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Operational and Conceptual Trends in Narrative Persuasion Research: Comparing Health- and Non-Health-Related Contexts

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Interest in narrative persuasion has grown markedly since the turn of the 21st century, yet the concept of narrative at the center of this scholarly work remains a diffusely bounded construct. This study offers a moment of empirical reflection through a content analysis of peer-reviewed articles examining narrative persuasion in health- and non-health-related contexts to better define the conceptualizations and operationalizations of narrative that have been used to shape the direction and theorizing of narrative persuasion. We identify trends and potential biases in the literature, compare these patterns in studies focused on health-related topics and those targeting other issues, and suggest a variety of conceptualizations and possible relationships that may deserve more attention as this area of inquiry progresses.

Keywords: narrative, persuasion, health communication, content analysis, experiments

Researchers in communication, marketing, public health, psychology, and other disciplines have focused considerable attention on the (potentially unique) persuasive affordances of narrative messages. This work has led to various attempts at synthesis of the literature, including several meta-analyses and systematic reviews (Allen & Preiss, 1997; Braddock & Dillard, 2016; de Graaf, Sanders, & Hoeken, 2016; Shen, Sheer, & Li, 2015; van Laer, de Ruyter, Visconti, & Wetzels, 2014; Zebregs, van den Putte, Neijens, & de Graaf, 2015), special journal issues on narratives and their impact (e.g., Bilandzic & Kinnebrock, 2009; Johnson, Ewoldsen, & Slater, 2015; Nabi & Green, 2015), and numerous theoretical models of

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narrative processing and influence (e.g., Busselle & Bilandzic, 2008; Gerrig, 1993; Green & Brock, 2000; Moyer-Gusé, 2008; Slater & Rouner, 2002).

At the same time, researchers have conceptualized what constitutes a narrative message quite differently. Some theorists define narrative messages broadly (e.g., "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" [Kreuter et al., 2007, p. 222]), while others focus on particular forms or genres of narrative communication. These more specific classifications include concepts such as "entertainment-education" ("incorporating health and other educational messages into popular entertainment media with the goal of positively influencing awareness, knowledge, attitudes, and/or behaviors" [Moyer-Gusé, 2008, p. 407]; see also Slater & Rouner, 2002), "personal testimonials" ("a personal story, a description of an individual experience, or a personal opinion" [Braverman, 2008, p. 666]; see also Dunlop, Wakefield, & Kashima, 2008), and "exemplification" ("personal descriptions by people who are concerned or interested in an issue" [Brosius, 1999, p. 214]; see also Kim, Bigman, Leader, Lerman, & Cappella, 2012).

Further complicating the issue is the fact that research on narrative impact has focused on a wide variety of potential explanatory mechanisms of persuasion, although not always in the same study. These include a diverse set of concepts such as transportation (e.g., Green, Brock, & Kaufman, 2004), identification (e.g., Cohen, 2001), empathy (e.g., Campbell & Babrow, 2004), realism (e.g., Hall, 2003; Shapiro, Barriga, & Beren, 2010), emotional response (e.g., Dunlop, Wakefield, & Kashima, 2008; Nabi, 2015), narrative causality (e.g., Dahlstrom, 2013), counterarguing (e.g., Niederdeppe, Kim, Lundell, Fazili, & Frazier, 2012), and reactance (e.g., Moyer-Gusé, 2008) among others.

Finally, health contexts represent a substantial subfield within the field, and some reviews of narrative persuasion research and effects have focused on this specific context (de Graaf et al., 2016; Shen et al., 2015; Zebregs et al., 2015). Yet many researchers in this context come from a health communication tradition, with its own motivations, assumptions, and expected outcomes that do not necessarily guide narrative persuasion as a whole. As such, these reviews often reach different conclusions about the conditions under which narratives persuade than have broader reviews of the narrative persuasion literature (Braddock & Dillard, 2016).

We contend that these scattered conceptualizations of narrative form and function, combined with the difficulty of comparing general conclusions to those derived from specific contexts, may impede more precise theorizing about the conditions under which different types of narrative messages may be more or less persuasive than other forms of communication.

This study takes a first step in addressing these issues through a content analysis of peer-reviewed articles examining narrative persuasion in health- and non-health-related contexts, published between 2000 and 2013, to describe trends and patterns in the conceptualizations and operationalizations of narrative that have been used to shape the direction and theorizing of narrative persuasion. We seek to answer the following questions: How have researchers operationalized narrative in their research? To what extent do overlooked patterns of association between narrative design, research design, and/or audience

features exist in studies of narrative persuasion? How do these overall patterns compare to those within the subset of narrative studies that focus on health contexts?

Intuitively, it seems reasonable to suggest that narratives are not a monolithic entity—some narratives largely follow single characters, while others describe collectives; some emphasize plot, while others emphasize a story's setting; some seek to evoke strong emotions, while others invite more thinking and reasoning. Yet researchers studying narrative persuasion must also make decisions about which narrative stimuli to use in a particular study. These decisions may reflect a researcher's or theorist's beliefs about what matters for understanding narrative persuasion, but in the aggregate they may also shape the direction and content of the larger field's theorizing and study of the topic. By taking a moment to empirically reflect on the conceptualizations and operationalizations of narrative that have been used to shape the direction and theorizing of narrative persuasion, we can discover what features and relationships deserve more attention as the field progresses as well as the extent to which these conceptual and operational decisions differ across message contexts.

What This Article Adds

This content analysis is not the first step in a systematic review or meta-analysis, but a stand-alone descriptive article designed to map the field as it has developed over time and where it stands today. It has the potential to contextualize and enhance our understanding of previous meta-analytic studies estimating the effects of narrative messages. Meta-analyses are useful to the extent to which they can provide precise estimates of the average effect of a treatment across a wide variety of studies and populations as well as attributes of the treatment or audience that may moderate these effects. They may be less valid and precise, however, when attempting to synthesize research that features highly diverse operationalizations of a treatment, different comparison groups and research designs, and dissimilar study populations (Haidich, 2010; Higgins & Green, 2011). If narrative design, research design, or audience variables that were treated as independent moderating factors in previous meta-analyses systematically co-occur in narrative effects research, it is likely that complex interactions between two or more of these factors influence the magnitude and direction of narrative impact. Meta-analysis by itself is not well suited to handle this degree of complexity (Higgins & Green, 2011).

Specifically, this study seeks to add clarity to several puzzles that have emerged in efforts within the field to synthesize knowledge about narrative persuasion by comparing studies that have tested the impact of narrative persuasion on health topics to studies on non-health topics. Two prior meta-analyses examined associations between narrative engagement (Tukachinsky & Tokunaga, 2013) or transportation (van Laer et al., 2014) and story-targeted outcomes, clearly demonstrating a link between these factors, but providing limited insight into specific narrative design features, story context, or receiver characteristics that might enhance or impede their persuasive impact. Four other reviews, however, reached quite different conclusions about potential moderators of narrative persuasion. Braddock and Dillard's (2016) meta-analysis found little evidence that the type of outcome (beliefs vs. intentions), medium, fictionality, or research design mattered in shaping the magnitude of narrative impact. Zebregs et al.'s (2015) meta-analysis, in contrast, concluded that narratives work better in changing intentions than in changing beliefs and attitudes. Shen et al.'s (2015) meta-analysis further concluded that the

medium did matter, suggesting an advantage for audio and video over print. A systematic review by de Graaf and colleagues (2016) argued that various research and narrative design factors shape the likelihood of persuasive impact, including the outcome (beliefs vs. intentions), and point of view (first versus third person), but not medium of presentation (print or audio/video).

Several key differences in these studies could explain their divergent conclusions. For one, Braddock and Dillard (2016) compared narrative messages to pure controls (no message or unrelated stimuli, N = 74 studies); Shen et al. (2015) and Zebregs et al. (2015) compared narratives to nonnarrative forms of evidence (N_{Shen} = 25 studies; $N_{Zebregs}$ = 15 studies); de Graaf et al. (2016) included both types of studies (N = 153 studies). Another major difference, however, is the generality or specificity of context. Braddock and Dillard (2016) and Zebregs et al. (2015) examined narrative persuasion across various contexts, whereas Shen et al. (2015) and de Graaf et al. (2016) looked exclusively at health-related narratives. No studies to date have explicitly compared how researchers conceptualize and operationalize narrative between health and non-health contexts; understanding these differences could help us to understand why these studies reach different conclusions.

A common trait across these studies may also help to explain differences in their conclusions. Each study attempted to isolate the independent effects of narrative and research design features by comparing the magnitude of their impact in what are functionally bivariate analyses. Each of these studies found high levels of statistical heterogeneity in estimates of narrative impact across studies—variation that was not well explained by the moderators tested. Yet, given relatively small sample sizes for each review, it is likely that the specific narrative and research design features in each study were associated with one another, limiting the degree to which a meta-analysis involving a limited number of studies is able to tease apart the independent contribution of each feature. We add clarity to these questions by assessing the degree to which the associations in existing studies between narrative and research design may confound conclusions drawn from small samples of both narratives and audiences.

Summary and Research Questions

We characterize narrative persuasion studies in a variety of ways, enabling us to address several different research questions. The first set of research questions examines the content of narrative messages used in persuasion studies. Specifically, we examine how narrative stimuli used in randomized experiments have been operationalized in terms of their (RQ1a) modality (e.g., print, video, etc.), (RQ1b) format (e.g., advertising, film, etc.), and (RQ1c) length. We also examine details about their (RQ1d) origin (e.g., professionally produced, researcher-created, or a combination of the two), (RQ1e) character unit (e.g., a single character or collectives), (RQ1f) character point of view (first, second, or third person), (RQ1g) narrator (internal or external to the story), and (RQ1h) whether the narrative had obvious persuasive intent. We also compare the frequency with which each of these narrative features appear between studies on health-related topics and those targeting non-health contexts (RQ1i).

The second set of research questions concerns details about the design of narrative persuasion studies. These details are directly related to the nature of the research question being addressed in the study—whether the study compares narrative to nonnarratives, different forms of narrative to one

another, or factors external to the narrative that may shape narrative impact. Specifically, we characterize the proportion of studies that used experimental narrative stimuli to explore questions about the relative impact of (RQ2a) narrative versus nonnarrative contrasts, (RQ2b) factors related to the internal construction of narratives (e.g., manipulating character details, length, etc.) as well as (RQ2c) factors related to the external context of consuming narratives (e.g., audience goals, mood, etc.). We also assess (RQ2d) the demographics of study participants for narrative persuasion studies (e.g., student samples, targeted groups, etc.). And we compare these features between studies focused on health-related topics and those targeting non-health-related contexts (RQ2e).

The third and final set of research questions explores patterns of associations between variables. Specifically, we ask (RQ3a) which of the aforementioned narrative stimuli or study design variables exhibit directional trends over time as well as (RQ4a) broader patterns of associations between variables that reveal specific study designs and conceptualizations and that often co-occur in experimental narrative studies. Again, we compare these trends (RQ3b) and patterns of association (RQ4b) between studies focused on health-related topics and those targeting non-health-related contexts.

Method

Identification and Collection of Relevant Journal Articles

We identified peer-reviewed journal articles published between 2000 and 2013 that used a randomized experimental methodology with at least one treatment stimulus in a narrative (or a relevant acronym—story, anecdote, etc.) format, as defined by the authors of the article, as the inclusion criteria for the study. Giving the power of definition to the authors of the articles keeps our own biases of what should constitute a narrative from skewing the sample. Our search criteria differ from other meta-analyses and systematic reviews in that we did not consider quasi-experimental studies, conference papers, or dissertations (see de Graaf et al., 2016), but did consider studies comparing narrative to a nonnarrative message (e.g., Shen et al., 2015; Zebregs et al., 2015) as well as those comparing narrative to no message (Braddock & Dillard, 2016). We began our search with a series of keyword searches in major academic databases (PsycINFO, Communication Abstracts, Web of Knowledge, and Google Scholar) using a variant (depending on the search engine structure) of the following search term: *(narrative OR anecdote OR story OR transportation OR identification OR realism OR exempl*) AND (persuas* or effect*)*. We reviewed all search results or, in the case of Google Scholar, the first 15 pages of results. Based on the results of these searches, we identified 32 prominent authors of narrative persuasion studies and queried both search engines and their personal (or institutional) websites for other potential narrative persuasion studies. We also reviewed the articles cited in several prominent reviews of narrative persuasion literature (e.g., Kreuter et al., 2007; Slater & Rouner, 2002) and used Google Scholar to identify articles that cited these reviews and other highly cited articles identified in previous stages of the process. We screened each article by reading its abstract and, if necessary, method sections to assess whether it met study inclusion criteria.

This initial search process yielded a sample of 161 articles. A secondary evaluation removed remaining articles that did not meet the inclusion criteria, resulting in a final sample of 135 published articles. Some of these articles consisted of more than one experimental study, resulting in a total of 199 discrete studies. Because the research questions focus on how narrative stimuli have been constructed, the stimulus itself was the unit of analysis used for coding. Within the relevant sample, we identified and coded 1,048 stimuli.

After coding, it became clear that stimuli within an experimental study were usually identical on all factors except for the focus of the manipulation. Because the number of stimuli within each study varied greatly across the sample (from two to 40), retaining the stimulus as the unit of analysis would bias results toward the studies using larger numbers of stimuli. This duplication was not as prevalent or extreme across multiple studies within a single published article, which often varied multiple factors. To more accurately capture the level for which narrative stimuli are usually created, we condensed the data to make each experimental study the unit of analysis. For example, one published article comprising three discrete studies, all three with two stimuli, would represent three units of analysis. In such cases, we coded each of the three studies based on the factors present in the stimuli they contain. The final sample therefore consisted of the 199 discrete experimental studies. The complete list of all articles used and a summary of their codes are available in a supplementary table (available at http://www.dropbox.com/s/vhz3wpibahxs7qy/dahlstrom_et_al._2017_supplmental_table.pdf).

Coding Procedure

All data came from the methods section of the published article and/or appendices offering sample stimuli, if present. Most of the following variables included an "other" category to account for stimuli that did not fit our codebook as well as an "unknown" category when the description present was not enough to allow for categorization. To simplify reporting, we do not report these categories when describing each factor.

Coders assessed three message-level factors about each narrative stimulus. *Modality* represents the mode of communication used by the stimulus and was coded as either text, video, audio, or interactive. *Format* represents the external genre that guided the structure of the stimulus. Coders assessed a range of possible formats, which we subsequently combined into six groups: (1) advertising (advertisements, public service announcements, and testimonials), (2) television program (single television program, series of television programs, or selected scene from a television program), (3) film (entire film or selection from a film), (4) book (complete book or selected portion), (5) news, or (6) vague (ambiguously described formats, such as "short story" or "video"). Coders identified the *length* of the stimulus in two variables: first, the unit in which the length was reported—words, lines of text, pages, or minutes—and, second, by the value representing the length of the stimulus in that unit. We converted all text-based units into words assuming 12-point font with standard double spacing in word processing software, which is 250 words per page or 12 words per line of text. Of the stimuli that reported any length of text, 40.9% of them were converted to word counts using these values.

Coders also assessed five content-level factors for each narrative stimulus. *Origin* represents the source from which the narrative content originated. Coders gauged whether the stimulus was (a) a professionally created narrative originally constructed for purposes other than research; (b) a professionally created narrative, but further modified by the researcher; or (c) fully researcher created. *Character unit* represents the scale at which characters are incorporated within the narrative, focusing on (a) a single character, (b) an ensemble of multiple characters, or (c) groups or archetypes. *Point of view* represents the perspective offered of the narrative events and was coded as either (a) first, (b) second, or (c) third person. *Narrator* represents a description of who within the narrative is telling the story. Narrator was coded as (a) the main character, (b) a secondary character, or (c) a detached observer. *Persuasive intent* represents whether the content of the narrative was obviously attempting to persuade the audience. Coders assessed whether each stimulus had obvious persuasive intent.

Coders further assessed four study-design factors. The first three factors captured whether researchers manipulated certain types of variables in the experimental design, each coded as either present or not present. The three types of variables captured included (a) *narrative to nonnarrative* comparisons, (b) manipulations to *variables internal to the narrative*, and (c) manipulations to *variables external to the narrative*. Internal narrative variables represent aspects of the narrative construction itself, such as its length, the vividness of its description, or the type of characters presented. Studies that manipulate internal variables usually contain multiple narrative stimuli that are constructed differently along that internal variable. In contrast, external narrative variables represent aspects of how audiences receive a narrative that is independent of the narrative itself. Examples could include the goals that an individual expects to achieve from reading a narrative, the mood that an individual is in prior to watching a narrative, or even the demographics that define the audience member. Studies that manipulate external variables usually contain a single narrative that is therefore used in different contexts designed to explore this external factor. As the final study-level factor, *participants* represented the identity of the sample used in the experiment. Coders assessed whether the study sample was (a) college students, (b) the general public, or (c) a specifically targeted group within the general public, such as mothers, specific professions, or ideological groups.

Coders assessed one thematic-level factor—health- versus non-health-related topics. We considered a study to be about a *health-related topic* if the narrative discussed a specific health issue (obesity, cancer, etc.), health-related decisions (eating health foods, exercising), or mental health topics (e.g., anxiety, general happiness, and overall well-being). We considered all other narrative content to be non-health-related topics.

To reorganize the data coded at the level of stimulus into a data set organized by experimental study, we calculated the length variable as the average length across all stimuli in the study. We recoded all other factors as dummy variables within each study as either present or not present. This allowed the coding to still capture the differences between stimuli within a study. For instance, a study that manipulated modality by comparing text and video stimuli would be coded as containing both text and video modalities.

Assessment of Intercoder Reliability

We trained two coders to use the codebook and evaluated interrater reliability by comparing the coder's scores on a random sample of 20% of the total sample. We calculated Krippendorff's alpha for these comparisons, with $\alpha > .83$ on all factors.

Results

We explored the distribution of individual variables using simple frequencies. We tested for broader patterns of relationships between variables using different analytic tests depending on the nature of the comparisons, analyzing (a) relationships between continuous variables through bivariate correlations, (b) relationships between continuous and categorical variables through analysis of variance, and (c) relationships between categorical variables through Fisher exact tests. Because most of the variables were categorical, the number of these comparisons exceeded what could be accommodated by a standard Fisher exact test. Therefore, we used Monte Carlo, simulation-based Fisher exact tests with 1 million replications. Finally, to compare categorical relationships between health- and non-health-related categories, we used Cochran-Mantel-Haenszel tests to explore the stratified matched categorical data. This analysis tests whether the relationship between specific categorical variables differs across two samples—in this case between the variables in health-related contexts and non-health-related contexts.[1] Because these broader patterns of relationships represent an exploratory analysis, the large number of comparisons would likely result in numerous Type 1 error false positives. We thus used Bonferroni-Holm corrections, a conservative protection method, to protect against these Type 1 errors (Goeman & Solari, 2010).

Some variables required detailed descriptions from the authors about their stimuli in order to be coded, and some authors did not report this information for key variables. Therefore, the results that follow are based on different proportions of the full sample. We report the percentage of the sample ($N_{\%}$) on which the results for each variable are based. Similarly, because the unit of analysis is the experimental study, the percentages may exceed 100% if studies contained multiple stimuli with more than one category of the measured factors present.

Percentage of Studies on Health- Versus Non-Health-Related Contexts

Narrative studies that focused on a health-related context composed 37.6% of the total sample. The following sections present results from the total sample first, followed by a description of any of the relationships that were significantly different between health- and non-health-related contexts.

Characteristics of Narrative Stimuli

The first set of research questions asked how experimental narrative stimuli have been operationalized relative to the three message-level factors of (RQ1a) modality, (RQ1b) format, and (RQ1c) length. In modality ($N_{\%}$ = 100%), the majority of narrative stimuli was textual (68.8%), with video a

[1] Fisher exact and Cochran-Mantel-Haenszel tests are generally reported with *p* values only.

distant second (24.8%) and audio (1.5%), interactive (3.5%), and other modes (4.0%) composing small proportions.

In format ($N_{\%}$ = 99.5%), the majority of narrative stimuli were described in vague terms with no clear connection to externally valid typologies (47.0%). Advertising was the second most common format (22.3%), with a collection of other, uncategorized formats as the third most prevalent (18.3%). The remaining formats of film (8.5%), news (4.5%), television program (3.5%), and book (3.5%) individually composed small proportions of the reported stimuli.

In length, just over half of the studies reported any length of their stimuli ($N_{\%}$ = 57.5%). The studies that did were then separated into those lengths that could be measured in words (32.6%) and those that could be measured in minutes (17.3%).[2] The number of words ranged from 47 to 6,750, with a median of 625 (SD = 1546.33), and the number of minutes ranged from 1 to 75, with a median of 13.50 (SD = 19.79).

The first research question also asked how experimental narrative stimuli are operationalized relative to the content-level factors of (RQ1d) origin, (RQ1e) character unit (RQ1f), character point of view, (RQ1g) narrator, and (RQ1h) obvious persuasive intent. In origin ($N_{\%}$ = 97.5%), most narrative stimuli were fully created by the researcher (47.5%), followed by a researcher modifying a professionally created narrative (29.2%). Fewer stimuli were professionally created narratives with no alterations (20.8%).

In character unit ($N_{\%}$ = 84.2%), most narrative stimuli focused on a single character (52.0%), with decreasing percentages for ensembles of characters (23.8%) and archetypes (11.4%). In character point of view ($N_{\%}$ = 62.4%) as well as narrator ($N_{\%}$ = 63.9%), fewer studies provided enough detail to permit coding of these variables, leaving a smaller percentage of studies from which these results are based. Among those studies that could be coded, most narrative stimuli portrayed the action of the story from a third-person point of view (43.6%) followed by first-person (20.8%) and second-person perspectives (4.0%). The narrator factor followed a similar pattern, with most narratives telling the story through a detached observer (45.5%), followed by through the main character (21.3%) or through a secondary character (3.5%).

In terms of whether narratives had obvious persuasive intent ($N_{\%}$ = 99.0%), the pool was somewhat split, with most narratives displaying no obvious persuasive intent (66.3%), but a sizable number were overtly persuasive (38.6%).

Comparing these factors between health- and non-health-related contexts (RQ1i) reveals one significantly different distribution. Regarding format ($p < .001$), health-focused narratives were more likely to be modeled after advertising formats and less likely to be described in vague terms, as portrayed in Figure 1.

[2] The remaining 7.6% of studies used units that could not be easily converted into either words or minutes and were dropped from further analysis of length.

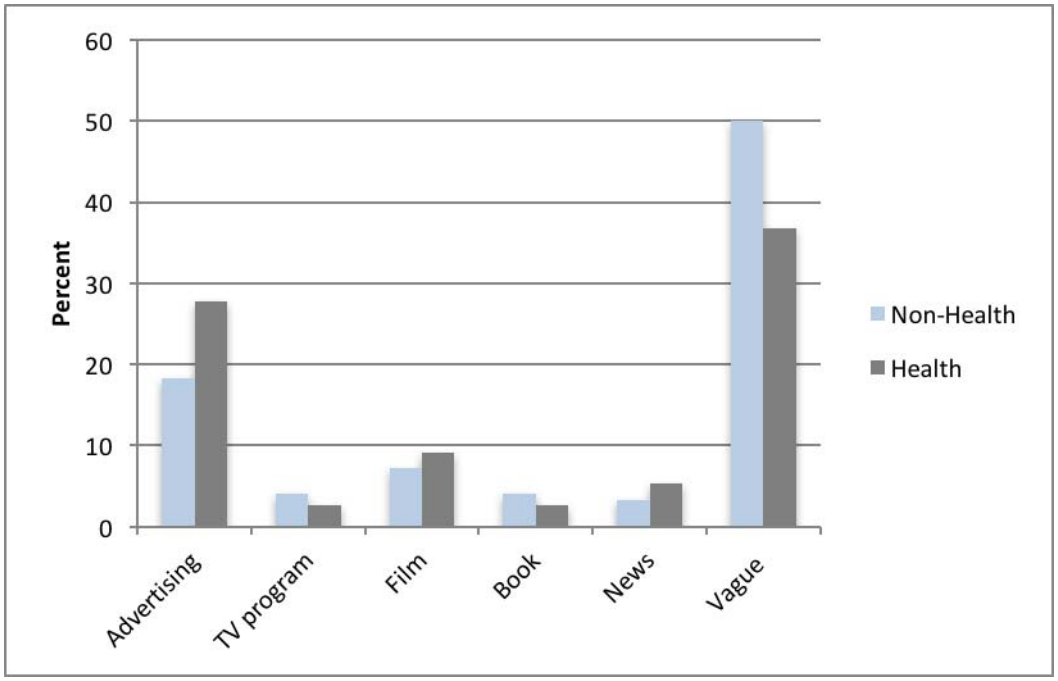

Figure 1. Percentage of studies with a narrative stimulus of differing formats.

Characteristics of Narrative Persuasion Study Designs

The second set of research questions asked what proportion of studies used experimental narrative stimuli to explore questions relative to (RQ2a) narrative versus nonnarrative comparisons, (RQ2b) variables relative to the internal construction of narratives, and (RQ2c) variables relative to the external context of consuming narratives ($N_{\%}$ = 100% for each). Most studies have explored questions related to variables relative to the internal construction of narratives (80.7%), with both variables relative to the external construction of narratives (32.2%) and narrative versus nonnarrative comparisons (27.2%) less common. We also asked which populations are used to collect data for experimental narrative studies (RQ2d, $N_{\%}$ = 100%). College students are the most typical participant pool (70.8%), followed distantly by specific publics (17.3%), the general public (9.9%), and other participants (2.0%).

Comparing these design-level factors between health- and non-health-related contexts (RQ2e) reveals two significantly different distributions. Regarding narrative versus nonnarrative comparisons (p = .003), health-focused narratives are more likely to compare narrative and nonnarrative messages, as portrayed in Figure 2. Regarding participant pools (p < .001), health-focused narratives are less likely to use college students and more likely to use a specific targeted public as participant pools, as portrayed in Figure 3.

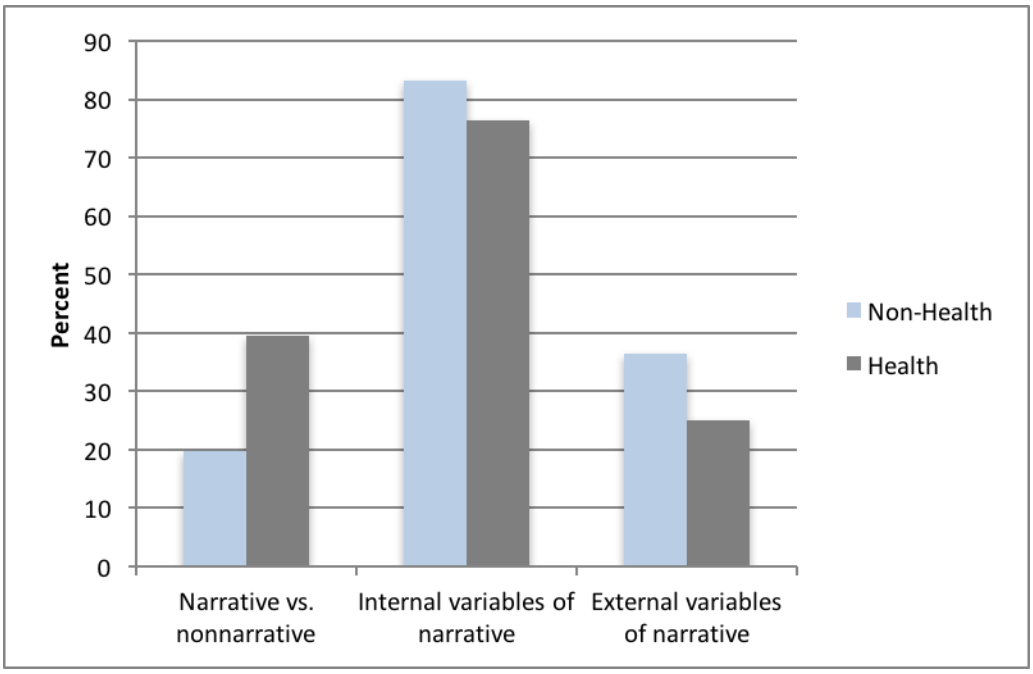

Figure 2. Percentage of studies that explore questions relative to different types of manipulations.

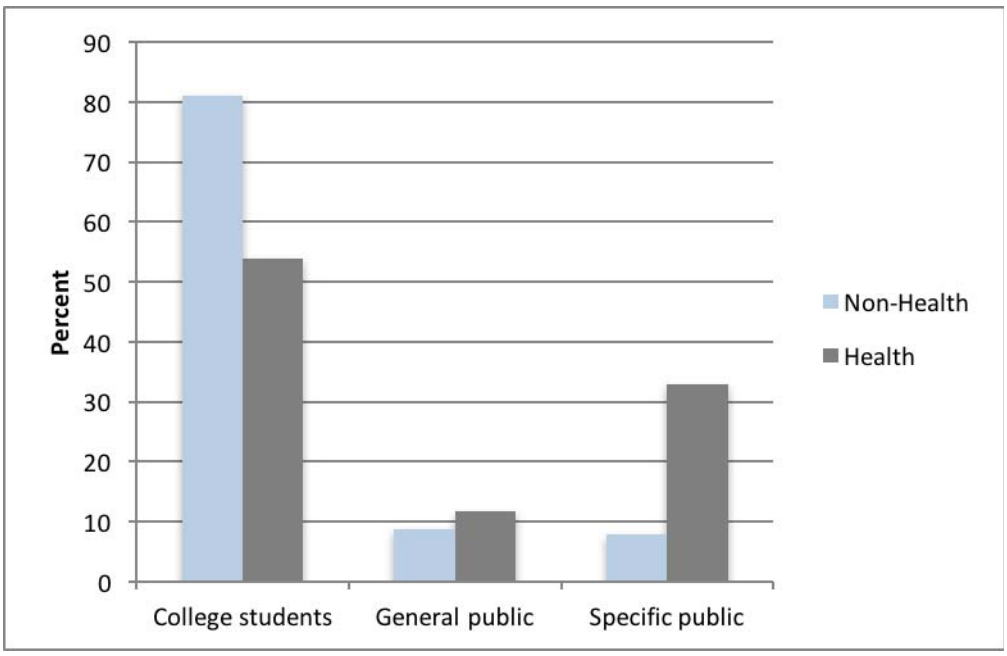

Figure 3. Percentage of studies that use various sources of participant pools.

Trends Over Time

RQ3a asked which of the previous variables exhibit directional trends over time. To explore this question, we coded the year of each published study as a continuous variable and used a series of analysis of variance tests with each of the previous categorical factors, again controlling for Type 1 error with Bonferroni-Holm corrections. Figure 4 provides a plot of the number of articles published by year to capture the growth in experimental narrative research over time within our sample. Also plotted is the subsample of health-related articles for descriptive purposes only—health-related articles were not significantly different based on change over time.

We found one significant trend over time using the entire sample (RQ3a): The number of narrative stimuli using obvious persuasive intent decreased over time, $F(1, 198) = 10.15$, $p = .002$, $\eta_p^2 = .05$. Comparing health- to non-health-related narratives (RQ3b), we found one relevant statistically significant trend over time: Non-health-related narratives exhibited an increase over time in stimuli with a first-person point of view, $F(1, 73) = 12.15$, $p = .001$, $\eta_p^2 = .14$.

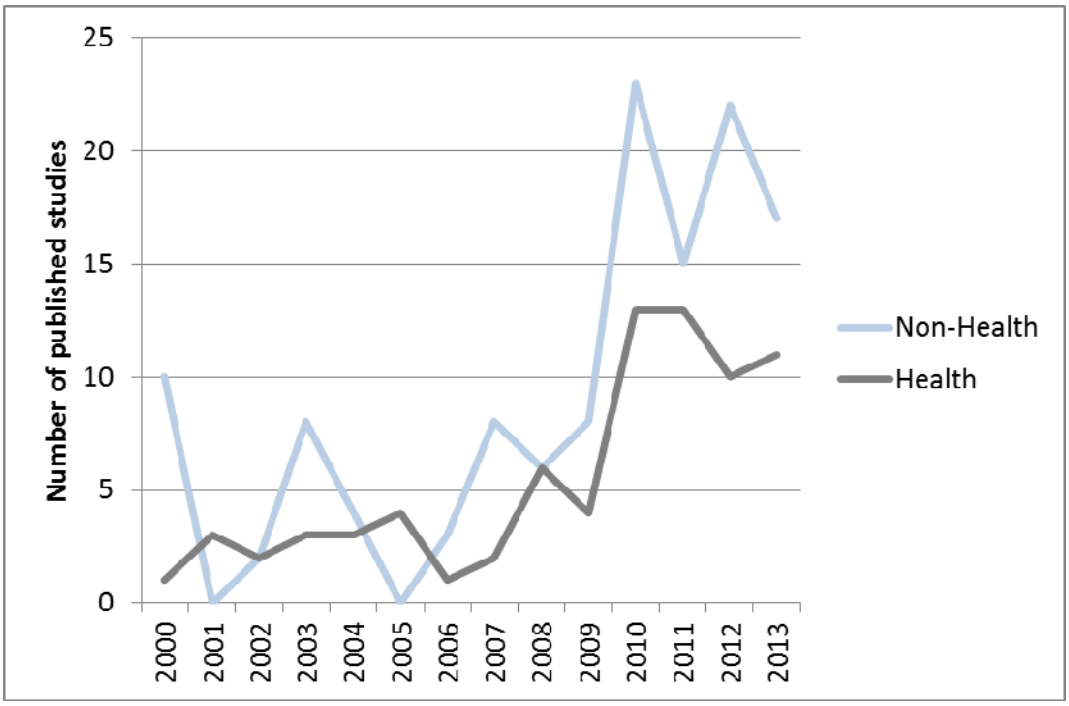

Figure 4. Number of experimental narrative studies published over time.

Broader Patterns of Associations

The final research questions asked what other broader patterns of associations were present in these data to identify study designs and stimulus conceptualizations that often co-occur in experimental narrative studies, both in the complete sample (RQ4a) and when comparing health- and non-health-related contexts (RQ4b).[3]

Narratives created by researchers were more likely to use text, and narratives coming from professional sources were more likely to use video ($p < .001$), and this relationship was significantly more pronounced in health-related narratives ($p < .001$). These broader patterns of association can help reveal how the frequently used "vague" format of narrative stimuli tend to be constructed. These narratives that are not structured around external formats are more likely to be text based ($p < .001$) and are less likely to exhibit obvious persuasive intent ($p < .001$). In health-related contexts, these vague formats also are more likely to use a third-person point of view ($p < .001$).

Additional relationships emerged when comparing health- and non-health-related narratives. In health-related narratives, archetype-focused narratives are more likely to use a third-person point of view ($p < .001$); single-character-focused stimuli are more likely to have obvious persuasive intent ($p < .001$); and studies using targeted publics as participants are more likely to use video and less likely to use text ($p = .002$).

Discussion

Summary and Implications

Research interest in narrative persuasion has increased markedly over the past decade and a half, in terms of both the number of published studies as well as the diversity of fields exploring narrative within their own disciplinary contexts. However, the concept of narrative at the center of all this scholarly work remains a diffusely bounded construct—one that scholars have operationalized as a particular blend of modes, formats, and narrative elements that may or may not be generalizable to the narratives operationalized by other scholars. Within narrative persuasion literature, health contexts represent a substantial subfield, and one guided by a health communication tradition with its own motivations, assumptions, and expected outcomes that do not necessarily guide narrative persuasion as a whole. Therefore, it becomes important to reflect on what conceptualizations and operationalizations of narrative have been used to shape the direction and theorizing of narrative persuasion, how these relationships compare between health- and non-health-related contexts, and what conceptualizations and relationships deserve more attention as research continues.

[3] We have chosen not to report significant relationships that merely served to reinforce coding definitions. For instance, movie formats were more likely to represent video modes, and studies using college student participant pools were less likely to use general public participant pools.

Characteristics of Narrative Stimuli

First looking at narrative persuasion as a whole, results reveal clear patterns in how narratives have been operationalized and subsequently examined in the literature. Although native narratives exist across various modes of communication, over two-thirds of empirical studies focus on text-based narratives. This is perhaps not surprising, because text is often the easiest mode for researchers to use and/or manipulate toward their research goals and may reduce the complexity of information manipulated via audio or visual means. However, it also represents a bias toward a particular mode of communication that may not be representative of the broader corpus of narrative messages.

Likewise, the quality of a narrative has often been hypothesized as an important factor moderating narrative effects, but has been a difficult and complex construct to conceptualize. As a proxy, professionally produced narratives have sometimes been used, presumably assuming that narratives that were created by professionals and vetted through relevant publication or broadcast criteria suggest a narrative of higher quality. We identified roughly an even split between these (presumably) higher-quality narrative stimuli that were created by professionals (although at times modified or edited by researchers) and lower-quality narrative stimuli that were entirely constructed by researchers for the purpose of their particular studies.

Combining these two factors, text-based narratives were more likely to have been researcher-created, whereas video-based narratives were more likely to represent unmodified professional media products. This is again not surprising, because researchers are more likely to have the time and resources to craft a text-based narrative from scratch, whereas it may be more efficient to select an existing film or television program that meets a particular research interest. Taken together, however, this pattern suggests a possible confounding of mode and quality within the literature. Results established from text-based narratives may therefore be colored by an unmeasured reduction in quality relative to results established from video-based narrative stimuli. This connection between mode and origin was even stronger in health-related contexts, suggesting that any confound present is likely amplified within our understanding of how narrative influences health contexts. We speculate that this pattern may be part of the reason why Shen et al.'s (2015) meta-analysis, focused exclusively on health contexts, found that audio and video narratives were more persuasive than print, whereas Braddock and Dillard (2016) found no such difference within the broader narrative persuasion literature.

Examining the depiction of character factors reveals a more diverse construction across the sample. Although single-character focus, third-person point of view, and detached narrator dominate in their respective categories, a substantial number of narrative stimuli also focus on ensembles of characters or archetypes, first-person points of view, or main character narration. The effects of different points of view in particular has attracted more empirical attention in the past few years (e.g., Banerjee & Greene, 2012; Chen, McGlone, & Bell, 2015), and future research should continue to examine the different impacts of these factors, especially in relation to character identification. However, it is important to note that the results presented about these factors are based on just over half of the sample because these are the factors least likely for researchers to report in their method section. Future research should then also

consider explicitly including these factors in the description of their stimuli, especially for non-text-based stimuli that are more difficult to include in an appendix for later analysis.

Turning to stimuli format, studies focusing on health-related contexts operationalized their stimuli using advertising formats more than those from non-health context. This raises a different issue, because most of the major theories explaining narrative persuasion predict that narratives may be more persuasive because they are able to engage the audience away from noticing the actual persuasive intent of the message (although, notably, de Graaf et al., 2016, argued that this feature did not influence impact). However, part of what defines an advertising format is an obvious persuasive intent where most audiences are aware they are being targeted with an attempt to persuade. In this sense, it appears that a substantial proportion of health-related narrative studies represent contexts that do not embody one of the uniquely persuasive characteristics of narrative assumed by theory. Future studies could begin to address this issue by exploring the mechanisms that underlie these types of obviously persuasive narratives.

The discussion thus far has implied the goal for moving the field of narrative persuasion forward is to disentangle these biases and create more internal validity within narrative stimuli. However, another pattern found in the overall analysis was a general lack of structuring narrative stimuli to represent externally valid formats of narratives likely consumed by audiences. This raises a complementary question about the need for external validity within narrative stimuli.

Almost half of the studies in our sample described their narrative stimuli in vague terms unrelated to defined, external formats, such as a "short story" or a "video." Our analysis suggests that these vague formats tend to be text-based and are less likely to exhibit obvious persuasive intent. Within health-related narratives, these vague formats were also more likely to portray events through a third-person point of view. These vague stimuli are measuring a hypothetical type of narrative divorced from the native formats likely to be encountered by audiences. As such, it remains unclear how generalizable results established from these vague formats might be outside of the experimental context. Uses and gratifications theory describes how audiences bring different expectations to different formats of information (Ruggiero, 2000). Understanding narrative effects in real-world environments then requires understanding how the format itself attenuates or amplifies any expected influence of narrative messages.

The question of the need for greater internal versus external validity within narrative persuasion stimuli is not contradictory, but rather complementary, and should be based on the goal of a particular study. Researchers aiming to theoretically explore impacts of particular narrative features will likely gravitate toward advancing internal validity to control the numerous confounds present in professional stimuli that differ on many aspects other than the factor under study. In contrast, researchers aiming to explore generalizable effects on particular audiences will likely gravitate toward advancing external validity to capture the wider relationships within the complex external media environment.

Characteristics of Narrative Study Designs

The analysis reveals that, although the most common experimental design compared multiple narrative stimuli that differed on one or more internal factors, other designs often compared narrative to

nonnarrative stimuli and/or explored external factors of how individuals come to experience a single narrative. This suggests the field as a whole is examining a diverse collection of factors related to how narratives are constructed and consumed, expanding our understanding in multiple domains. However, results reveal biases toward certain design factors between health- and non-health-related contexts.

Health-related contexts were more likely to design studies around narrative versus nonnarrative comparisons. This type of design may be less nuanced with regard to the narrative than studies exploring internal or external narrative factors. The prevalence of this type of design within health-related contexts may therefore be a consequence of the growing awareness of narrative persuasion and an initial co-opting of narrative as a simple exploratory tool into an established health communication context. Health-related contexts were also more likely to use a specific participant pool and less likely to use a convenience sample of college students. This, too, may be co-opted from a health campaign context, where clear audience targets guide expected outcomes and message strategies. Nevertheless, these differences in study characteristics may help to explain divergent findings from systematic reviews and meta-analyses of exclusively health-related studies (de Graaf et al., 2016; Shen et al., 2015) and those focused on the larger narrative persuasion literature (Braddock & Dillard, 2016).

Broader Patterns and a Typology of Health-Related Narrative Studies

The remaining research questions asked how these factors changed over time and about broader patterns of relationships between them. One significant trend among the entire sample revealed a decrease over time of narratives incorporating obvious persuasive intent. Among the non-health-related contexts, a second significant trend was an increase over time of narratives incorporating a first-person point of view. These trends are likely capturing the growth and development of theories underlying entertainment-education and identification over this time period, respectively.

Overlaying broader patterns on the previous results can begin to build a general typology of health-related narrative stimuli. It is important to note that because statistical clustering methods for categorical data are not as well developed as those for continuous data, the following typologies represent a qualitative summary with the acknowledgement that these categories remain speculative at this stage. These emergent health-related groupings might be characterized as follows.

Public Service Announcement Model. Professionally created video content focused on a single character using a first- or third-person point of view. The narrative is obviously persuasive with a clear desired attitudinal or behavioral outcome and is targeted at a specific audience.

Entertainment-Education Model. Professionally created video content of longer length that actively tries to hide its persuasive intent. This model aligns with the evolution of major theories of narrative persuasion that identify mechanisms that keep such intent hidden and below the cognitive availability of the audience.

Theory-Testing Model. A lower quality, researcher-created textual message that is not aligned with any externally valid format. The narrative focuses on a single character using a third-person point of view while attempting to hide its persuasive intent.

Limitations

Although we cast the search broadly to capture as many peer-reviewed articles as possible that fit the study criteria, there are assuredly relevant articles on narrative persuasion that did not make it into our sample. It is hard to predict how these overlooked studies may have impacted the overall results of the content analysis, but we acknowledge the potential for biases based on our search strategies and inclusion criteria.

Likewise, the variables we chose to measure represented a mix of factors identified as theoretically important as well as factors that pragmatically we thought we would be able to capture from published research articles. Other important narrative factors surely exist that we did not measure, and some of our pragmatic measures may turn out not to matter in shaping persuasive impact. We recommend that readers view our study results as empirical documentation of a subset of potentially (but not definitively) important narrative variables.

We did not code for the direction or magnitude of persuasive outcomes because the focus of this study is on the conceptualization, operationalization, and design of variables and studies in the narrative persuasion literature, not a meta-analysis of the strength of persuasive effects. As noted earlier, meta-analyses by themselves may not be able to synthesize a body of research with highly heterogeneous operationalizations of stimuli, comparison groups, research designs, and study populations (Haidich, 2010; Higgins & Green, 2011). As such, although our results can reveal where biases exist within the literature, they cannot calculate the magnitude of that bias on the aggregate understanding of narrative impact.

Conclusion

This study offers a moment of empirical reflection on the current state of research and theorizing about narrative persuasion as a whole and the place of studies focused on health-related topics within the field. In conclusion, we offer the following suggestions to researchers continuing to explore these areas.

Explicitly document the operationalization of narrative stimuli created or selected. Narratives are complex enough communicative structures that there is no standard form. Documenting the choices made in stimulus creation will allow other researchers to align specific findings with similar narrative operationalizations.

Explore and account for complex interactions in reaching conclusions about narrative impact. The variables measured in this study were usually tested alone, such as measuring the effect of point of view on an outcome variable. Yet our results suggest that many of these variables cluster together, especially within health-related contexts. Testing more complex relationships may uncover important interactive

effects, such as exploring whether the effect of point of view is dependent upon the mode of the narrative or whether the effect of persuasive intent is dependent upon the format.

Deconstruct narrative persuasion as a whole to refine efforts to bound when certain theories or mechanisms may be more predictive. Health-related narratives, in particular, seem to cluster around certain typologies. Do certain theories or underlying mechanisms become more predictive for certain combinations of these variables? For instance, the extended elaboration likelihood model may be more predictive when there is no obvious persuasive intent; a valid, external, entertainment format; and longer length. But identification may play a larger role when a narrative uses a single-character unit, a first-person point of view, and a high-quality origin. This type of deconstruction could help health-related narratives in particular better achieve desired outcomes by clarifying when certain theories are more or less likely to apply. We recommend that the next stage of narrative persuasion research move away from grand, unified theorizing that attempts to explain all aspects of narrative across all message formats and contexts, and instead move toward a segmented, but interconnected collection of theories dependent upon particular constructions and contexts of narrative messages.

Consider selecting externally valid formats to serve as contexts for narrative stimuli. Experimental narratives are often created with little relation to formats that audiences experience in normal settings. Although these vague formats play a useful role in the manipulation of specific variables for theoretical purposes, they do not account for the expectations audiences bring to different story formats. It would be useful to document and characterize narrative operationalizations most prevalent in the mediated environment of a target audience and use those formats as the basis for stimulus creation or hypothesis generation.

As the field of narrative persuasion continues to mature, we hope that scholars find this reflection useful in their efforts to address key questions, and potential gaps or biases in our understanding, rather than unknowingly deepen them.

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