Using Narrative Communication as a Tool for Health Behavior Change: A Conceptual, Theoretical, and Empirical Overview

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Narrative is the basic mode of human interaction and a fundamental way of acquiring knowledge. In the rapidly growing field of health communication, narrative approaches are emerging as a promising set of tools for motivating and supporting health-behavior change. This article defines narrative communication and describes the rationale for using it in health-promotion programs, reviews theoretical explanations of narrative effects and research comparing narrative and nonnarrative approaches to persuasion, and makes recommendations for future research needs in narrative health communication.

Keywords: *health communication; narrative communication; behavior change; health promotion*

Health communication has emerged as an important tool for achieving public health objectives (Bernhardt, 2004), including promoting and supporting individual and organizational change and eliminating health disparities (Freimuth & Quinn, 2004). To date, the dominant paradigm in health communication has involved using statistical evidence, probability, and appeals to logic and reason to persuade and motivate people to adopt behavioral changes. Increasingly, however, health communication developers are turning to narrative forms of communication like entertainment education, storytelling, and testimonials to help achieve those same objectives. To better understand narrative communication, accelerate the pace of learning about its effects, and assure appropriate applications in health-promotion programs, this article (a) defines narrative communication, (b) describes the rationale for using it, (c) reviews theoretical explanations of narrative effects, (d) describes the research literature comparing narrative and nonnarrative approaches to persuasion, and (e) makes recommendations for future research needs and potential applications of narrative to health-behavior change.

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What Is Narrative Communication?

There is no one definition of *narrative* universally accepted by researchers. This is reflected in the wide range of ways in which narrative has been operationally defined in studies. The lack of a shared understanding of narrative creates challenges when attempting to synthesize narrative studies and examine the impact of narrative. Drawing on recurring themes and key concepts from others' descriptions of narrative (Baesler & Burgoon, 1994; Black & Bower, 1979; Cole, 1997; Green & Brock, 2000, 2002; Kopfman, Smith, Ah Yun, & Hodges, 1998; Oatley, 2002), we propose the following definition: "A narrative is any cohesive and coherent story with an identifiable beginning, middle, and end that provides information about scene, characters, and conflict; raises unanswered questions or unresolved conflict; and provides resolution."

Applications of narrative to promote changes in health-related behaviors can take many forms. Schank and Berman (2002) identified five specific types of stories, each used for different communication purposes: *official stories* constructed to tell an innocuous version of events or the position of a group, *invented stories* that are made up or fictional, *firsthand experiential stories*, *secondhand stories* of others that we retell, and *culturally common stories* that are generalized and pervasive in a cultural environment. Narrative communication involves the use of any of these types of stories to convey a point to another party or to receive information from another party.

Why Use Narrative Approaches to Promote Health-Behavior Change?

At the simplest level, narrative communication would seem promising for use in health-behavior applications because it is the basic mode of human interaction. In our day-to-day lives, we communicate with one another through narrative and storytelling. Narrative is the primary means through which various influential social and political institutions share information with the public. It is the basis of news reporting in journalism and thus how we learn about the world around us (Woodstock, 2002). Products and services, policies, and programs are all introduced to us and defined using narrative (Gabbay & Leenders, 2003; Hallahan, 1999; Shankar, Elliott, & Goulding, 2001). It is a comfortable and familiar way of giving and receiving information.

There are also epistemological reasons to include narrative approaches in health-behavior interventions. Bruner (1986) argued that there are two fundamentally different ways of knowing, the paradigmatic and the narrative. The *paradigmatic* uses procedures to verify and test for empirical truth. This is a more scientific way of knowing, relying on empirical and experimental methods to discover, describe, or elucidate facts about some domain of interest (Howard, 1991; Polkinghorne, 1988; Wilber, 1998). Traditionally, much of health communication has reflected this paradigmatic approach. In contrast, narrative ways of knowing can include good stories, gripping drama, historical accounts, personal experience, the experience of others, and faith and religion. Schank and Berman (2002) proposed that understanding any situation involves storing and retrieving stories from memory. They suggest that "we construct and tell stories, in part, to teach ourselves what we know and what we think" (Schank & Berman, 2002, p. 294). This narrative mode of learning and knowing may be especially useful when addressing issues involving morality, religion, personal values, meaning in a person's life, complex social relationships, and other issues for which reason and logic have obvious limitations (Howard, 1991; Lutrell, 1989; Polkinghorne, 1988).

Both paradigmatic and narrative ways of knowing are necessary to develop an understanding of the world, and each provides a distinctive way of ordering experience and constructing reality. Neither is inherently more valid than the other. Rather than arguing the merits of each for promoting health-behavior change, it seems more productive to consider for whom and under what circumstances each might be most effective and how and when they might be combined to achieve optimum effects.

THEORETICAL EXPLANATIONS OF NARRATIVE EFFECTS

How and why would narrative communication contribute to changes in behavior and other health-related outcomes? Several theoretical perspectives have been considered, with varying degrees of explanatory utility. Dual-processing models of persuasion—those that propose distinct ways of processing information for people who do and do not have the ability and motivation to cognitively process information—have been applied to the study of narrative effects but with mixed results. However, a recent adaptation of one dual-processing framework has proven to be more useful. Green's transportation-imagery model applies most specifically to narrative and, accordingly, has been tested more than other models. Finally, although models of health-behavior change like social cognitive theory, precaution adoption process model, and theory of reasoned action have been applied and evaluated more extensively in health-behavior research, their application to narrative has been limited. Most research on narrative effects has been conducted in the fields of communication and psychology, not in health-behavior research.

Dual-Processing Models of Persuasion

The elaboration likelihood model (ELM; Petty & Cacioppo, 1986) and heuristic systematic model (HSM; Chaiken, 1980) are dual-processing models commonly used to understand persuasion in situations when the recipients of the message are aware of the persuasive intent (i.e., an outwardly persuasive context). Both models posit two routes of processing—termed *central* and *peripheral* in ELM, *heuristic* and *systematic* in HSM—as well as a framework for when each route will be used (Booth-Butterfield & Welbourne, 2002; Chaiken, Liberman, & Eagly, 1989; Petty & Cacioppo, 1986; Todorov, Chaiken, & Henderson, 2002). In central and systematic processing, recipients actively process, or elaborate on, persuasive messages. This kind of processing usually occurs when issue involvement and/or motivation and ability to process are high. In contrast, peripheral and heuristic processing are based on superficial cues and heuristics associated with persuasive information and often function when motivation and/or ability to process messages are low (Booth-Butterfield & Welbourne, 2002; Chaiken et al., 1989; Petty & Cacioppo, 1986; Todorov et al., 2002). According to dual-processing models, personal involvement in the topic of a narrative will mediate the type of processing used to examine its propositions.

Attempts to use ELM to explain persuasive effects of fictional narratives have yielded mixed results. Prentice, Gerrig, and Bailis (1997) found that false assertions embedded in narratives were accepted as true when the setting was unfamiliar to research participants (a situation of low involvement) but were rejected when the setting was familiar. Acceptance of the false assertions was attributed to a lack of elaboration because of low involvement. However, a replication study conducted by Wheeler,

Green, and Brock (1999) resulted in acceptance of false assertions regardless of story setting, suggesting that issue involvement or personal relevance did not affect the route of narrative processing.

Studies of HSM and narrative have also yielded mixed results. Kopfman et al. (1998) found that compared to narratives, statistical information about organ donation produced greater numbers of total thoughts, positive thoughts, and perceived causal relevance. In contrast, narrative evidence produced a greater number of affective responses. They concluded that statistical information produced more systematic processing, whereas narrative stimulated affective responses that could serve as heuristic cues. Although these findings were interpreted in the context of HSM, the study did not demonstrate that the heuristic cues they identified were, in fact, responsible for heuristic processing of the information.

Green, Garst, and Brock (2004) asserted that although ELM is an appropriate model for examining messages that consist of "arguments, reasoning, claims, and so forth" (Green & Brock, 2002, p. 320), it is less appropriate for explaining the persuasive impact of narrative. They suggest that message processing conforms to ELM when audience members are unengaged, but when they are engaged in a narrative, it is inhibition of counterarguing that is responsible for passive acceptance of persuasive propositions. Slater and Rouner (1996, 2002), in separate studies of statistical versus anecdotal evidence and the effects of entertainment education, also conclude that ELM cannot explain the process of narrative persuasion. Like Green and colleagues, they propose that the degree of engagement in the narrative is responsible for persuasive effects, not just involvement in the topic as is the case in ELM. Consistent with these observations, Chaiken et al. (1989) explained that "HSM assumes that the primary processing goal of message recipients is to assess the validity of the persuasive messages they encounter" (p. 214). Because the processing goal of those receiving narrative is often for enjoyment or entertainment, HSM is not an appropriate model for examining the persuasiveness of narrative effects.

ELM is thought to be best suited to explain responses to "overtly persuasive messages addressing issue- or outcome-relevant topics" (Slater, 2002a, p. 178). The extended elaboration likelihood model (Slater, 2002a) attempts to expand on traditional ELM (Petty & Cacioppo, 1986) to explain a greater range of persuasive situations. Slater (2002a) proposed that a person's processing goals establish the type of processing that will take place, and determinants of processing intensity (e.g., a person's motivation) are responsible for the degree of involvement within each processing type. Types of processing include value-protective processing (to protect previously held values or beliefs), value-affirmative processing (to affirm previously held values or beliefs), outcome-based processing (traditional ELM), didactic processing (based on the perceived importance of or intrinsic information in the message), information scanning (browsing message information peripherally), and hedonic processing (processing of entertainment). There may be more than one goal in processing a message, causing more than one mechanism of processing to be engaged.

In contrast to the traditional ELM, which posits that "engagement with the message is a function of the extent to which the message topic impinges on the recipient's self-interest" (Slater & Rouner, 2002, p. 176), the extended ELM states that engagement with a narrative message depends on "how well the narrative serves the needs and goals of the reader or viewer" (Slater & Rouner, 2002, p. 176). The concept of issue involvement in the traditional ELM is replaced with the concept of absorption/transportation within the context of entertainment narrative (Slater & Rouner, 2002). Plot and narrative

quality may influence engagement in the narrative as well as absorption or transportation into the story. Through engagement in the storyline, individuals come to identify with characters, counterarguing is reduced, and the individuals are more open to persuasive messages contained in the narrative (Green, 2004; Slater, 2002a; Slater & Rouner, 2002).

Although the extended ELM is a relatively new model for persuasive processing, it has been used to explain narrative processing in several studies. Slater and Rouner (1996; Slater, 2002a) examined differences in value-protective and value-affirmative types of processing among individuals exposed to alcohol-education messages. Those who had value-protective processing goals generated more positive responses to the argument when presented with anecdotal narrative evidence, whereas individuals with value-affirmative processing goals generated more positive responses to the argument when presented with statistical evidence. Individuals with value-affirmative goals were assumed to be engaging in central processing as outlined by the traditional ELM. For individuals with value-protective goals, however, the narrative evidence was thought to be engaging enough to inhibit counterarguing, leading them to use more peripheral processing.

Hedonic processing is thought to best explain narrative processing. Within the extended ELM (Slater, 2002a), counterarguing is inhibited, source credibility and argument strength are irrelevant, and involvement in the message is a function of identification with the characters and interest in the story. Hedonic processing shares with transportation-imagery model (Green & Brock, 2002) the idea that inhibition of counterarguing, identification with story characters, and transportation or engagement with the narrative increase the persuasiveness of the narrative (Green & Brock, 2000, 2002; Slater, 2002a).

Transportation-Imagery Model

Application of the transportation-imagery model (Green & Brock, 2000, 2002) is limited to narratives that evoke vivid imagery and that are truly narrative, as opposed to didactic rhetoric. According to the model, narrative persuasion occurs because an individual is "transported" into the narrative world (Green & Brock, 2002). Transportation is defined as "an integrative melding of attention, imagery, and feelings, focused on story events" (Green, 2004, p. 247). It is expected to lead to persuasion because (a) transported individuals are so absorbed in the story that they are less likely to counterargue and therefore come to believe the story propositions; (b) transportation makes the story seem more like actual experience; and (c) transported individuals may identify with or develop strong emotions for the characters of the narrative, making their perspective have greater influence on the beliefs of the reader/listener/viewer (Green, 2004; Green & Brock, 2002; Green et al., 2004). Transportation's role in persuasion may be mediated by participatory responses (Green & Brock, 2002), "mental products of readers' participation in a narrative" (Polichak & Gerrig, 2002, p. 72). For example, if a well-liked character is about to get into a car with a drunk driver or have sex with a shady character, the reader or viewer may mentally call out, "Don't do it!" to warn the character. Transportation itself is influenced by a number of factors, including the quality of the narrative, narrative format, use of suspense, imagery in the narrative, perceived realism of the narrative, ability of reader/viewer/listener to create vivid mental images, and propensity for absorption (Green, 2004; Green & Brock, 2000, 2002).

Both factual and fictional narratives have been shown to change beliefs (Green, 2004; Green & Brock, 2000, 2002; Green et al., 2004; Strange & Leung, 1999), and

transportation is proposed as the mechanism by which persuasion takes place. Green and Brock (2000) found that more transported individuals reported more story-consistent beliefs regardless of the factual status of the narrative. Green (2004) found that transportation was positively correlated with perceived realism of the story and that transportation had a significant effect on story-related beliefs. Green also found that personal experience related to the narrative increased the likelihood an individual would be transported.

Transportation experiments conducted to date have evaluated narrative primarily in written form. It is not clear whether transportation functions in the same way in other media. The model assumes that transportation works for "any recipient of narrative information" (Green & Brock, 2002, p. 323), meaning that it is not limited to written narrative but is also experienced by those who encounter narrative by listening or viewing (Green, 2004; Green & Brock, 2000; Green et al., 2004). The assertion that transportation theory is broadly applicable to all media venues producing narratives is intuitively appealing; however, more research is needed to demonstrate the application of transportation theory to media beyond written text.

MODELS OF HEALTH-BEHAVIOR CHANGE

Behavior-change models provide at least three possible mechanisms through which narratives could influence health-behavior change: behavioral modeling and observational learning, changes in cognitive readiness, and perceived social norms.

Social Cognitive Theory

In Bandura's (1977) social cognitive theory, behavioral modeling is central to observational learning. By observing a model, individuals can learn a behavior and will be more likely to perform it if they see the model reinforced for the behavior in ways that appeal to them. Development of entertainment-education narratives draws heavily on social cognitive theory by using role models for performing the new behavior as well as creating attitude accessibility (e.g., attitudes accessible in appropriate contexts are more likely to predict behavior) and increasing self-efficacy (Slater, 1999, 2002b). For example, Rogers et al. (1999) reported effects of a narrative dramatic radio soap opera *Twende na Wakati* (*Let's Go with the Times*) broadcast in Tanzania with the intent to change family-planning behavior. Their evaluation found that listeners were able to discern positive, negative, and transitional role models and were more likely to identify with the positive role models portrayed in the program.

The use of personal experience narratives to promote observational learning and increase self-efficacy has been demonstrated in the Witness Project, a community- and church-based program to increase mammography and breast self-examination (BSE) among low-income African American women in rural Arkansas (Erwin, Spatz, Stotts, Hollenberg, & Deloney, 1996). In the program, local breast and cervical cancer survivors called "Witness role models" talk about, or "witness," their cancer experiences to small groups of women in churches and other community settings. Through their experiential narratives, survivors may be especially credible role models from which observers can learn. Findings from a pilot study and quasi-experimental trial showed that self-reported use of mammography and BSE increased from pre- to postexposure

among women who attended a Witness session (Erwin et al., 1996; Erwin, Spatz, Stotts, & Hollenberg, 1999). Also, a qualitative evaluation of the program found that the Witness role models were trusted and seen as truthful largely because they were perceived as having similar cultural values (Bailey, Erwin, & Belin, 2000).

Precaution Adoption Process Model

Weinstein's (1988) precaution adoption process model is a cognitive-stage model of preventive behavior but pays special attention to the influence of others' behaviors and opinions on a person's perceived vulnerability and preventive responses. In studies based on the model, individuals who think a problem is likely in their community know people that are concerned about the problem and someone who has taken precautionary action to avoid the problem are more likely to think about the problem, decide to take preventive action themselves, and make plans to do so (Weinstein & Sandman, 1992). The precaution adoption process model suggests that exposure to narrative characters that are perceived by the audience to be similar to themselves may move participants closer to taking action for a particular health behavior.

Theory of Reasoned Action

In the theory of reasoned action (Ajzen & Fishbein, 1980), beliefs that others—even strangers—approve of a behavior (*normative beliefs*) can influence a person's intent to engage in that behavior. This is especially true if the "others" are seen as important, valued, or credible. Persuasive messages that shape not only beliefs about a topic (*behavioral beliefs*) but also beliefs about what important individuals and groups think about the topic and how they behave toward it are most likely to lead to attitude and behavior change (Zimbardo & Leippe, 1991). Narratives told by individuals perceived as similar to the audience or with whom the audience identifies may help position health behaviors as normative. Findings from a national evaluation of 37 AIDS prevention projects provide some support for this expectation. Janz et al. (1996) found that small-group discussions in which community members shared their personal experiences, learned from each other, and built group norms were rated as the most effective intervention strategy and were the most commonly used intervention approach across the 37 different projects. The use of personal-experience narratives by members of the community of interest helped intervention participants identify with credible sources and positioned AIDS-preventive behaviors as appropriate and normative.

COMPARING NARRATIVE AND NONNARRATIVE COMMUNICATION

Research examining effects of narrative on persuasion has been somewhat limited and sufficiently varied in focus as to make generalizations about findings difficult. This literature includes studies of cognitive processing of narratives and narrative comprehension (Bower & Morrow, 1990; Graesser, Singer, & Trabasso, 1994; Kintsch, 1992; Magliano, Zwaan, & Graesser, 1999; Morrow, Bower, & Greenspan, 1989; Morrow, Greenspan, & Bower, 1987), narrative structure (Graesser, Golding, & Long, 1996; Graesser, Olde, & Klettke, 2002), health benefits for storytellers (Koithan, 1994; Pennebaker, 2000; Rosenthal, 2003; Smyth, Stone, Hurewitz, & Kaell, 1999), and applications of narrative

as a means of persuasion (Cole, 1997; Slater, 2002b). Here we concentrate on studies comparing persuasive effects of narrative and nonnarrative approaches.

There have been a number of studies, reviews, and meta-analyses examining the impact of narrative versus statistical evidence on persuasion. Findings to date have been equivocal in large part because of the varying definitions of narrative used in these studies. In addition, the methods and measures used for evaluating the persuasiveness of each type of evidence often vary considerably between studies. Among the review articles, Taylor and Thompson (1982) examined 7 studies that compared statistical and narrative evidence and found that in 6 of those studies, case-history presentation was more persuasive than statistical evidence. Baesler and Burgoon (1994) examined 19 studies comparing statistical and narrative evidence and found that 13 studies reported narrative evidence as being more persuasive, 2 studies found statistical evidence to be more persuasive, and 4 studies found no difference between statistical and narrative evidence. Allen and Preiss (1997) conducted a meta-analysis across 16 studies and concluded that statistical information is more persuasive than narrative evidence. Because of selection criteria, Allen and Preiss specifically excluded a number of studies examined by Baesler and Burgoon in their review.

Several studies exploring communication about health behaviors illustrate these findings. Slater and Rouner (1996) found that in processing alcohol-education messages, college students rated statistical evidence as more persuasive when the message was congruent with their values and narrative evidence as more persuasive when the message was incongruent with their values. Greene and Brinn (2003) examined the effectiveness of narrative versus statistical evidence in persuading college women against tanning-bed usage. They found no difference between the two evidence types in mental effort expended or reflections on the message but found that narrative had greater ratings of realism and statistical evidence had greater ratings of information value. Statistical evidence resulted in decreased tanning-bed usage 1 month after the intervention, whereas narrative evidence did not.

Slater, Buller, Waters, Archibeque, and LeBlanc (2003) examined the effects of different types of narrative evidence (conversational and testimonial) versus didactic evidence (in the form of a news article) in providing nutrition information. They found all forms of evidence to be equal on ratings of clarity, perceived usefulness, and self-efficacy, but the conversational form of narrative evidence was rated as more believable. Findings also provided some evidence for a moderating effect of identification with message characters on the relationship between message type and believability, clarity, and perceived utility of the information. Participants who identified strongly with characters perceived the message as more useful, as clearer, and as more believable.

We found no research examining whether a combination of narrative and statistical evidence was more effective than either narrative or statistical evidence alone. Research in entertainment-education suggests the addition of an epilogue recapping the persuasive message (i.e., a nonnarrative summary to a narrative communication) may be necessary for the program to be successful (Slater, 2002b). This suggests that a combination of narrative and statistical evidence may be more effective than either type alone. We assert that narrative communication holds promise to be an effective tool for health-behavior change and that the relevant question is not whether narrative communication is superior to traditional statistical or rhetorical communication but, rather, how each type of communication functions, under what conditions each is most effective, and how they might be combined to maximize communication impact.

RECOMMENDATIONS FOR THEORY DEVELOPMENT AND FUTURE RESEARCH

Study findings such as those described previously suggest that audiences may view narrative communication as more personal, realistic, believable, and memorable than nonnarrative forms of communication. Narrative communication also appears to be processed differently than nonnarrative, and traditional theories of persuasion may not adequately account for narrative effects (see above discussion of dual-processing models). When audience members become immersed in a narrative, they are less likely to counterargue against its key messages, and when they connect to characters in the narrative, these characters may have greater influence on the audience members' attitudes and beliefs.

But the evidence base for using narrative communication is still emerging. It remains relatively small in size, has yielded mixed results, and only a handful of studies have examined health-behavior outcomes in non-student samples. Clearly, much is left to learn about using narrative communication to promote adoption or maintenance of health behaviors. One way to advance our understanding is to integrate theories of health behavior and communication to better inform the design of health-behavior-change interventions. As an example, this article has reported or introduced several theory-related propositions about narrative including: (a) Narratives help overcome resistance to a message by reducing counterarguing, (b) narratives facilitate observational learning, and (c) identification with characters in a narrative influences perceptions of group and/or personal susceptibility as well as social norms. Although this is by no means a comprehensive list and lacks full empirical validation, its implications for practice should be clear. Program developers who have identified resistant attitudes, lack of modeling, low levels of perceived vulnerability, or unsupportive social norms as key determinants of a given behavior should consider how narrative approaches to communication might be integrated into intervention plans. Developing cross-disciplinary integrative models of communication and behavior change holds great promise for advancing health education practice and should be a priority for those in both fields.

A second way to build the knowledge base is to undertake a systematic program of research exploring narrative communication and health behavior. One approach to organizing such research would be to identify gaps in the knowledge base within each of the basic components of communication: source, message, channel, and receiver (Lasswell, 1948).

Source

Transportation-imagery theory and the extended ELM both assert that identification with characters in a narrative facilitates transportation and absorption into the story, which in turn leads to persuasion. In entertainment education, characters are developed to be similar to the intended audience to promote greater identification with those characters (Slater, 2002b). Traditional persuasion research also suggests that perceived similarity between the source and receiver of a persuasive message and perceived expertise of the source on the persuasive topic generally facilitate persuasion (Alpert & Anderson, 1973; Rogers & Bhowmik, 1970; Simons, Berkowitz, & Moyer, 1970; E. J. Wilson & Sherrell, 1993). Understanding the extent to which source judgments such as similarity, expertise, and trustworthiness influence effects of narrative communication, the mechanisms through which narrative has these effects, and how the effects might vary by

channel of narrative delivery (see section below) would be very beneficial for designers of communication-based programs that promote health behaviors. For example, in many health-communication programs, it may be possible to vary the narrative source or attributes of key characters in a narrative to appeal to different receivers based on preferences that are either explicitly stated by the receiver or inferred by program developers.

Message

There are many dimensions on which narrative stories or "messages" might vary, including whether they are factual versus fictional, told in first versus third person, take different narrative forms (e.g., conversations, dramas), are more or less interactive, and provide greater or lesser amounts of narrative (i.e., dose). Understanding the effects of these variations may influence the process of selecting or developing narratives for health-behavior interventions. For example, it is not currently known whether there is a threshold, or dose, of narrative below which a communication cannot be expected to have narrative effects. Some studies examining mechanisms of narrative persuasion have tested rather lengthy narratives, such as Green and Brock's (2000) use of a multiple-page story, Green's (2004) use of a 3800-word narrative, or Rogers et al.'s (1999) use of a radio soap-opera broadcast during several months. In contrast, the narratives evaluated in most studies comparing narrative and statistical evidence are typically much shorter (Baesler & Burgoon, 1994; Dickson, 1982; Greene & Brinn, 2003; Kopfman et al., 1998; Slater et al., 2003; Slater & Rouner, 1996). This could help explain the mixed findings to date in these studies. Future research should directly test effects of length and duration on narrative processing and persuasion.

It is possible that the perspective through which a narrative is told also influences its persuasiveness. Although studies of written narratives have examined first-person (Dickson, 1982; Slater & Rouner, 1996) and third-person narratives (Baesler & Burgoon, 1994; Greene & Brinn, 2003; Kopfman et al., 1998), studies comparing the two as a possible moderator of narrative persuasion are lacking. It seems possible, for example, that some combinations of topic and source (e.g., cancer survivors) might lend themselves better to a first- versus third-person narrative and vice versa for other combinations. Likewise, it may be important to better understand differences in the effects of factual versus fictional narratives. Fictional narratives have been found to change beliefs (Green & Brock, 2000; Prentice et al., 1997; Strange & Leung, 1999; Wheeler et al., 1999), and transportation has been shown to moderate belief change in both fictional and nonfictional narrative (Green & Brock, 2000; Strange & Leung, 1999). Do these findings hold true for health-related narratives and/or narratives presented through nonprint channels? The success of entertainment-education soap operas (Bouman, Maas, & Kok, 1998; Rogers et al., 1999; Slater, 2002b; Storey, Boulay, Karki, Heckert, & Karmacharya, 1999) would seem to support this conclusion, but direct comparisons have not been made.

Channel

Narratives may be communicated through a wide range of media including print, television, video, radio, and computer. The effects of communication channel on persuasion are complex and often mediated by source, message, and receiver factors (Andreoli & Worchel, 1978; Booth-Butterfield & Gutowski, 1993; Chaiken & Eagly,

1983; Worchel, Andreoli, & Eason, 1978). It is possible that different media affect not only the way narratives are processed but also their effectiveness. For example, some studies have shown that visual media accentuate the importance of source attributes (Graber, 1990; Pfau, Holbert, Zubric, Pasha, & Lin, 2000; Sparks, Areni, & Cox, 1998). This suggests that character identification—a key element of transportation—might be facilitated in video-based narrative. Although the transportation-imagery theory (Green & Brock, 2000, 2002) asserts that transportation functions in the same way across different media, most of the research on transportation has been conducted with written text. Entertainment education, which has been delivered via multiple media including radio (Rogers et al., 1999; Storey et al., 1999; Vaughan & Rogers, 2000) and television (Bouman et al., 1998; Glik et al., 1998; Montgomery, 1993; K. E. Wilson & Beck, 2002), has not always been rigorously evaluated. Future research could explore whether certain forms of narrative are more effective when delivered through certain channels and whether there are differences in the way that narratives are processed in each media.

Receiver (Audience)

Attributes of the intended audience may also influence effects of narrative communication. For example, research on narrative transportation has demonstrated that a person's ability to create vivid mental images and his or her propensity for absorption can facilitate narrative persuasion (Green, 2004; Green & Brock, 2000, 2002). At a population level, shared group characteristics like culture might also affect narrative. Howard (1991) has suggested that every culture contains several dominant stories that are understood by those within the culture and drawn on to make meaning out of different situations under different circumstances.

IMPLICATIONS FOR PRACTICE

Although theory development and research such as that described previously is needed to fill gaps in the evidence base for narrative communication, practitioners can and should continue to apply narrative in ways supported by the best available theoretical and empirical evidence. Here we describe selected applications that illustrate different settings, objectives, and modes of narrative delivery. The examples provided are not intended to be exhaustive but, rather, to illustrate some common ways that narratives have and can be applied to promote behavior change.

Using Narrative for Simulation Exercises

Using narrative to simulate real-life situations, Cole (1997) used interactive written narratives as simulation exercises to teach problem-solving and decision-making skills to farm workers and coal miners. Workers read a written narrative of a true emergency situation and throughout the story were presented with emergency scenarios. At each critical juncture, the reader is forced to make a decision about how he or she would act in that situation through selection of multiple-choice responses. If they make the safe decision, they proceed through the narrative; if they make a decision with negative consequences, they are directed to rethink the alternatives and make another choice. This application illustrates that narrative can create realistic scenarios in which individuals can rehearse decisions and actions that they may need to take later in real-life situations.

Such scenarios could be useful for teaching a wide range of behaviors, not just those related to injury prevention.

Using Narrative to Model Health Behaviors

HIV/AIDS prevention interventions from five cities participating in the CDC AIDS community demonstration projects used role-model stories to illustrate how five different HIV-risk-reduction strategies were enacted in real-life situations (Fishbein, Higgins, Rietmeijer, & Wolitski, 1999). Stories were collected from community members and distributed by members to their community peers. Because the projects also increased availability of condoms and bleach kits and provided basic AIDS information, the success of the program could not be directly attributed to the narrative part of the intervention. However, the project illustrates how stories can model specific behaviors and consequences and also how narrative can be effectively incorporated into broader community-based health interventions. The aforementioned Witness Project also illustrates this application of narrative, having cancer survivors share their stories in churches and community settings to promote screening (Bailey, et al., 2000; Erwin et al., 1996; Erwin et al., 1999).

Using Narrative to Reach Population Subgroups

Narrative approaches may be especially effective when communicating with populations that have a strong oral tradition. For example, much of what early American Blacks learned of a positive nature about their culture, their contributions to human civilization, and strategies for surviving in a White society was handed down in stories (Martin, 1995). Henry Louis Gates, Jr. asserted, "Telling ourselves our own stories . . . has as much as any single factor been responsible for the survival of African Americans and their culture" (Gates, 1989, p. 17). Building on this tradition, ongoing research supported by the National Cancer Institute's Centers of Excellence in Cancer Communication Research initiative is exploring the effects of narratives in promoting use of mammography. This project has collected more than 50 hours of personal-experience narratives from African American breast cancer survivors. These stories are being systematically evaluated to identify attributes of both the survivor and her story that affect knowledge, motivation, and behavior, and selected stories will be included in a narrative intervention to increase women's use of mammography.

Informational approaches to health-behavior change can be effective, but they also have clear limitations. To be sure, an overreliance on information alone or persuasion for health-behavior change is risky. Motivational messages encouraging behavior change in the absence of building personal skills and confidence or assuring social and environmental conditions that support and reinforce the desired change can lead to frustration and ultimately rejection of current and future persuasion attempts. Reducing the likelihood of audience members dismissing health messages is believed to be one potential advantage of narrative communication. Whereas overtly persuasive messages have a clear intent that is usually easily discernable (and perhaps also quickly rejected by some for this same reason), many narrative approaches are engaging in and of themselves, making the health information they contain not only less objectionable but also more contextual and meaningful. In addition, given health educators' comparatively limited budgets relative to commercial advertisers and marketers, it is often difficult for persuasive health messages to compete in reach, repetition, and consumer attention in a vast marketplace of health and health-related information. Despite these limitations, information, communication, and persuasion should and will remain an important part

of the health educator's arsenal. Maximizing the effects of this approach will require not only combining it with other, noncommunication interventions but also in making strategic choices about the appropriate use of narrative and nonnarrative forms of communication.

Within the rapidly growing field of health communication, narrative approaches are emerging as a promising set of tools for motivating and supporting health-behavior change. However, much remains to be learned about how to best use narrative. As our knowledge grows, narrative will likely become a welcome addition to more quantitative approaches that have dominated health communication to date, and together the two may have synergistic effects that enhance the impact of health promotion programs.

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