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RUNNING HEAD: Autobiographic Similarity in Narrative Persuasion

**When Bad Things Happen to a Protagonist Like You: The Role of Self in Resistance
to Negatively Framed Health Narratives**

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Abstract

This study examines when and how shared risk-relevant experience (autobiographic similarity) influences resistance to negatively framed health narratives. We conducted a 2 (narrative perspective; first- vs. third-person) x 2 (processing motives; experiential vs. analytical) randomized experiment with a short narrative depicting the negative effects of an illicitly used “study drug.” For those autobiographically similar to the study drug user, a first-person narration (vs. third-person) produced greater transportation only when participants processed to understand the story (experiential condition), whereas the reverse was found when processing for the persuasive message (analytical condition). Transportation was a significant mediator that transferred these interactive effects onto greater perceived risk only among those with autobiographic similarity. This study highlights the active role played by the audience’s self-concept in narrative persuasion and addresses boundary conditions for overcoming defensive resistance.

Keywords: perceived risk, narrative persuasion, transportation, autobiographic similarity, narrative perspective

When Bad Things Happen to a Protagonist Like You: The Role of Self in Resistance to Negatively Framed Health Narratives

Narratives have been widely used in public health campaigns to depict negative consequences of risky behaviors (van Leeuwen, Renes, & Leeuwis, 2013; for a review see, Hinyard & Kreuter, 2007). Yet, narrative health campaigns have not always resulted in the intended persuasive outcomes (e.g., Hornik, Jacobsohn, Orwin, Piesse, & Kalton, 2008; Kinder, Pape, & Walfish, 1980). The success of narrative persuasion is closely linked to an audience member's ability to expand boundaries of the self to subjectively experience a protagonist's negative situations as their own (Slater, Johnson, Cohen, Comello, & Ewoldsen, 2014). However, if an audience member has been tempted or engaged in risky behavior similar to the protagonist in a health narrative, such audience-character similarity (autobiographic similarity) may increase defensive resistance to the message because information that reminds an audience member of one's own negative self-aspects is challenging to accept (Weinstein, Deci, & Ryan, 2011; Wilson & Ross, 2001), discouraging an audience member from experiencing the story as his/her own.

While narratives in some cases may reduce resistance by transporting audiences into a story (Dal Cin, Zanna, & Fong, 2004; Kreuter et al., 2007), defensive resistance by audience members who have risk-relevant experience may influence how much they are transported into the story. For high risk individuals, transportation may depend, in part, on (a) whether an audience member is focused on understanding the story or on analyzing the persuasive intent of the story (i.e., processing motive; Epstein, 1994) and (b) whether the story is narrated by an external observer (third-person) or by the victim (first-person) (i.e., narrative perspective; Kaufman & Libby, 2012).

Prior research suggests that the relative efficacy of first-person perspective (vs. third-person) at prompting transportation into a narrative message applies only when an audience member shares group membership with or can relate to the narrative protagonist (Kaufman & Libby, 2012). In response to a narrative depicting negative consequences of risky behaviors, when autobiographically similar audience members are motivated to analyze the persuasive intent of a narrative, they are likely to be defensive and reject their similarity to the negatively portrayed character; however, when processing to understand the story with reduced self-awareness and defensiveness (Green & Brock, 2002), they are better able to accept their similarity to the negatively portrayed protagonist. Overall, we propose that those with autobiographic similarity are most likely to be persuaded by first-person narratives when they are processing to understand the story, or by third-person narratives when processing for the persuasive message. Those without autobiographic similarity will be less resistant to the negatively framed health narratives, and thus will be unaffected by these differences in processing motive and narrative perspective.

We investigate our proposition in the context of illicit “study drug” use among college students, which has been an increasing concern for college health professionals (DeSantis, Noar, & Webb, 2009). Despite the potential for serious health consequences, college students tend to believe illicit use of Attention Deficit Hyperactivity Disorder (ADHD) stimulants as study drugs is morally acceptable and physically harmless (DeSantis & Hane, 2010). College students’ response to a health narrative that depicts negative consequences of illicit study drug use may differ by their relevant-risk experiences.

Autobiographic Similarity as a Source of Self-Threat

Narrative persuasion is conceptualized as “any representation of a sequence 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 addressed” (Kreuter et al., 2007, p. 222). Narrative impact on audiences’ beliefs, attitudes, and behaviors depends on the extent to which they become involved with the narrative and its characters (Dal Cin et al., 2004; Slater & Rouner, 2002). Perceived similarity between the audience and the protagonist has been suggested as a key factor that promotes such involvement (Moyer-Gusé, 2008; de Graaf, 2014). Prior research has focused on either demographic or personality similarities with mixed results (e.g., Moyer-Gusé & Nabi, 2010; de Graaf, 2014). However, similarity based on factors that are closely related to the basic conflicts, emotions, or situations experienced by the characters may be more influential than demographic or personality factors (Green & Brock, 2002; Slater et al., 2014; Cohen & Ribak, 2003).

Health communication studies have often measured prior knowledge or experience to control for its effect in testing message effects (e.g., Nan, 2012); however, little is known about how prior knowledge or experience with a specific risk interacts with the persuasion process. Also, prior work examined the role of personal experience in narrative persuasion in terms of familiarity with the issue (knowing a homosexual) rather than audience members’ own experience (being a homosexual; Green, 2004). We propose a specific type of personal experience, termed autobiographic similarity, conceptualized as an audience member’s past psychological or behavioral engagement in a particular risky behavior performed by the main story character, as a key factor in how audience members relate to a character in a health narrative. In the context of illicit study drug use, an audience member who has been tempted to use study drugs (as well as those who have actually used them) is autobiographically similar to a

story character who contemplates and uses the drugs. Those contemplating using study drugs recognize the “need” for a drug that will help them study, have been tempted, and perhaps have imaginatively experimented with the behavior (Prochaska, DiClemente, & Norcross, 1992). On the other hand, those who have not used or contemplated using the drug are considered autobiographically dissimilar with a character using the drug.

Message recipients often respond defensively to negative health information that is personally relevant (Lieberman & Chaiken, 1992; Chen, Alden, & He, 2010; Freeman, Hennessy, & Marzullo, 2001). Information that reminds audience members of their negative past experiences or self-aspects is challenging to accept, often eliciting negative emotions and personal distress (Weinstein et al., 2011; Wilson & Ross, 2001). Autobiographic memories specific to the risky behavior depicted in a narrative could remind audiences of negative aspects about themselves, motivating them to reject the relevance of the story content or their similarity to the negatively portrayed character. Such defensive resistance could manifest as a denial of personal vulnerability to recover one’s own threatened self-conception (Sherman & Cohen, 2006). Thus, we first examine perceived risk vulnerability as a correlate of autobiographic similarity to further investigate how those with autobiographic similarity respond differently to negatively framed narratives than those without such similarity.

Hypothesis 1 (H1): Those who share similar autobiographic history with a protagonist who suffers consequences of that behavior will perceive their risk of suffering those negative consequences as lower than those who lack such experience.

Transportation and Overcoming Defensive Resistance

Narrative efficacy at overcoming resistance had been primarily explained by reduced counterarguments based on the premise that narrative processing takes up mental capacity,

reducing motivation and ability to scrutinize story points (Green & Brock, 2000; Slater & Rouner, 2002). Because the intent to persuade is often implicit in narratives, narratives are less likely to induce psychological reactance, a form of resistance to restore one's freedom in response to overt persuasion attempts (Moyer-Gusé, 2008; for a review, Rains, 2013). However, another important mechanism for overcoming resistance could be an audience member's willingness to relax his/her accustomed self-boundaries or preferred self-conception in processing a negatively framed narrative (Slater et al., 2014).

Transportation refers to an experience of being caught up in the story with "an integrative melding of attention, imagery, and feelings" (Green & Brock, 2000, p.701). In a recent article, Slater and his colleagues (2014) suggested the concept of temporarily expanding boundaries of the self, which is associated with an immersive form of narrative processing like transportation. Although audience members often find it difficult to relate to negatively portrayed characters such as stigmatized individuals (Chung & Slater, 2013; Sestir & Green, 2010), temporarily expanding their self-boundaries may allow an audience member to better imagine themselves in the story character's negative situation, moving beyond their preferred self-conception as a healthy person (perhaps despite risky behaviors). As a result, audience members may be more open-minded to accept negatively framed health narratives that suggest one's own vulnerability.

Two story-related factors may, jointly with autobiographic similarity, influence the extent to which narrative audiences temporarily expand their boundaries of the self: narrative perspective and processing motive.

Narrative perspective. Narrative perspective (or voice) is a fundamental story feature that determines the way through which the story is communicated to audiences. First-person (the story is told from the protagonist's viewpoint) has been suggested to be more persuasive than

third-person perspective (an external observer serves as a narrator) by creating closeness to the protagonist (e.g., Segal et al., 1997; Winterbottom, Bekker, Conner, & Mooney, 2008); however, studies have not always found this pattern (e.g., Banerjee & Greene, 2012) and recent work indicates this may be the case only when the protagonist is perceived as an in-group member but not when one considers the protagonist as out-group (Kaufman & Libby, 2012).

One possibility is that if the audience member perceives the protagonist as sharing group membership (or similar to the self) based on his/her own risk-relevant experience, first-person may be more effective at producing transportation than the third-person perspective. A second possibility, however, is that the audience member defends the self, perceiving the negatively portrayed protagonist as out-group (or dissimilar to the self), even when his/her own risk-relevant experience suggests that they are like the protagonist; if so, previous research would predict no persuasive advantage of first-person over third-person perspective (Kaufman & Libby, 2012). Whether an audience member who shares risk-relevant experience accepts his/her similarity (perceiving as in-group) or rejects his/her similarity (perceiving as out-group) to the negatively portrayed protagonist should be closely related to the person's processing motives.

Processing motives. When an audience member encounters a narrative persuasive message, he/she can engage it as a story or as a persuasive message. The Cognitive Experiential Self-Theory (CEST; Epstein, 1994) suggests that there are potentially two distinctive processing motives that may be involved when one encounters a health narrative: the analytical motive and the experiential motive. The analytical motive encourages an individual to process information in a critical manner based on the rules of logical inference with the evidence provided, whereas the experiential motive encourages individuals to vicariously experience narrative events guided by emotion. Narrative audiences often passively accept the stories' themes or facts because they are

not motivated to process information in a critical manner as it interrupts their enjoyable narrative reading (Oatley & Gholamain, 1997). Although the experiential motive is likely to be the predominant mode of reading a narrative, the analytical motive can be activated, particularly if the persuasive intent is obvious and/or when the story delivers information that is inconsistent with the audience member's important self-conceptions.

An audience member motivated to analytically process a narrative often accesses his/her prior experience and other schemas to evaluate the story at hand, which heighten his/her self-awareness while reading a narrative (Green & Brook, 2000). With this heightened self-awareness, the analytical motive may increase defensive resistance among those autobiographically similar, making them to reject their similarity to the negatively portrayed protagonist. Thus, when those with autobiographic similarity are in the analytical motive, the first-person advantage (vs. third-person) at producing transportation will not hold (Kaufman & Libby, 2012); instead, a third-person narration (vs. first-person) will be more transporting as it lowers personal relevance of the story (i.e., lower self-threat; Banerjee & Greene, 2012).

The experiential motive, on the other hand, can temporarily reduce defensive resistance among those autobiographically similar. When audience members are in an experiential mindset, they are willing to suppress their conscious mind linked to their current and previous schemas and experience (Green & Brock, 2002). As a result, audiences are better able to relax their accustomed self-boundaries and accept their similarity to the negatively portrayed protagonist, thus imaginatively engaging in the story world that is otherwise a challenge to their self-concept (Slater et al., 2014). In this case, a first-person narrative (vs. third-person) should be more transporting when those with autobiographic similarity are in an experiential motive as they are

better able to accept their similarity to the negatively portrayed protagonist (Kaufman & Libby, 2012).

Combined, we expect the first-person advantage over third-person narration at inducing transportation when the similar group adopts an experiential motive; and the reverse is expected when the similar group adopts an analytical motive. Those who lack story-congruent negative experiences are not particularly motivated to resist the message; thus differences in narrative perspective and processing motive will not make a difference. We suggest transportation as the mediator through which the interaction between processing motive and narrative perspective changes perceived risk among the similar group. Thus, we propose mediated moderation as follows:

Hypothesis 2a (H2a): Under the experiential motive, transportation will mediate the relative efficacy of first-person (vs. third-person) at increasing perceived risk among the similar group.

Hypothesis 2b (H2b): Under the analytical motive, transportation will mediate the relative efficacy of third-person (vs. first-person) at increasing perceived risk among the similar group.

Method

Participants and Procedure

We conducted a 2 (processing motive: experiential vs. analytical) x 2 (narrative perspective: 1st person vs. 3rd person) between-subjects experiment with a story depicting a character vulnerable to harmful consequences of using ADHD stimulants without a prescription. College students ($n = 228$) were recruited to participate in an experiment administered on the Internet in exchange for extra credit. Participants were asked to read a short narrative with a

specific processing motive instruction (explained below). We excluded those who did not recall the processing motive reading instructions ($n = 9$), resulting in an analytic sample of $N = 219$. Along with basic demographic information, the post-questionnaire included perceived similarity, transportation, and perceived risk. In addition, we assessed participants' experiences relevant to the use of study drugs to create an index of autobiographic similarity. Of the respondents, 9% had a prescription for an ADHD drug and 4% experienced some medical problem due to ADHD drugs. Seventy seven percent were women and 67% self-identified as White. Respondent age ranged from 18 to 44 ($M = 19.59$, $SD = 2.04$). Twenty-two percent were freshmen, 39% were sophomores, and 25% were juniors.

Experimental Stimulus

Narrative perspectives. Two story versions were written based on newspaper reports on study drug usage among college students (e.g., ABC News, 2005). The stories depicted a character experiencing negative consequences of taking study drugs without a prescription. The two versions were identical except for manipulating perspective by referring to the protagonist in first ("I", $n = 112$) or third person ("Maggie", $n = 107$). The story character, Maggie, wakes up on an emergency room gurney after taking Adderall without a prescription and collapsing in her dorm bathroom. In the hospital, she recalls her dependency on the study drug and side effects that she has experienced. Maggie's story concludes with her being concerned about her parents and others finding out what she did (Appendix A). O'Keefe (2003) emphasized that message manipulation checks are unnecessary when message variations are defined in terms of intrinsic features. We thus did not perform separate manipulation checks because narrative perspective is an intrinsic feature of narrative messages.

Processing motive. Pre-reading instructions manipulated two processing motive conditions (Sestir & Green, 2010; Green & Brock, 2000; Green, 2004). In the experiential condition ($n = 110$), participants were instructed to put themselves into the story by “focusing on the events as if you were inside the story itself” to increase the likelihood of vicarious experience. For the analytical condition ($n = 109$), participants were asked to “think carefully about the arguments, statements, and beliefs the characters and settings seem to depict” to encourage them to critically process the story content. At the end of the study, participants were asked to indicate which reading instruction they received and we excluded those who did not correctly recall the instruction ($n = 9$).

Measures

Autobiographic similarity. We asked two questions to create an index of autobiographic similarity: whether an audience has (1) used and (2) been tempted to use ADHD drugs to study. Twenty percent reported that they had used ADHD drugs and 42% had been tempted to use the study drug. Those who had never used or never been tempted to use study drugs were categorized as the dissimilar group ($n = 122$, 56%) and those who had used or been tempted to use were categorized as the similar group ($n = 94$, 43%). To validate our categorization, three measures assessed *perceived similarity* on a 5-point Likert scale (e.g., “What the story says about this person shows that she seems a lot like the person I actually am”; $\alpha = .86$, $M = 2.27$, $SD = .96$). Those categorized in the similar group perceived themselves significantly more similar to the protagonist ($M = 2.52$, $SD = 1.00$) than those categorized in the dissimilar group ($M = 2.07$, $SD = .89$), $t(213) = 3.47$, $p = .001$, partial $\eta^2 = .05$. Within the similar group, perceived similarity did not differ between those who actually used study drugs ($M = 2.66$, $n = 45$) and those who were only tempted to use ($M = 2.39$, $n = 49$), $t(92) = 1.28$, $p > .05$. A pairwise comparison also

showed that perceived similarity in the dissimilar group was significantly lower than those who tempted to use study drugs ($M = 2.07$ vs. $M = 2.39$, $p < .05$). Thus, the binary index was used in the subsequent analyses.

Transportation. We assessed transportation with a 12-item scale derived from Green and Brock (2000). Participants indicated the extent to which they agreed or disagreed with each statement (1 = not at all, 7 = very much), for instance, “I was mentally involved in the story while reading it”, “I could picture myself in the scene of the events shown in the story.” Responses were averaged into a transportation scale ($\alpha = .69$, $M = 4.17$, $SD = .77$).

Perceived risk. Participants estimated their perceived chance of experiencing health consequences if they were to use ADHD drugs without a prescription (1 = almost zero; 7 = almost certain, Weinstein et al., 2007). Also, two items assessed feeling at risk: “If I take performance enhancing drugs without a prescription, I would feel [that I’m going; very vulnerable] to experience health consequences as depicted in the story” (1 = strongly disagree; 7 = strongly agree). We averaged three items to create a perceived risk scale ($\alpha = .89$, $M = 4.50$, $SD = 1.40$).

Analytic Approach

We used a series of analysis of variance (ANOVA) to examine our hypotheses. We first examined main effects of experimental conditions and autobiographic similarity on perceived risk (testing H1). To examine H2, we entered two-way interactions and a three-way interaction between experimental conditions and autobiographic similarity in models predicting perceived risk and transportation. Significant interactions were probed with focused post-hoc tests (Hayes, 2005). To examine whether transportation mediates the interactive effects onto perceived risk, we tested for mediated moderation using the PROCESS macro for SPSS (Preacher & Hayes,

2008). To establish mediated moderation, (a) the treatment effect on mediator should depend on the moderator and (b) compared to the moderation of the overall treatment effect, the moderation of the residual direct effect of treatment should be reduced (Muller, Judd, & Yzerbyt, 2005).

Results

Perceived Risk as a Correlate of Autobiographic Similarity (H1)

We hypothesized a lower perceived risk among those with autobiographic similarity compared to the dissimilar group (H1). Controlling for experimental conditions, autobiographic similarity significantly reduced perceived risk ($M_{\text{similar}} = 3.93$, $SD = 1.42$; $M_{\text{dissimilar}} = 4.94$, $SD = 1.24$), $t(214) = 5.63$, $p < .001$, $\eta_p^2 = .13$ (H1 supported). There was no main effect of narrative perspective or processing motive on perceived risk.

Mediated Moderation of Transportation (H2)

H2 proposed mediated moderation; transportation would mediate the relative efficacy of (a) first-person (vs. third-person) under the experiential motive and (b) third-person (vs. first-person) under the analytical motive at increasing perceived risk among the similar group. We found a significant three-way interaction on perceived risk, $F(1, 208) = 6.61$, $p = .01$, $\eta_p^2 = .03$. As expected, the processing motive by narrative perspective interaction was significant only in the similar group, $F(1, 90) = 4.18$, $p = .04$, $\eta_p^2 = .04$ (the dissimilar group, $p = .14$). As shown in Figure 1, for the similar group, the first-person narration produced significantly higher perceived risk ($M = 4.36$, $SD = 1.52$) than the third-person narration ($M = 3.38$, $SD = 1.35$) under the experiential motive, $t(41) = 2.24$, $p = .03$, $\eta_p^2 = .11$, but no difference was observed under the analytical motive ($M_{1st} = 3.87$, $M_{3rd} = 4.08$, $p = .60$, $\eta_p^2 = .006$). As expected, in the dissimilar group, narrative perspective did not make a difference under any processing motives (analytical, $p = .11$; experiential, $p = .65$).

Consistent with the patterns found on perceived risk, we found a significant three-way interaction between two experimental conditions and autobiographic similarity on transportation, $F(1, 208) = 6.33, p = .01, \eta_p^2 = .03$. As shown in Figure 2, the processing motive by narrative perspective interaction was significant only in the similar group, $F(1, 92) = 8.21, p = .005$, partial $\eta^2 = .08$ (the dissimilar group, $p = .71$). For the similar group, first-person narration produced significantly higher transportation ($M = 4.65, SD = .61$) than the third-person narration ($M = 4.28, SD = .59$) under the experiential motive, $t(41) = 1.99, p = .05, \eta_p^2 = .09$, whereas the opposite pattern was found in the analytical motive ($M_{1st} = 3.95, SD = .86, M_{3rd} = 4.53, SD = .99$), $t(49) = -2.22, p = .03, \eta_p^2 = .09$.

Having confirmed the predicted interaction patterns on transportation, we tested for mediated moderation using the PROCESS macro (Model 12). In a model predicting perceived risk, we accounted for the effect of transportation and allowed the indirect effect via transportation to be moderated by the autobiographic similarity by processing motive interaction. In this model, the residual direct effect of narrative perspective on perceived risk no longer depended on the similarity-processing motive interaction, $F(1, 204) = 3.56, p > .05$. The 95% CIs for the overall indirect effect of transportation ($B = .38, SE = .19, 95\% CI = [.09, .85]$) did not include zero, suggesting that transportation is a significant mediator that transfer the interactive effects between experimental conditions and autobiographic similarity into perceived risk. The conditional indirect effect of narrative perspective via transportation was significant only in the similar group under both processing motive conditions: (a) experiential motive ($B = .13, 95\% CI = [.02, .34]$; supporting H2a) and (b) analytical motive ($B = -.21, 95\% CI = [-.50, -.03]$; supporting H2b). Figure 3 shows mediated moderation focusing on the similar group.

Discussion

In our experiment using a message in which a character suffers negative effects of illicitly using a “study drug,” those with autobiographic similarity to the character considered themselves less likely to experience health consequences depicted in the story, reflecting a defensive bias. First-person narration (vs. third-person) combined with the experiential motive helped overcome audience members’ defensive resistance based on autobiographic similarity, which was explained by higher level of transportation. However, first-person narration (vs. third-person) became counterproductive—reducing risk perception—when autobiographically similar individuals adopted an analytical motive in processing a health narrative.

This study contributes to the narrative persuasion literature in two ways. First, the results highlight the active role played by the self in processing health narratives, which had not been adequately addressed in the literature. In particular, we advance the theoretical claim made by Slater and his colleagues (2014) on narrative impact on beliefs related to the self by specifying conditions under which audiences can expand their preferred boundaries of the self to subjectively simulate the experience of a negatively portrayed protagonist. Second, our findings offer plausible explanations for the inconsistent results reported in the literature regarding the effects of perceived similarity and narrative perspective.

Autobiographic Similarity in Negatively Framed Health Narratives

Although narrative approaches have been suggested as overcoming resistance to persuasion (e.g., Dal Cin et al., 2004), there isn’t much research that addresses what specific features or conditions of a narrative help overcome or worsen resistance. Audience-character similarity in risk-relevant experience appears to be a major component that changes the way narrative audiences relate themselves and respond to negatively framed health narratives. Our view is consistent with those scholars who emphasize that similarity in story situations and

conflicts that are relevant to audience's identity influences narrative impact more than similarity in social or demographic categories (Green & Brock, 2002; Slater et al., 2014; Cohen & Ribak, 2003). Although prior research often narrowly defined at risk individuals, we included those who were psychologically considering the risky behavior (Prochaska et al., 1992). Our stimulus story described the processes of developing temptation to try out study drugs and dependency after a trial. Any personal experiences relevant to this sequence of events should be considered as story-congruent autobiographical memories.

Autobiographic similarity may serve as a source of resistance only to negatively framed health messages, but not to positive ones; our finding thus offers a plausible explanation for inconsistent results reported in prior research. In a recent study, for instance, audience-character similarity increased perceived risk of getting intestinal cancer in response to a cancer survivor story (de Graaf, 2014). When positively framed, autobiographic similarity may enhance persuasion as past relevant experience provides mental imagery resources that make it easier for audiences to imagine themselves in the story situation (Green, 2004). When negatively framed, autobiographic similarity may instead interfere with narrative processing and reduce persuasion as the story reminds audiences of negative aspects about themselves. In line with our explanation, perceived similarity was negatively associated with risk vulnerability when audiences read a story about the difficult consequences of an unplanned teen pregnancy (Moyer-Gusé & Nabi, 2010). Future work should further examine our proposition with direct manipulations of protagonist characteristics in health narratives.

Experiential Motive as a Boundary Condition for the Efficacy of First-Person Testimonial

Among those with autobiographic similarity, first-person narration produced more transportation than a third-person narration when they were instructed to experientially process a

narrative, but not when they analytically processed the narrative. As expected, this pattern was not observed in the dissimilar group. Although first-person narration creates an immediate sense of closeness to a narrative character, it is not a sufficient condition to invite audiences to simulate the subjective experience of a character. Kaufman and Libby (2012) suggested shared group membership between audience and character as a boundary condition. People often psychologically distance themselves from stigmatized individuals (Chung & Slater, 2013) or those who have negative traits (Sestir & Green, 2010). As such, the character struggling with a negative health issue could be perceived as out-group (or dissimilar to the self), particularly among those autobiographically similar to the character, as a form of self-defense, when they are in an analytical mindset.

It is possible that the reading instruction to experientially process a narrative helped autobiographically similar audiences remove themselves from the self-focused state; therefore being less inclined to reject their similarity to the negatively portrayed character and more transported by the first-person narration (vs. third-person). This explanation is consistent with the theoretical claim made by Slater et al. (2014) on the reduction of in-group/out-group distinction as a result of temporarily expanding boundaries of the self in narrative engagement. The experiential motive could be one important element that prompts an audience to temporarily expand his/her boundaries of the self to accept the narrative content that is counter-attitudinal to the audience's positive self-conception.

Under the analytical motive, on the other hand, autobiographically similar individuals were more transported into the story narrated by an external observer (third-person) than when the victim told her own story (first-person), which in turn increased their perceived risk. People often perceive first-person narratives as testimonials and third-person narratives as exemplars

(Banerjee & Greene, 2012). First-person testimonials could be more self-threatening than third-person exemplars to those who have negative risk-relevant experiences when they are in a critical or elaborative mindset perhaps because it feels like their own testimonial with an increased personal relevance. This speculative explanation, however, warrants further research.

Autobiographic similarity appears to be an important audience characteristic; a formative research that identifies those at risk individuals, including those contemplating the initiation of a risky behavior, would benefit developing effective health narratives tailored to their needs. When dealing with at risk populations based on negative health behaviors, health educators can improve persuasion by using a first-person testimonial rather than an exemplar while concomitantly promoting experiential narrative reading, for instance, by improving narrative quality or realism (Green, 2004). In cases where audiences are motivated to analytically process a health narrative, however, the use of a first-person testimonial could be counterproductive; an exemplar may be better able to circumvent audience's defensive reactions to health narratives.

Limitation and Proposed Future Studies

Our reading instructions may have been weak because story engagement may not be entirely conscious, controllable process for the audiences. At the same time, audiences may not accurately understand or distinguish 'being there in the story' and 'critically elaborating the story content' because both mental processes involve deep attention paid to the story content. Transportation under the analytical motive may reflect the notion of cognitive elaboration in persuasion literature (Petty & Cacioppo, 1986). Future research should develop manipulations and measures that better capture different mental processes involved in narrative reading.

Because we did not randomly assign participants into conditions based on their autobiographic similarity, cell sizes were not equally balanced across conditions and some were

relatively small to examine three-way interactions (the smallest cell, $n = 20$). Thus, the effect sizes reported here may be underestimates of the true effect of autobiographic similarity. Also, cross-sectional measurement of autobiographic similarity precludes causal conclusions about relationships with that variable. It would be useful for future work to employ longitudinal panel designs to confirm causal relationships proposed in this study. We considered autobiographic similarity as a source of defensive resistance; however, the similar group could have questioned the authenticity of story content based on their prior experience and thus led to greater resistance compared to the dissimilar group. However, the exclusive interaction effects within the similar group would be difficult to explain solely based on differences in perceived authenticity of the story content. Future studies would benefit from directly measuring defensive resistance (e.g., counterarguing, reactance) or implicit self-concept (Sestir & Green, 2010) to better understand the explanatory mechanism behind the observed message effects. Also, it would be important to assess intention or willingness to use ADHD medications as study aids to confirm behavioral implications beyond changes in perceived risk.

Our student sample was highly relevant to the unique context of the use of study drugs. Student samples do tend to be more optimistic about health risk than other populations (Klein & Helweg-Larsen, 2002); this optimism might result in overall lower risk perception, making it less likely to detect the hypothesized effects. Despite a possible floor effect, we observed hypothesized patterns among the similar group; future research with non-student samples may detect stronger effect sizes than those reported here. Like many other investigations based on student samples, the majority of study participants were White females. Although we used a female (“Maggie”) protagonist in our story versions, the protagonist was not perceived as more similar to female than male participants, consistent with prior research findings (Green, 2004; de

Graaf, 2014). Nonetheless, readers should be cautious in interpreting and applying our findings to other populations. The use of a single narrative message is another limitation worth noting. Future work should replicate the findings reported here with multiple message conditions.

Conclusion

Having story-congruent experiences may trigger defensive reactions when the story is counter-attitudinal to the audience's positive self-conception. This counterproductive effect can be minimized by narrating a story through the victim's perspective while motivating audiences to take a more immersive form of mental processing. Only when audiences relax their accustomed self-boundaries, which may manifest as the state of transportation, can they minimize their defensive resistance and realize personal vulnerability.

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Figure 1. Perceived Risk by Experimental Conditions and Autobiographic Similarity. Numbers above bars are cell means (*SDs*). * denotes $p < .05$ for the focused contrasts between perspective conditions. Similar Group (experiential, $n_{1st} = 23$, $n_{3rd} = 20$; analytical, $n_{1st} = 29$, $n_{3rd} = 22$). Dissimilar Group (experiential, $n_{1st} = 34$, $n_{3rd} = 33$; analytical, $n_{1st} = 24$, $n_{3rd} = 31$).

Figure 2. Transportation by Experimental Conditions and Autobiographic Similarity. Numbers above bars are cell means (*SDs*). * denotes $p < .05$ for the focused contrasts between perspective conditions. Similar Group (experiential, $n_{1st} = 23$, $n_{3rd} = 20$; analytical, $n_{1st} = 29$, $n_{3rd} = 22$). Dissimilar Group (experiential, $n_{1st} = 34$, $n_{3rd} = 33$; analytical, $n_{1st} = 24$, $n_{3rd} = 31$).

Figure 3. Test of Mediated Moderation for the Autobiographically Similar Group ($n = 94$).

Unstandardized coefficients [95% confidence intervals]. Narrative perspective (Ref. = third-

person); Processing motive (Ref. = analytical). (a) The effect of perspective condition on

transportation depends on processing motives ($B = -.94$, $CI = [-1.60, -.29]$: (a-1) conditional

indirect effect of first-person (vs. third) when experiential and (a-2) conditional indirect effect of

first-person (vs. third) when analytical. (b) The residual direct effect of perspective condition no

longer depend on the moderation of processing motive ($B = -.78$, $CI = [-1.95, .40]$). Mediation

not observed in the dissimilar group.

Appendix A. Narrative Perspective Conditions (first-person vs. [third-person])

I [Maggie] opened my eyes. I [She] was laying on an emergency room gurney. My [Her] roommate, Sarah, was leaning over me [her]. “Maggie, are you ok? You collapsed in the bathroom. I called 911! What did you take?”

“I just took something to help me study,” I [Maggie] whispered.

It started finals week of my [her] junior year. I’ve [Maggie had] always gotten “As”. I think I’m [She had been] pretty motivated to do well. After pulling two all-nighters, I [she] couldn’t concentrate on the work I [she] still had to do. I [She] was really stressed out.

A classmate told me [Maggie] about performance enhancing drugs like Ritalin and Adderall. Kind of like steroids, but for studying. The first time I [she] took it, I [she] panicked. I [She] felt accelerated, I [she] was talking too fast — people noticed. “What are you on?” was the question of the day. Since that day, I [she] took it for school or for important activities, like job interviews, because my [she thought her] grades and career depended on it. With the drug, I [she] was more driven. I [She] focused. I [She] wasn’t distracted by anything else.

At first, taking the pills seemed okay. But then I [she] started having trouble falling asleep. I [She] started noticing unusual changes in my [her] behavior like occasionally having the jitters. I [She] thought I [she] should stop using the pills – but I [she] couldn’t. There was no way I [she] could get things done without the pills.

Last night was one of the worst 13 hours of my [Maggie’s] life. I [She] had a big test coming up; so I [she] took Adderall. I [She] felt out of it the whole day. I [She] couldn’t fall asleep and had the worst headache ever. My [Her] heart raced; I [She] was sweating, and I [she] was dizzy and nauseous. I remember going [she went] in the bathroom. The next thing I remember [she remembers] was in the ER... The nurse just said they called my [her] parents. “What am I going to say to them?” [Maggie muttered.]