicate certain perspectives on various topics, including their own experiences. Researchers have argued that the persuasive power of narratives generally follows two distinct routes: involvement with the storyline (i.e., narrative transportation; Green & Brock, 2002) or involvement with the character (i.e., identification; Cohen, 2001; Slater & Rouner, 2002). Previous findings indicate that both transportation and identification are strong mediators that help explain the mechanisms through which narrative communication changes attitudes and behaviors related to the target topic. Confirming these results, past meta-analyses indicate that narratives were more persuasive than informational messages and had a small but significant impact on attitude and behavior (Perrier & Ginis, 2017; Shen, Sheer, & Li, 2015). In another meta-analysis, Braddock and Dillard (2016) found that narrative communication had a small but significant impact on beliefs associated with the topic of the story.

Previous findings suggest that narratives can help destigmatize certain health conditions, including mental illness. For example, Ritterfeld and Jin (2006) examined the effects of a movie and an educational movie trailer on pre- and postmeasures of attitude, social distancing, and knowledge acquisition related to schizophrenia. They found that overall, viewing the movie increased knowledge. However, watching the trailer after the movie improved knowledge and reduced stigma. They also found that empathy toward the protagonist and perceived reality were significant predictors of the entertainment value of the movie. Caputo and Rouner (2011) examined the effects of an edited version of the movie on depression. Participants were
told ahead of time that the film was either fictitious or based on a true story. They found that the genre (fiction vs. real) of the movie did not influence social-distancing behavior and that character identification mediated the effect of story relevance (a subscale of transportation) and social-distancing behavior.

Previous findings also indicate that narratives induce empathy for stigmatized or marginalized groups. Oliver and colleagues (2012) found that participants who read narrative news stories (as opposed to informational/policy-related stories) reported more favorable attitude toward the stigmatized individuals. Empathy further generated favorable attitude toward the stigmatized group and led participants to seek more information about the group. Based on previous findings, we proposed the following hypotheses:

H1:  Compared with the informational condition, narrative messages will reduce perceived threat of the protagonist (H1a) and increase social acceptance (H1b).

H2:  Compared with the informational condition, narrative messages will have a significant effect in reducing perceived dangerousness of the group (H2a), increasing social acceptance of the group (H2b), and lower negative attitude toward people suffering from mental illness (H2c).

Delayed Disclosure and Character Liking

Previous findings indicate the efficacy of narrative communication. However, scholars have paid little attention to the way narrative and character development might make a story more relatable, especially when the protagonist belongs to a stigmatized group. Chung and Slater (2013) found that social acceptance of the protagonist in the high-stigma condition (i.e., recovering drug addict) was significantly lower than social acceptance of the protagonist in the low-stigma condition (i.e., single mother). Stigma level did not influence overall identification, transportation, and narrative enjoyment. However, the results indicate that perspective taking (a subscale of identification) was lower in the high-stigma condition than in the low-stigma condition. However, we speculated that Chung and Slater (2013) disclosed the stigmas at the start of the study, potentially influencing the results.

One possible explanation might lie in the literature of narrative enjoyment and liking of morally ambiguous characters (MAC), ones who carry out both good and bad deeds (Krakowiak & Oliver, 2012) and behave in immoral ways (Krakowiak & Tsay-Vogel, 2015). Results from a series of three studies by Shafer and Raney (2012) indicate that participants did not differ in their liking of good characters (i.e., heroes) or bad characters (i.e., antiheroes), suggesting that viewers did not morally evaluate the characters’ actions. In fact, they found that audiences formed schemas based on prior exposure to immoral characters. Krakowiak and Oliver (2012) examined the effects of good, bad, and morally ambiguous behavior on affective disposition and enjoyment of the narrative. They also tested other cognitive mechanisms, such as perceived reality and transportation. They found that although good characters were liked the most, MACs were liked less than good characters but more than bad characters. However, MACs were equally cognitively engaging, making them just as enjoyable as good characters.

Though having a stigmatized condition does not mean that a person will perform bad deeds or be perceived as morally bad, the stereotype of being dangerous is attributed to some serious mental illnesses...
(e.g., bipolar disorder or schizophrenia). Thus, people might view having a stigma as a character flaw. In fact, Goffman (1963) argued that morality is one of the core elements of stigma formation. If viewers consider possession of a stigma to be a moral problem, disclosure of a stigma in the middle of the narrative might lead them to see a character as moving from being good to being morally bad (i.e., MAC). Thus, we proposed the following research questions and hypothesis:

**RQ1:** Will narratives featuring delayed disclosure of the stigmatized condition aid in destigmatization of the protagonist (RQ1a) and the group (RQ1b)?

**H3:** Narratives featuring delayed disclosure of the stigmatized condition will promote greater character liking than narratives that disclose the stigmatized condition at the beginning.

**RQ2:** Will character liking lead to destigmatization of the protagonist (RQ2a) and the group (RQ2b)?

**Transportation**

Previous findings in narrative communication studies show that transportation is an effective means of persuasion, especially when the goal is to change attitude and behavioral intention (Green & Brock, 2000, 2002; Morgan, Movius, & Cody, 2009; Murphy, Frank, Moran, & Patnoe-Woodley, 2011). Previous findings also indicate that character virtue had no impact on transportation (Chung & Slater, 2013; Tal-Or & Cohen, 2010). In other words, regardless of character nuance (e.g., disclosure of mental illness), transportation, or involvement with the storyline did not differ across conditions. Therefore, we assumed that transportation would not differ between the two narrative conditions. However, we proposed the following hypothesis:

**H4:** Transportation will lead to destigmatization of the protagonist (H4a) and the group (H4b).

**Identification**

According to Cohen (2001), identification is "an imaginative process through which audience members assume the identity, goals, and perspective of a character" (p. 261). Through identification, audience members experience the narrative from the point of view of the protagonist, making them more empathetic with the character. Murphy, Hether, Felt, and de Castro Buffington (2012) found that both transportation and identification (measured as character involvement) change attitude and behavioral intention. Tal-Or and Cohen (2016) found that identification with the character led to changes in attitude that were specific to the character. Other findings (e.g., So & Nabi, 2013) also indicate that identification changed attitude and behavior.

However, in context of destigmatization, as suggested earlier, Chung and Slater (2013) found that empathizing with and socially accepting characters from a highly stigmatized group was more difficult than doing the same for characters from a less stigmatized group. One potential reason could be that by readily cueing participants with the protagonist's stigmatized condition might hinder them to look at the protagonist in a more holistic manner. The condition might have trigged a more category-based approach using preexisting stereotypes associated with the stigmatized condition. The continuum model of impression
formation (Fiske & Neuberg, 1990) theorizes that when someone encounters an unfamiliar person, inferences about the individual are formed via “category-based” information processing rather than looking at the person holistically by their other characteristics. If narratives make the stigmatized categories more readily available, readers might not be motivated to collect or recognize other information presented to them about the protagonist. Thus, we proposed the following hypotheses:

\[ H5: \text{Narratives featuring delayed disclosure of the stigmatized condition will lead to greater identification than narratives that disclose the stigmatized condition at the beginning.} \]

\[ H6: \text{Identification will lead to destigmatization of the protagonist (H6a) and the group (H6b).} \]

**Implicit Bias**

Although overt expressions of prejudice have become less common, covert forms of prejudice still exist, and people who are stigmatized experience the negative effects of that covert prejudice. Nevertheless, most studies have examined narratives and stigma reduction using only self-reported explicit measures and have not gauged reduction implicitly. Implicit bias or attitudes are measured indirectly via tasks that look relatively unrelated to the attitude being examined (Dasgupta, 2013). These measurements can include the speed of response on tasks that gauge the association strength between certain words and objects, or the choice of words in sentence completion tasks (Dasgupta, 2013). Previous research indicated that people held greater negative bias in implicit attitudes than in explicit attitudes toward and stereotyping of mental illness as opposed to physical illness (Teachman, Wilson, & Komarovskaya, 2006). Additionally, Monteith and Pettit (2011) documented a greater negative attitude toward depression than toward physical illness, along with study participants rating depression as causing instability when the measures were implicit. These results suggest that even when people did not admit to having negative attitudes, they still held implicit bias. Greenwald, Poehlman, Uhlmann, and Banaji (2009) suggest that when it comes to socially sensitive topics, implicit attitudes are a better predictor of behavior than explicit attitudes.

Prior literature suggests that the acquisition of implicit attitudes or biases can be traced to the environment of an individual and often develops without their cognizance (Dasgupta, 2013). These biases often influence the decisions and judgements of others. Previous research indicates that implicit attitudes are not completely immutable but rather malleable and can, under certain circumstances, be changed. A study by Dasgupta and Rivera (2008) examined whether brief positive media exposure of gays and lesbians resulted in reducing implicit bias toward them, especially in people who lacked real-life contact with the community. Results demonstrated a significant reduction in implicit bias because of the intervention, along with an increased support for gay-friendly civic legislation. In another study, Dasgupta and Greenwald (2001, Study 1) found that people who watched pro-Black media had a lot less implicit bias against African Americans. These results stayed the same even after a 24-hour follow-up, when the participants were not reminded of the stimulus they had seen the day before. Previous findings in social psychology also indicate that perspective taking, which is crucial to empathy, reduces implicit bias, aids in promoting intergroup harmony, and decreases out-group distinction (Todd, Bodenhausen, Richeson, & Galinsky, 2011; Todd & Burgmer, 2013). Given these findings on implicit measures and previous literature that suggests that narratives aid in perspective-taking, we would like to examine whether narratives highlighting the positive
sides of the protagonist who also has mental illness (positive media exposure) might have an impact on implicit attitudes toward mental illness. The following hypothesis and research questions were posed:

**H7:** The narrative messages will have lower implicit bias scores than the informational message.

**RQ3:** Will character liking, transportation, and identification lower implicit bias scores?

Additionally, we also argued in the previous section that narratives with late disclosure might facilitate audiences to move away from only recognizing the stigmatized category and look at the protagonist in a more holistic manner. However, it is not known if this could also motivate reducing implicit bias. Thus, we proposed the following research question:

**RQ4:** Will narratives featuring delayed disclosure of the stigmatized condition have lower implicit bias scores than narratives with early disclosure?

### Methods

In this study, we used a 2 narrative (Disclosure timing: beginning vs. middle of narrative) × 1 (Informational message) + 1 (Control: pure control) between-subjects experimental design. We recruited participants through a Qualtrics panel and paid them a small fee for participation. To qualify for the study, participants had to be at least 25 years old and a resident of the United States. Out of 360 participants, 70 of them were not part of the final sample (N = 290) as they either failed the simple comprehension scale or had duplicate implicit bias test (which may suggest that they took part in the study twice). Participants ranged in age from 25 to 84 years (M = 51.7, SD = 13.94), and most identified themselves as women (50.27%) and Caucasians (78.4%).

### Procedure

Participants first read the instructions and the informed consent form approved by the Pennsylvania State University’s institutional review board (IRB). Later, participants responded to demographics questions about age, gender, educational level, and ethnicity. Then we randomly assigned participants to one of the four study conditions. During the experiment, participants read the stimulus. Later, they completed the posttest questionnaire. Then they visited another website to complete the implicit association test (before that, they were reminded to think about the stimulus they had previously read). Finally, participants came back to the Qualtrics website to complete the survey.

### Stimulus Overview

**Narratives**

We created two different versions of the story and presented them in the form of a blog post (word count = 982). Both versions revolved around the protagonist, Reese, and their twin sister, Becky, and the protagonist told their story about their own experiences with dealing with bipolar disorder, which is revealed
at the beginning or in the middle of the narrative (disclosure timing) in a sequential order that had an identifiable structure. The story talks about Reese’s difficulties going through college, graduating, dealing with the stigma surrounding mental illness, their childhood, the traumatic event that the 2008 economic turnaround had, their diagnosis, and how they manage their illness to lead a quality life (treatment). A licensed clinical psychologist ensured that the narrative accurately represented the symptoms and descriptions of the disorder.

Informational Message

We also wrote the informational message as a blog post (word count = 817), taking some of the material verbatim from the NAMI website. The blog post had similar but modified content that removed narrative features. Rather than telling the protagonist story in a chronological order, the informational condition discussed four different types of bipolar disorder, the causes of bipolar disorder, and treatment options along with reinforcing that a person suffering from bipolar disorder can lead a productive life. The informational message also provided an example about a young person named Reese, who was diagnosed with bipolar disorder, and despite the stigma and difficulties, they completed college and successfully managed their symptoms, leading a productive life.

Control Message

Participants in the control condition read an article called “The chocolate revolution” (Dahl, 1997). The article was about confectioneries, especially chocolate and the history of chocolate. It provides a timeline that covers the development of chocolate as a confection, which first began as a drink and later evolved into the range of treats we know today.

Study Measures

Manipulation Check

Two items checked the proposed manipulation. The first question asked participants to rate their agreement (1 = "strongly disagree"; 7 = "strongly agree") that the message they read was a story about a person. The second question asked participants to rate their agreement (1 = "strongly disagree"; 7 = "strongly agree") that the message they read focused on factual information about the topic.

Narrative Comprehension

Four multiple-choice questions measured narrative comprehension: (a) "Which mental illness was Reese diagnosed as having?" (b) "Did Reese recently get a job offer?" (c) "What is the name of Reese’s twin sister?" and (d) "What caused the fallout/misunderstanding between Reese and the twin sister?" In addition, participants summarized the narrative using three to four sentences.
Narrative Transportation

To assess narrative transportation, we adapted a five-item, 7-point Likert-type scale (1 = "strongly disagree"; 7 = "strongly agree") from Green and Brock (2000). Sample items included "I was mentally involved in the message" and "the story affected me emotionally." We indexed these measures by calculating the average of all the items. Higher scores indicated higher levels of transportation (Cronbach’s α = .88, M = 5.45, SD = 1.19).

Identification

To assess how much the participants identified with the character in the message, we adopted a 10-item, 7-point Likert-type scale (1 = "strongly disagree"; 7 = "strongly agree") from Chung and Slater (2013) and Cohen (2001). Sample items included "I think I have a good understanding of the person in the blog post." Higher scores indicated identification (Cronbach’s α = .92, M = 5.25, SD = 1.10).

Character Liking

To assess character liking, we adapted a two-item, 7-point Likert-type scale (1 = "strongly disagree"; 7 = "strongly agree") from Zillmann and Cantor (1977). Items included "I like Reese" and "I dislike Reese." Additionally, we adapted two items from the social attraction scale in McCroskey and McClain (1974). The items included "I think Reese is a pleasant person" and "Reese is the kind of person I would enjoy being around." We indexed the measures by calculating the average of all the items. Higher scores indicated higher levels of character liking (Cronbach’s α = .86, M = 5.56, SD = 1.08).

Dependent Variables

Social Acceptance of the Individual

We adapted a four-item, 7-point Likert-type scale of social acceptance of people suffering from mental illness (1 = "very unwilling"; 7 = "very willing") adapted from Link (1982). Example items included "I would like to work with the person in the blog." We indexed the measures by calculating the average of all the items. Higher scores indicated higher social acceptance and greater stigma reduction (Cronbach’s α = .90, M = 5.95, SD = 1.01).

Perceived Threat of the Individual

We created a three-item, 7-point Likert-type scale (1 = "strongly disagree"; 7 = "strongly agree") to measure perceived threat that Reese posed to society. Sample items included "I would feel threatened by the person in the blog post." We indexed the measures by calculating the average of all the items. Lower scores indicated lower perceived threat associated with mental illness (Cronbach’s α = .90, M = 2.07, SD = 1.30).
Social Acceptance of the Group

To measure stigma attitudes, we adapted a five-item, 7-point Likert-type scale of social acceptance of people suffering from mental illness (1 = "very unwilling"; 7 = "very willing") from Link (1982). Example items included "I would like to work with a person suffering from mental illness." We indexed the measures by calculating the average of all the items. Higher scores indicated higher social acceptance and greater stigma reduction (Cronbach’s $\alpha = .92$, $M = 6.00$, $SD = 1.06$).

Perceived Threat of the Group

We created a three-item, 7-point Likert-type scale (1 = "strongly disagree"; 7 = "strongly agree") to measure perceived threat. Sample items included "I would feel threatened by the person suffering from mental illness" and "It can be dangerous being around a person suffering from mental illness." We indexed the measures by calculating the average of all the items. Lower scores indicated lower danger or threats associated with mental illness (Cronbach’s $\alpha = .91$, $M = 2.88$, $SD = 1.53$).

Explicit Attitude Toward the Group

To measure destigmatization of the group, we adapted a five-item, 7-point Likert-type scale (1 = "Not at all"; 7 = "Very much") from the perceived devaluation and discrimination scale in Link (1982). Sample items included "If I discovered a person had been hospitalized for mental illness, I would probably think less of them" and "I believe that a person who has mental illness is just as trustworthy as anyone else." We indexed the measures by calculating the average of all the items. Higher scores indicated a more favorable attitude toward the group (Cronbach’s $\alpha = .79$, $M = 5.75$, $SD = 1.09$).

Implicit Bias Toward the Group

To assess the strength of the stereotype associated with mental illness and stability, we used a brief implicit attitude test (BIAT; Sriram & Greenwald, 2009) with focal attributes adapted from Monteith and Pettit (2011). A regular implicit attitude test uses seven blocks and 180 trials. However, BIAT has four blocks and 20 trials, thus reducing the time to complete the test. In the first block, participants pressed "I" for words associated with mental illness or stability and "E" for any other words. In the second block, participants pressed "I" for words associated with mental illness or instability and "E" for any other words. Block 3 repeated Block 1, and Block 4 repeated Block 2. The sorting words for each category were as follows: mental illness ("depression, anxiety, bipolar," and "schizophrenia"), physical illness ("influenza, disease, virus," and "cancer"), instability ("risky, threatening, aggressive," and "dangerous"), and stability ("calm, composed, peaceful," and "relaxed").

The advanced algorithm suggested by Greenwald, Nosek, and Banaji (2003) using the $D$ measure calculated association strength. We calculated separate means for Blocks 3 and 4, subtracting the former from the latter. We then divided these mean-difference scores by the inclusive standard deviation of latencies in the two blocks to yield an equal-weight, adjusted difference score ($D$) for each participant. The
scores ranged from −2 to +2. Lower scores or negative scores indicated a preference for mental illness and instability over mental illness and stability.

Results

Manipulation Checks

A one-tailed t-test with type of message (i.e., narrative vs. informational) as the independent variable and perceived message (i.e., story of a person) as dependent variable was significant, t(210) = −9.32, p < .001, d = 1.09. Results indicate that participants were more likely to agree that the message read like a story in the narrative condition (M = 6.40, SD = 1.00) than in the informational condition (M = 4.96, SD = 1.71). In addition, a one-tailed t-test with type of message (i.e., narrative vs. informational) as the independent variable and perceived message (i.e., factual information about the illness) as dependent variable was significant t(210) = 4.97, p < .001, d = .65. Results indicate that participants were more likely to agree that the message read like information in the informational condition (M = 6.07, SD = 1.20) than in the narrative condition (M = 5.19, SD = 1.49). Thus, the manipulation was successful.

Overall Efficacy of Narratives, Informational, and Control Messages

H1 predicted that the narrative messages would aid in destigmatization of the individual in the story more than the informational message. A one-way ANOVA with messages type as the independent variable and perceived threat of and social acceptance from the protagonist as the dependent variables revealed a significant main effect for perceived threat F(2, 210) = 8.15, p < .001, η² = .07. A post hoc test indicated that the means of both narrative messages—disclosure at the beginning (M = 2.05, SD = 1.26) and disclosure in the middle (M = 1.86, SD = 0.99)—differed significantly from the means of the informational message (M = 2.60, SD = 1.01), making narratives more effective in reducing perceived threat. However, the means of the two narratives were not significantly different than informational messages in their effect on social acceptance, F(2, 210) = 2.65, p = .07. Therefore, H1 was partially supported.

H2 predicted that the narrative messages would aid in destigmatization of the group (i.e., people suffering from mental illness) compared with the informational message, and H7 predicted that the narratives would have lower implicit bias scores against mental illness. Similarly, RQ1 addressed whether the narratives might differ from each other in destigmatization of the individual and the group. A one-way ANOVA with message type as the independent variable and perceived threat of the group, social acceptance of the group, explicit attitudes, and implicit attitudes as the dependent variables revealed a main effect for perceived threat, F(3, 287) = 4.38, p < .01, η² = .04. A post hoc test indicated that the means of both the narrative messages—disclosure at the beginning (M = 2.62, SD = 1.40) and disclosure in the middle (M = 2.60, SD = 1.35) significantly differed from the informational message (M = 3.23, SD = 1.65) and control group (M = 3.33, SD = 1.58; see Table 1).

A significant main effect for social acceptance emerged, F(3, 287) = 7.85, p < .001, η² = .07. A post hoc test indicated that the means of both narrative messages—disclosure at the beginning (M = 6.29, SD = 0.89) and disclosure in the middle (M = 6.29, SD = 0.92)—significantly differed from means
of the informational message (\(M = 5.83, SD = 0.13\)) and the pure control (\(M = 5.63, SD = 0.120\)). The means of the two narratives did not differ with each other.

A significant main effect for explicit attitude emerged, \(F(3, 287) = 12.42, p < .001, \eta^2 = .10\). A post hoc test indicated that the means of the narrative with disclosure in the middle (\(M = 6.12, SD = 0.88\)) differed from the means of the informational message (\(M = 5.62, SD = 1.14\)) and the pure control (\(M = 5.18, SD = 1.68\)) and that the means of the informational message differed from the control. Therefore, H2 was partially supported. The means of the two narratives did not differ from each other. Therefore, the current data set did not render support to RQ1.

A significant main effect for implicit bias emerged, \(F(3, 287) = 7.85, p < .05, \eta^2 = .03\). A post hoc test indicated that the means of the narrative with disclosure at the beginning (\(M = –0.34, SD = 0.46\)) differed from the means of the narrative with disclosure in the middle (\(M = –0.08, SD = 0.47\)) and the informational message (\(M = –0.12, SD = 0.48\)). The results indicate that participants who were assigned to narrative with disclosure at the beginning condition held the most implicit bias. Therefore, H7 was not supported.

Table 1. Means of all Dependent Variables by Condition Type.

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Early Disclosure Narrative ((n = 54))</th>
<th>Late Disclosure Narrative ((n = 66))</th>
<th>Informational ((n = 91))</th>
<th>Pure Control ((n = 78))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Acceptance Individual</td>
<td>2.64</td>
<td>5.90</td>
<td>6.06</td>
<td>5.70</td>
</tr>
<tr>
<td>Per_Threat_Individual</td>
<td>8.15***</td>
<td>2.05</td>
<td>1.86</td>
<td>2.60</td>
</tr>
<tr>
<td>Per_Threat_Group</td>
<td>4.31***</td>
<td>2.62</td>
<td>2.60</td>
<td>3.23</td>
</tr>
<tr>
<td>Social Acceptance Group</td>
<td>7.26***</td>
<td>6.28</td>
<td>6.29</td>
<td>5.83</td>
</tr>
<tr>
<td>Explicit Attitude</td>
<td>10.62***</td>
<td>5.97</td>
<td>6.12</td>
<td>5.62</td>
</tr>
<tr>
<td>Implicit Bias</td>
<td>3.72*</td>
<td>–0.34</td>
<td>–0.08</td>
<td>–0.12</td>
</tr>
</tbody>
</table>

Note. Per_threat_Individual = Perceived Threat of the Individual; Per_threat_Group = Perceived Threat of the Group.
***\(p < .001\), **\(p < .01\), *\(p < .05\)

Effects of Disclosure Timing in Narrative on Identification and Character Liking

We predicted that narratives with disclosure in the middle would promote greater character identification (H4) and character liking (H5). To test these hypotheses, we conducted two independent sample t-tests. The first one-tailed t-test with disclosure timing as the independent variable and identification as the dependent variable was not significant, \(t(120) = 0.82, p = .41\). The one-tailed t-test with disclosure timing as the independent variable and character liking as the dependent variable was not significant, \(t(120) = 0.81, p = .42\). Therefore, H4 and H5 were not supported.
**Effects of Transportation, Identification, and Character Liking on Destigmatization**

Prior research indicated that the persuasive effects of narratives can be attributed to its ability to involve the audience in the plot (transportation; Green & Brock, 2002), the character (identification; Cohen, 2001), and character liking (Moyer-Gusé, 2008). Three independent t-tests were first conducted to compare narratives and informational conditions before assessing the effects of those variables on destigmatization. Results of the first t-test $t(188) = 2.28, p < .05$ indicated that, overall, narratives elicited higher levels of transportation ($M = 5.48, SD = 1.09$) than information messages ($M = 5.13, SD = 1.14$). Results of the second t-test $t(209) = 2.56, p < .05$ indicated that, overall, narratives elicited higher levels of identification ($M = 5.37, SD = 1.07$) than information messages ($M = 5.00, SD = 0.99$). Results for the third t-test $t(208) = 2.74, p < .01$ indicated that, overall, narratives elicited higher levels of character liking ($M = 5.53, SD = 1.09$) than information messages ($M = 5.15, SD = 0.92$).

RQ2a, H4a, and H6a addressed whether character liking, transportation, and identification would aid in destigmatization of the protagonist. To test the hypotheses, we conducted two linear regressions. Results from the first regression indicate that character liking ($\beta = -.41, p < .001$) was the only significant predictor of perceived threat of the protagonist. Results of the second regression indicated that character liking ($\beta = .36, p < .001$) was a significant predictor of social distancing from the protagonist. Therefore, H4a was partially supported and H6a was not supported.

RQ2b, H4b, and H6b addressed whether character liking, transportation, and identification would aid in destigmatization of the group. Furthermore, RQ4 addressed whether these variables might lower implicit bias. We conducted four multiple regressions to test these proposals. Results of the first regression indicate that character liking ($\beta = -.34, p < .001$) was a significant predictor of reducing perceived threat of the group. Results of the second regression indicate that character liking ($\beta = .29, p < .001$) was the only significant predictor of social distancing from the group. Results of the third regression indicate that character liking ($\beta = .26, p < .001$) was the only significant predictor of explicit attitudes. Results of the fourth regression indicate that although none of the variables reduced implicit bias, transportation in fact predicted an increase in implicit bias ($\beta = -.25, p < .05$).

**Discussion**

The purpose of this study was (a) to compare the effects of narrative and informational messages on the destigmatization of mental illness and (b) to explore how stigma disclosure timing in the narrative might influence the destigmatization of mental illness.

**Narratives**

We hypothesized that narrative messages would help reduce the stigma against mental illness compared with informational messages or the control message. Results indicate that the narrative messages were significantly better at increasing social acceptance and reducing perceived threat of people suffering from mental illness (at the group level). Broadly speaking, one can argue that social acceptance is a behavioral intention as it typically measures the willingness to pursue certain behaviors that either increase
or decrease social interaction (e.g., working in the same place or a distant place, befriending, or unfriending). Perceived dangerousness can be a form of belief that others hold about people suffering from mental illness. These results align with previous findings that narrative messages are effective in changing target beliefs and intentions (Shen et al., 2015). However, neither of the narratives performed significantly better at increasing social acceptances of the character compared with the informational condition. This could be because informational messages generally conveyed that people suffering could lead a productive life and followed that information with an example of the character Reese. This could have motivated all participants to readily accept the character.

Results also indicated that only the narrative with disclosure in the middle improved explicit attitudes toward people suffering from mental illness. This finding indicates that making the stigmatized condition salient in the beginning might not be the best way to destigmatize. Instead, cueing participants with other social categories that typically have positive connotations or commonality between stigmatized and nonstigmatized groups might be an effective way to destigmatize. While studying narratives, many scholars have focused on comparing narrative messages with statistical or informational messages (Nabi & Green, 2015). Our findings indicate that scholars need to look further into different types of narratives and understand more how best to construct a narrative that will aid in reducing the stigma surrounding mental illness.

**Implicit Bias**

We also measured the implicit association between mental illness and stability using BIAT. Previous findings in social psychology and prejudice reduction studies indicate that exposing participants to counter stereotypical exemplars of out-group members helped reduce implicit bias (e.g., Dasgupta & Greenwald, 2001, Study 1). Our findings highlight two important factors. First, regardless of treatment condition, participants associated mental illness with instability rather than stability. This finding suggests that on an implicit level, participants had a slightly negative bias against people suffering from mental illness. Previous findings are similar: explicit measures do not capture negative attitudes toward people suffering from mental illness as well as implicit measures do (e.g., Monteith & Pettit, 2011).

Second, our findings indicate that narrative communication did not significantly reduce implicit bias. In fact, the narrative with disclosure in the beginning amplified implicit bias compared with the informational message and the pure control. Making the stigma salient in the beginning could have automatically activated the stereotypes associated with people suffering from mental illness (e.g., unstable and dangerous). This stereotype activation might have resulted in a more negative score against the out-group as a whole, potentially overriding the prejudice reduction effect of the positive disconfirming exemplar (i.e., Reese). Additionally, social desirability bias may have prevented the participants from overtly expressing prejudice.

**Character Liking**

We hypothesized that character liking will aid in destigmatization of the individual and the group. Results indicated that character liking is a significant predictor of destigmatization for both the individual
and the group. However, character liking did not differ between the narrative conditions. This would likely mean that disclosing the stigma in the middle of the narrative did not likely make the protagonist a morally ambiguous character. However, it could be likely that having a mental illness and being high functioning might have made the character morally ambiguous irrespective of when they disclose it. Furthermore, the effects of character liking on destigmatization of the group can be explained via the phenomenon of cognitive balance (Heider, 1958). According to the balance theory (Heider, 1958), individuals strive to balance their liking relationships. In case of this study, when participants liked the protagonist, Reese, with mental illness and valued the person, they were more likely to like the group to which the individual belonged. In other words, participants were motivated to maintain a psychological balance of liking people with mental illness because they liked Reese. The results provide a valuable insight that it is important to portray likeable characters in entertainment education in order for destigmatization of mental illness. These results also warrant future research in terms of what characteristics of a protagonist makes them likeable especially when they belong to a stigmatized condition.

**Transportation**

Unlike previous findings that transportation facilitated attitudinal and behavioral change (Morgan et al., 2009; Murphy et al., 2011, 2012), our findings indicate that transportation did not reduce various stigma-related variables. However, they do indicate that higher transportation influenced implicit bias: the higher the transportation, the more likely the participants drew connections between mental illness and instability on the BIAT.

One reason transportation might have increased implicit bias is that the narratives briefly mention a shooting incident by a person suffering from mental illness (who was not Reese). This information could have activated a phenomenon called “subtyping.” Subtyping refers to cognitive processing wherein participants see disconfirming exemplars as an anomaly, therefore making the generalization of the attributes of the exemplar back to the whole group more difficult (Hewstone, 1994). The protagonist of the narrative (i.e., Reese) used in the current study was a high-functioning, positive exemplar who was potentially inconsistent with preexisting stereotypes about people suffering from mental illness. Adding the shooting incident might have activated those preexisting stereotypes that people suffering from mental illness are dangerous and unstable, preventing participants from generalizing the positive information about Reese to the group. Additionally, although not statically significant, the regression result indicated that transportation was predicting increase in perceived dangerousness ($p = .06$). This could be an indication that participants were unable to view the disconfirming exemplar to the generalized population. Though the participants did not state that explicitly, it may have been captured implicitly by participants associating mental illness to dangerousness more readily than physical illness to being dangerous and transportation into the narratives predicting the association.

**Limitations and Future Directions**

Although the findings make some interesting theoretical contributions, the current study has several limitations. First, we used an online experimental design by recruiting participants from a Qualtrics panel. Though scholars have found that results from online experiments are reliable, online settings cannot
control for external distractions as well as a traditional laboratory setting. We tried to ensure that participants were fully engaged by only including data from ones who correctly answered all of the comprehension questions. Nevertheless, online experimental designs can compromise internal validity. Additionally, to control for the attrition rate, we measured implicit bias toward the end of the study, using a different platform. We reminded the participants to think about the stimulus they were exposed to earlier. Although prior research (Dasgupta & Greenwald, 2001) indicates that implicit bias reduction was held 24 hours after stimulus exposure (as suggested in the literature review), it is still possible that some of the measures may have influenced the implicit measure. Future research should examine these effects in a controlled lab environment and administer the implicit attitude first.

Second, we used one type of mental illness (i.e., bipolar disorder). Mental illness is a complex issue and covers a wide range of disorders, some of which are more stigmatized (e.g., schizophrenia) than others. Additionally, the protagonist of the narrative was a high-functioning person suffering from bi-polar, and the results might have been different if the protagonist had not been high functioning and, instead, needed hospitalization (e.g., during the mania stage). Scholars should consider using different types of mental illness and making the narrative protagonist low functioning.

Finally, the stimulus primes participants to think about the commonly held stereotypes that people suffering from mental illness are dangerous (i.e., the shooting incident). The inclusion of this information makes the stimulus realistic because people read about or see such incidents in the media. However, adding this information could have prevented transportation from effectively destigmatizing the group and, instead, made it a predictor of higher perceived threat and implicit bias. Because we did not measure preexisting attitudes or attitude strength, we cannot say with great certainty whether this information indeed made immersion a predictor of stigma variables. Scholars should consider measuring preexisting attitudes and attitude strength to determine whether narrative messages truly have the potential to destigmatize mental illness.

Practical Implications

The results from the present study offer a few practical implications. First, the results from the study should continue to encourage advocacy group like NAMI and Mental Health America to use personal stories of recovery and illness as part of their marketing campaign plans. Second, the results from the study should encourage the entertainment industry to promote entertainment series about protagonists suffering from mental illness. Since character liking was a strong predictor of destigmatization at both individual and group levels, producers should think about creating strong, likeable characters while being cautious of delaying the disclosure to ensure reduction in implicit bias. In addition, producers should also think about ways to partner with health care providers to create realistic-yet-likeable characters to help destigmatize and provide the audience with an accurate image of people that they might encounter in real life. Finally, the results may also help health care providers discuss with their patients the potential timings of disclosure of their mental illness to avoid overt forms of stigmatization and reducing barriers to seek help or disclosure their condition.
References


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