A Model of Effects of Narrative as Culture-Centric Health Promotion

Article *in* Journal of Health Communication · March 2010

DOI: 10.1080/10810730903528017 · Source: PubMed

2 authors:

Linda K Larkey
Arizona State University
176 PUBLICATIONS **5,742** CITATIONS

SEE PROFILE

Michael L Hecht
REAL Prevention LLC
197 PUBLICATIONS **8,502** CITATIONS

SEE PROFILE

Journal of Health Communication, 15:114–135, 2010

ISSN: 1081-0730 print/1087-0415 online
DOI: 10.1080/10810730903528017

Routledge
Taylor & Francis Group

A Model of Effects of Narrative as Culture-Centric Health Promotion

LINDA K. LARKEY

College of Nursing and Health Innovation, Arizona State University, Phoenix, Arizona, USA, and Scottsdale Healthcare Hospital, Scottsdale, Arizona, USA

MICHAEL HECHT

Department of Communication Arts and Sciences, Penn State University, University Park, Pennsylvania, USA

Health promotion interventions designed for specific cultural groups often are designed to address cultural values through culturally adapted messages. Recent trends in health promotion incorporate narrative theory, locating culture within the narratives of cultural members, and suggesting that narrative may provide a central, grounded medium for expressing and shaping health behavior. We suggest that culturally grounded narratives are a natural choice for identifying and shaping health messages for specific audiences. A Model of Culture-Centric Narratives in Health Promotion is proposed based on previous persuasion and health promotion research. This model may be used to guide the development and testing of the narrative characteristics and psychosocial mediators of behavior change in a broad range of health interventions. Implications, boundaries, and limitations of the model are discussed.

> As one elder stated in a study of cervical cancer prevention among the Yakama Indian women of the Wa'Shat Longhouse, "I tell a story, and if it applies and you are ready to hear the message, you will be able to take it with you and make it your own" (Strickland, Squeoch, & Chrisman, 1999).

Health disparities have been identified as a priority concern by the Institute of Medicine (2002) accompanied by a call to field test health strategies that adapt messages to cultural contexts. Persistent gaps in health status between and among mainstream population and cultural groups within the United States have generated a call to

This article is partially based on concepts developed and tested in projects funded by American Cancer Society, *Juntos en la Salud: Cancer Prevention and Screening for Latinas* (#TURSG-03-080-01-PBP–PI: Larkey) National Cancer Institute, *Storytelling for Colorectal Health among Latinos* (RO1CA118663-02—PI: Larkey), and the National Institute on Drug Abuse, *Drug Resistance Strategies Minority Project* (R01 DA005629—PI: Hecht).

Many thanks to Deborah Helitzer, Matthew Kreuter, and Michael Slater for their comments and conceptual contributions to earlier drafts of the article.

Address correspondence to Dr. Linda K. Larkey, College of Nursing and Healthcare Innovation, Arizona State University, 500 N. 3rd Street, Phoenix, AZ 85004, USA. E-mail: larkeylite@msn.com

address a complex set of structural, sociocultural, and psychological factors. In particular, these factors that influence health disparities among ethnic minority populations have become a major focus of much of the field of health promotion (Airhihenbuwa, 2006).

It is argued that interventions designed to improve health-related behaviors should lean on an understanding of the existing culture and incorporate culturally relevant content into health messages (Castro, Barrera, & Martinez, 2004; Hecht & Krieger, 2006; Kreuter, Lukwago, Bucholtz, Clark, & Sanders-Thompson, 2003; Resnicow, Baranowski, Ahluwalia, & Braithwaite, 1999). Many remarkable programs of health promotion have done just that, both nationally and internationally, taking an ethnographic inventory regarding health behaviors and developing educational interventions that take into account cultural factors that function as barriers and facilitators, or incorporating cultural content to make messages more relevant (Botvin, Dusenbury, Baker, James-Ortiz, & Kerner, 1989; Botvin, Dusenbury, Baker, James-Ortiz, Botvin, & Kerner, 1992; Hecht & Miller-Day, 2009; Komro et al., 2004; Storey, Boulay, Karki, Heckert, & Karmacharya, 1999), though far fewer have tested whether such approaches are indeed more effective than programs that ignore culture (Kreuter et al., 2005).

The purpose of this paper is to describe a model suggesting how narratives shared from members of the group regarding experiences with a particular health behavior may ground health promotion programs so that they are more fully culturally representative and meaningful. We suggest that a narrative approach is one of the methods for capturing the richness of cultural elements that most effectively reaches minds and hearts for health behavior change.

We define culture as code, conversation, and community (Hecht, Jackson, & Ribeau, 2003; Philipsen, 1987). Code denotes the aspect of culture that carries a system of rules and meanings. Conversation describes culture as a way of interacting, while community denotes membership, all of which can be represented in shared narratives of a cultural group.

Although the terms ''culturally appropriate'' and ''culturally sensitive'' are more commonly used to describe messages that are developed using either cultural additions to existing programs or adapting messages for cultural suitability, we choose another term to differentiate and go beyond sensitivity or appropriateness goals. The term ''culture-centric'' is proposed to emphasize the centrality of the cultural viewpoint, describing within-culture narrative messages reflecting valid understanding and communicating cultural essence with fidelity. Narratives from cultural representatives are the medium through which this centrality is tapped, reproduced, and shared. Cultural grounding is the process of identifying cultural texts and developing culture-centric messages by and for a cultural group.

Narrative methods of developing culture-centric health promotion programs have been described that embed cultural knowledge in both the process and the content of the communication (Hecht & Krieger, 2006; Hecht & Miller-Day, 2009; Komro et al., 2004). Others, on a more macro level, suggest redefining cultural health promotion as building community structure and agency (Dutta, 2008). All of these emphasize narrative or stories as a key medium for facilitating change. Only rarely, however, are the narrative or cultural factors evaluated or tested for effects. Generally, programs are evaluated for their overall effectiveness in achieving behavioral change, but the ways that the cultural grounding ''works'' are not tested, mostly because we have not applied theories to guide our understanding of the

mediators affecting behavior change using cultural narrative approaches. What we propose to contribute is a model that provides a framework for testable relationships among the factors likely to matter most in using narratives to create successful, culture-centric health promotion messages.

How Health Promotion Programs Adapt to Cultural Differences

Health promotion programs often address cultural differences by adapting mainstream messages to fit different audiences. At the most rudimentary level, already-known or presumed values of the targeted cultural group are incorporated into messages (such as taking into account familismo of Latino culture) by presenting elements that reflect such values (e.g., images of families interacting; Castro & Hernández-Alarcon, 2002). A recent review of research on injury prevention interventions indicates that these simple reproductions of reified cultural values are more commonly used in developing messages than more in-depth culturally grounded, developmental approaches (Parks & Kreuter, 2007).

Using a more sophisticated approach, in-depth cultural group adaptations are made by conducting formative research (or from a communication perspective, ''audience research'') of a potential target audience and developing a more detailed and specific understanding of a groups' view of a particular health behavior or health messages. Often, results of these analyses are used to adapt content of programs, first by identifying cultural values related to the health behavior, then incorporating messages reflecting those values into a health promotion program. These sorts of programs have shown promise for achieving results. In this approach, cultural values are represented in a variety of ways, such as using messages that were directly suggested as important by target group members in the formative phases (e.g., discussions of religiosity or racial pride of African Americans; Komro et al., 2004; Kreuter et al., 2005), or adapting stories drawn from the myths of a particular culture to communicate contemporary values within a curriculum (Botvin, Schinke, Epstein, & Diaz, 1994; Botvin, Schinke, Epstein, Diaz, & Botvin, 1995).

The alternative, culture-centric approach that we present here starts with the culture to create messages rather than adding it to existing messages. Here, narratives are obtained and shaped into messages that keep much of the original content and form intact, with the intent to represent the culture and give voice to those who have participated in creating the content by sharing their stories. Members of the group even may be involved in message construction. For example, the keepin' it REAL substance use prevention curriculum was grounded in the cultures rather than derived from them (Hecht & Krieger, 2006; Hecht & Miller-Day, 2007). Relying on cultural narratives, the curriculum was created from the experiences of group members rather than adapted to them, with central messages produced by other members of the group (Hecht & Miller-Day, 2009). Testing versions that were culture-specifically targeted as well as a combined multicultural curriculum proved efficacious in a clinical trial (Hecht, Graham, & Elek, 2006; Hecht et al., 2003).

Using similar methods of representing cultural members' accounts of experiences in the development process, Burhansstippanov and colleagues (2003; Burhansstipanov, Beamis, & Dignan, 2002) successfully have incorporated cultural narratives on values such as ''respect'' to address behaviors considered to be particularly sensitive issues with Native Americans, such as enrollment in clinical trials or genetic testing. Identifying how these emerged as sensitive topics, understanding the

need for respectful approaches, and determining how to develop respectful approaches was accomplished by engaging cultural group members not only in the development of messages, but also in the design and implementation aspects of the research.

These encouraging results indicate that there may be additional value in grounding messages from within members' points of view. Grounding implies that the messages have been identified from narratives culled from members of the target population and then shaped into a narrative presentation that realistically represents the cultural group. These culture-centric programs all lean heavily on a narrative style of data collection that engages cultural members and then develops narrative messages that reflect culture in the language of the target group. This style of health message development enlists the experiences of group members through the stories describing their social realities. Narrative interviews, in particular, are used to invoke a storytelling style rather than didactic discourse by a collaborative orientation. Rather than identify and name cultural factors and then attempt to represent those factors in messages, these programs use the narratives from cultural members to learn, create, and represent culture from within the perspective and language of the group. In this way, emic or within-group cultural knowledge (Headland, Pike, & Harris, 1990) is embedded in the narratives without necessarily extracting and naming the values, but rather representing them naturalistically. Narrative, then, is a strong candidate as a foundation for creating culture-centric messages in health promotion.

Even so, to simply suggest that good formative research and culturally reflective messages are enough to achieve effects is an oversimplification of the approach. Narratives incorporate many factors that are not only culturally reflective, but also inherently may represent what is considered to be interesting, appealing, even dramatic through the content of stories as well as the narrative form in which they are communicated. Thus, narrative is both content (e.g., a story) and a form (e.g., a way of communicating). Moreover, evoking spontaneous narratives on broadly construed health topics also may provide direction and insight that acknowledges structural access issues and power differentials that may best be addressed from the world view of cultural group members (Dutta, 2008). While some recent work has described potential effects or benefits of narrative communication (Kreuter et al., 2007), much less is known about how (i.e., causal pathways) such effects might be achieved. We suggest that our understanding of how culture-centric, narrative-based health promotion may achieve effects could be improved by developing and testing a model that directly defines potential mediating factors, both culturally specific and more general psychosocial effects.

Narrative Theory as a Basis for Culture-Centric Health Promotion

Narrative theory includes a broad net of conceptual propositions and concepts drawn from different disciplines that suggests how culture is expressed. One approach focuses on the relationship between cultural identity and social experience. For example, Hecht's communication theory of identity argues that communication enacts or performs identity rather than merely expressing it (Hecht, Warren, Jung, & Krieger, 2004). Content and delivery of narratives (including conversation, stories, written words, etc.) enact identities and weave a set of beliefs, norms, and values that

reflect the culture within which they reside. So, the theory itself is centered in cultural knowledge and practices, suggesting a reversal in the way we think about how health behavior is shaped through the assertion that cultural narratives intrinsically shape behavior, including health behavior (rather than being just another variable that modifies behavior).

First we will discuss how narrative theory has evolved into the set of precepts that provide a foundation for health promotion in cultural contexts. Then a model of how this could be applied in health promotion is discussed, first by presenting the proposed model, and then discussing some of the challenges these ideas evoke, and how the model might be tested.

Narrative Theory: Multidisciplinary Roots

The conceptual framework around narrative emerged from a number of fields, including anthropology, communication, and psychology, resting upon the central claim that much of our social construction is through narrative exchange. This is true in at least three senses; narrative is one of the primary means that humans use to establish identity (McAdams, 1993), organize their thoughts, and communicate, including conversation, nonverbal responses, and more elaborate sequencing such as stories (Hoshmand, 2005).

Narrative theory emerging through the lens of psychology promotes a novel, developmental view of the self and identity. Important to this line of work is the claim that narratives in individual and social contexts (even in media) are integral to the development of self-concept (McAdams, 1993; McLean, 2005). In this view, the locus of narrative is in the selective but cohesive memory and formation of self-identity of an individual (McAdams, 1993). This view is central to studies that examine the potential of narratives to shape attitudes and beliefs about self (including what one feels one should do and is capable/empowered to do relative to health or any other context) and, in turn, increase the likelihood that behavior will be consistent with those beliefs about self.

Narrative also is a way of thinking or knowing. In communication theory, Fisher (1984) suggests that narrative is central to the human experience and that our natural affinity for storytelling serves to make sense of our lives embedded in the social experience of shared narratives. Similarly, social constructionists view narrative as shaping culture and cultural identity, thereby creating cultural meaning, belonging, and guidance in the collective context (Harwood, 1998; Hoshmand, 2005). For example, an anthropological understanding of the function of narrative within culture suggests that the very fabric of stories and conversation (for example, the themes and guidance provided by the "point of the story") is not just content but also the process through which cultural norms are built and propagated and group/cultural identity is strengthened (Locke 1998; Rhodes & Cusick, 2002; Singer, 2004).

Narrative theory, then, is about the process of developing a sense of self through narratives, about making sense of experience, and about expressing these identities and interpretation through social interaction. The social milieu serves to embed narrative behaviors in the social world. The power of this theoretical view is that it allows us to observe the expression of culture and identity in lived social experience, but the process itself is not culture specific. It seems that the development of self-concept and meaning in the context of social interaction is a process operating across cultures.

Narrative Theory in Health Promotion

> Various intellectual disciplines have taken the so-called narrativist turn: recognizing the extent to which perceptions are embedded in their telling, realizing human beings' reliance on storytelling to get their bearings in life, and acknowledging the innately narrative structure of human knowledge and provisional truth. (Charon & Montelo, 2002, p. 65)

Over the last couple of decades, the specific form of narrative, storytelling or stories, has begun to be incorporated into health promotion efforts. A number of projects have applied this approach to specific cultural or national groups with positive results, but without necessarily outlining the mechanisms by which these interventions achieve results. Cancer prevention and screening have been promoted using constructed stories presented as photo-novellas (culturally rich story/photo strips very popular among Latinos in the Southwest; Buller et al., 1999, 2000); informal group storytelling to teach African American women, helping them validate their experiences (Williams-Brown, Baldwin, & Bakos, 2002); and through sharing personal stories among Latino men and women (Larkey & Gonzalez, 2007; Larkey, Hecht, Miller, & Alatorre, 2001). Using stories in community settings and in popular media, such as radio and television shows, has been success in communicating risk and ways to alter behavior to lower risk in community HIV prevention programs (Community PROMISE, 2004; Fishbein & Yzer, 2003), with notable success in Tanzania's radio broadcast soap operas (Vaughan & Rogers, 2000; Vaughan, Rogers, Singhal, & Swalehe, 2000), and for reproductive health in Peru (Davenport-Sypher, McKinley, Ventsam, & Valdeavellano, 2002). Narratives also have propelled school-based drug interventions (Botvin et al., 1994, 1995; Hecht et al., 2006).

In a recent publication outlining the role of narrative communication in cancer prevention and control (Kreuter et al., 2007), a series of propositions suggests how narrative might achieve the desired effects, a first step to developing theory that is specific to health promotion. Narrative is defined as "a representation of connected events and characters that has an identifiable structure, is bounded in space and time, and contains implicit or explicit messages about the topic being addressed" (Kreuter et al., 2007, p. 222). These authors further suggest that narrative is storytelling and provide a more social framework for narrative in health promotion contexts than the psychologically rooted, developmental view.

Specifically addressing the cultural nature of narrative, Hecht and colleagues (Hecht & Kreiger, 2006; Hecht & Miller-Day, 2009) argue that narratives are a way of creating culturally grounded health messages because they reflect the underlying values and norms of the culture as well as providing message forms that are consistent with cultural practices. Narratives draw on socially shared symbol systems that express group membership and make stories meaningful to listeners by providing "good reasons" that justify actions based on the dominant stories within the group (Fisher, 1984). Finally, in proposing a theoretical agenda for narrative in health promotion, Singhal and Rogers (2002) suggested "employing a broader understanding of individual, group, and social-level changes and be more receptive to methodological pluralism and measurement ingenuity" (p. 132).

While in the extant literature several narrative factors have been proposed and tested as affecting attitudinal and behavior change, we propose a more comprehensive and integrative model that spans these levels, carrying qualities and outcomes

Table 1. Definition of Terms

Narrative	"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)
Narrative theory	A broad net of conceptual propositions and concepts drawn from different disciplines that suggests how identity and social experience emerge through communicative interaction.
Culture-centric	The characteristic of messages that reflects a within-culture view, portraying valid cultural essence through drawing directly from narratives of cultural members in naturalistic interaction.
Identification	The process of relating to, understanding in a personal way, even imagining oneself as close to another person.
Transportation or engagement	Becoming "carried away" by a story to the point that emotions are evoked and attention is fully absorbed.
Social proliferation	Uptake and diffusion of ideas or behaviors through discussion, rehearsal, and reciprocal support (caring, obligation, and group action).

from each level to the next as the ways that stories may "work" builds beyond the individual psyche to the point of mimicking the way culture and social norms are developed. From this point forward in this article, we turn to proposing a model of how narrative may frame a culture-centric model of health behavior and suggesting ways this model might be applied and tested for health promotion. We start by defining the key terms in this enterprise (see Table 1).

Narrative as Culture-Centric Health Promotion: The Model

Prior to defining the more specific domain of our proposed model, it is necessary to specify scope or boundary conditions. The model is intended to describe features or characteristics of narrative and their effects on health behaviors. These effects are seen as mediated by key narrative processes. Other factors, like modality and individual characteristics, are excluded.

First, we ask the reader to consider the range of opportunities within which people are exposed to messages about health. Some involve intentional or strategic exposures with expository intent, such as a nurse explaining to a patient the reasons for getting screened for cancer or a brochure describing medical and dietary interventions for those diagnosed with Type II diabetes. These formal messages, even when they are designed to be culturally appropriate, often are structured based upon theories that address cognitions, risk perceptions, and the like. Others are exposed more informally through entertainment content (e.g., medical dramas) and social networks (e.g., friends and relatives).

Regardless of the modality, the individuals involved in the narrative exchanges play a role in outcomes. Preexisting beliefs and attitudes shape perceptions of and

reactions to health messages. In addition, the characteristics of the narrator and the relationship between narrator and audience/target are important boundary conditions that we exclude from the discussion. In our proposed model, we do not incorporate this wide set of possibilities and effects on responses, but rather we address the more common cultural groupings and cross-boundary starting points that shape (not determine, but influence) culturally shared views. This is not to suggest that all individuals begin at the same starting point, nor do they have the same histories of exposure and life experiences, but that the health-related meanings and norms that are shared do provide a backdrop from which to begin. Instead, our model considers multiple opportunities for exposure to narratives, including informal social interaction wherein the storyteller is directly communicating with others, strategic or intentional narrative messages designed to promote specific health behavior (delivered personally, through third person, or mediated), and narratives that appear in the public media. So, the first application of the model may be to consider the range of contexts within which these exposures occur, recognizing the competing nature of multiple narratives from friends, family, and community (the existing milieu of cultural norms), from media (including soap operas and news stories as well as the ever-expanding online world), and then from the intentionally designed health promotion narratives that are becoming more common in the media.

The immediate and practical application of the model, however, is to guide and test the design of intentional media or educational programs for promoting specific health behaviors in cultural contexts. Such programs could be designed as one-way or interactive media delivered messages targeting one or more cultural groups or in more personal settings with one-on-one or group interactions during which health information is shared.

Summary of Model

The main body of the model (Figure 1) begins with proposing the salient *narrative characteristics* considered important in a story to be used in a health promotion message or intervention. These include personally engaging elements of the characters and story as well as more culturally embedded aspects of stories that create cultural resonance. These are seen to influence a set of *mediators* (i.e., responses to narratives that have been shown to be predictors of attitudinal and, in some cases, behavior change) including identification with the characters and transportation into the story (also called engagement). As individuals experience these responses to a story, the responses may trigger action in real-world contexts, such as discussion, group role modeling, and reinforcement. The combined set of mediators is expected to influence intentions (via attitudes and perception of social norms) about the behaviors being promoted, encouraging change patterned after the identified role models. Thus, we suggest a layered (Hecht & Baldwin, 1998) view of narrative, both as (a) a medium with characteristics that shape individual attitudes and beliefs, and as (b) an expression of culture embedded in the telling of stories in group contexts.

Narrative Characteristics

We start with the narrative characteristics or message features. In general, there is a need for the story and the characters to be realistic (either perceived as real, or accepted as realistic) to the point that they are engaging. In our model, we adopt

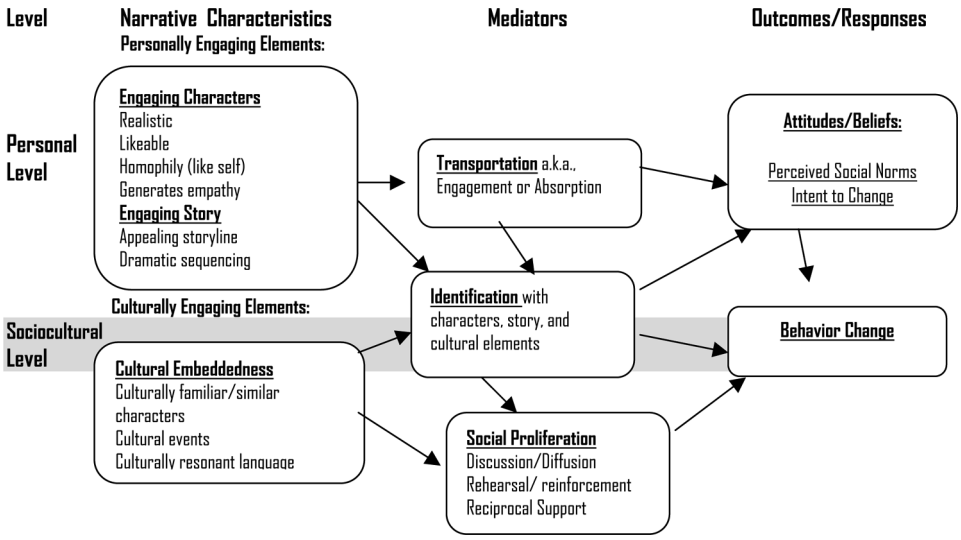

Figure 1. A model of culture-centric narratives in health promotion.

the factors proposed to be critical to *engaging characters* (typical of much of the persuasion research), that is, being realistic, generating empathy, liking, and perceived similarity of characters (homophily). Both the emotional connection (i.e., empathy and liking) and the perceived similarity of characters have been suggested as central to the persuasive effects of role models (Singhal & Rogers, 2002; Slater, Rouner, & Long, 2006) and found to be so in recent studies of cancer survivor stories (Kreuter et al., 2008). In naturalistic settings, influence by similar peers is noted as strong for behaviors such as smoking and illicit drug use (Hoffman, Monge, Chou, & Valente, 2007; Korhonen et al., 2008). Evaluation of HIV-prevention programs using community members, that is, similar others to share their own stories, show consistent positive effects on behavior (Janz et al., 1996). Such observations and related research have led to the assumption that role modeling of similar others garners attention and engagement to move people to align their behaviors accordingly.

An *engaging story* could be defined as having an appealing (or interesting) storyline. For example, just ''liking the show'' was correlated with intention to change behavior among Ethiopians exposed to a program that included messages for safe sex and contraception (Farr, Witte, Jarato, & Menard, 2005). Miller and colleagues (1998) found that interest, realism, and identification were key to engagement in video-delivered health narratives, suggesting that overall perceptions of the story and characters as being interesting and realistic may dispose receivers to become more fully engaged.

Stories may be engaging depending upon individual preferences for drama, romance, or another story form influencing the level of interest. In keeping with guidelines seen as important to story construction (Livo & Rietz, 1986), we suggest that dramatic sequencing is important for a narrative to be engaging. A discourse structure perspective on narrative has empirically shown that structuring narratives to reflect certain sequences in certain order results in differential heightened suspense or curiosity (Knobloch-Westerwick, Patzig, Mendie, & Hastall, 2004; Knobloch-Westerwick, & Keplinger, 2007). For example, interest is likely to be heightened

by the presentation of challenges and solutions to create tension and dramatic relief or sequencing that presents unanswered questions and mystery up to a final resolution.

These factors also are expected to be inherently dependent upon cultural perception, in that the appeal of a storyline and connection to characters may be different from one culture to the next. We acknowledge these sociocultural-level effects in suggesting the importance of *cultural grounding or* "*embeddedness*," expanding the concept of homophily (similarity) to the point that there are cultural cues in the characters' behavior or language that key the viewer into the culture depicted, evoking a sense of cultural resonance. Similarly, the storyline needs to have content elements, such as events that are common to the culture, addressed to create the sense of cultural recognition and identification, preferably poignant cultural events that mark a group and make members feel that they belong and that there is something special about this belonging. For example, in a story of a woman considering breast cancer screening ("Nana's Story," Boesch, 1999), the grown granddaughter of "Nana" is standing in line at the pow-wow, a regional, Native American gathering where ancestry and history is affirmed. By providing a culturally poignant background setting, the story and the character become embedded in meaningful aspects of culture and likely further evoke empathy and liking. Preferred formats for story structure and delivery may be tied to a particular community or culture, such as the radio-drama platform in which family planning messages were embedded in programs in Tanzania (Singal & Rogers, 2002).

It is certainly difficult to completely separate perceptions of personal homophily ("that person is like me") from perceptions of cultural likeness ("that person or that storyline reflects my culture"). As noted above, narratives express and perform identity. Thus, narratives that represent personal or cultural identities should be more engaging. We suggest, however, that the nature of identity is complex and includes a whole sense of "me" (e.g., personality, social roles) as well as a number of other group-based identities, one of which is ethnic or cultural identity (Hecht, 1993). The degree to which an individual personally feels connected to and identifies with his or her native culture may influence the degree of importance for these cultural cues that create a sense of resonance. Moreover, it is not clear if messages need to be tailored to individual identities, may effectively address only salient identities, or may target multiple identities (i.e., be multicultural) and remain engaging.

Mediators

While we expect that narratives will influence behaviors, understanding the narrative process requires specification of the underlying mechanisms through which this influence occurs. The characteristics of narratives or stories are expected to lead to these mechanisms or mediating variables that are key to shifting behaviors. The aspects of narrative discussed above are expected to evoke responses that are considered critical mediators in the model, including *transportation* (i.e., getting "carried away" by the story, including complete attention, absorption, and emotional involvement consistent with the events of the story) and *identification* with characters in a story (or the storyteller).

There are a number of ways of specifying these mechanisms. The theory of aesthetic engagement has examined the art of "engaging" an audience (Berleant, 1991; Miller et al., 1998) as consisting of both cognitive and emotional responses

to performance (Ben Chaim, 1984; Blythe, Overbeeke, Monk, & Wright, 2004; Boorstin, 1990; Kincaid, 2002). Cognitive/emotional engagement involves becoming totally absorbed in the message (Blythe et al., 2004; Kinkaid, 2002). Similar terms include transportation (Green, Brock, & Kauffman, 2004) and, in marketing, cognitive centered engagement (Klinger & Romer, 2007). In fact, the terms engagement, absorption, and transportation appear to be interchangeable in the context of narrative message processing (Slater & Rouner, 2002).

Researchers have attempted to measure audience perceptions of engagement and identification using various techniques (e.g., Cage & Rosenfeld, 1989; Slater et al., 2003). In a recent analysis of a newly developed scale designed to assess story elements and mediators relevant to colorectal cancer prevention behaviors, story-related factors (emotional and cultural content) were related to scales measuring identification with the story and characters, which in turn was significantly correlated with intentions to change dietary and physical activity behaviors (Larkey, Lopez, & Roe, 2008), Based upon the theoretical framework of aesthetic engagement, Miller and her colleagues (1998) proposed a new scale measuring three dimensions of performance: interest, realism, and identification. These three dimensions reflect the audience's perception of stories/narratives in aesthetic performances. Another recent study seems to confirm this structure (Lee, Hecht, & Miller-Day, 2008).

These story elements are seen first as necessary components for a recipient to become interested, show attention, and, if the characters and story are "like self," recognize self in the characters and link narrative to the self, evoking a response of identification. As more individuals view and respond to narratives in this way, they are likely eventually to share with others, diffusing the promoted behaviors through rehearsal and support. We call this phenomenon *social proliferation* (also, contagion, spillover effects).

Research that tests these concepts in entertainment education (EE) demonstrates that these principles work in a variety of laboratory, theater-like, and informal social contexts, producing attitude changes (Brown & Basil, 1995; Green & Brock, 2000; Green, Brock, & Kaufman, 2004; Rhodes & Cusick, 2002; Riley & Hawe, 2005; Singhal, Cody, Rogers, & Sabido, 2004; Slater, Rouner, & Long, 2006). For example, when exposed to messages about reducing high-risk HIV behavior, perceptions of Magic Johnson as a role model and as a friend to whom participants could relate resulted in greater change in intentions to reduce risk (Brown & Basil, 1995). More broadly tested using the EE model, behavior changes such as limiting number of sexual partners (Kim, Kols, Nyakauru, Marangwanda, & Chibatamoto, 2001), safe sex practices, community empowerment relative to HIV/AIDS, and supportive, caring behavior toward people infected (Soul City, 2007), reductions in substance use (Miller et al., 1998), and shared decision making in family planning (Sharan & Valente, 2002) have been measured in community settings. The endpoint measures address the outcomes, but they do not assess the psychosocial factors that may be associated with the behavior change.

Most of the efforts using EE have based content of interventions on social cognitive theory, focusing on role modeling and influences on the perception of social norms as key factors through which the programs were expected to achieve results. Other theoretical perspectives also have been used in EE to organize the story; present positive, negative, and transitional role models; and create perceptions of social norms; but again, these are not directly measured in relationship to behavior change (Sood, Menard, & Witte, 2004).

Narrative messages may achieve effects beyond those directly proposed in EE for role modeling and response to characters. For example, identification arising from the closeness of the story to one's own situation or culture and transportation into the story may reduce the resistance to the message by bypassing counterarguments (Hinyard & Kreuter, 2007; Slater & Rouner, 2002). Another route for how transportation into a story may influence attitude and behavior is suggested by Green (2006), creating connections with characters who role model behaviors that achieve desirable outcomes and through establishing a perception of normative behavior.

There also has been discussion about how totally immersed one should be in a narrative for maximum message effects. Some communication theorists argue that maximizing engagement and transportation is desirable for inducing change (Cohen, 2001; Green & Brock, 2000; Slater & Rouner, 2002; Smith, Downs, & Witte, 2007). This predicts a monotonically increasing relationship. On the other hand, others argue that a certain amount of disengagement is necessary to distinguish fiction from reality (Artaud, 1970; Miller et al., 1988). In other words, a curvilinear relationship should be observed with high levels of engagement distracting and low levels inadequately motivating.

To more fully acknowledge the importance of culture in these mediators, we suggest that the degree of cultural resonance created through embedded cultural representations in the story will impact cultural aspects of identification (that is, recognition of events and characters in the story as resonating with one's own culture). Some of the same factors that are likely to engender identification, such as homophily and likeability, also are hypothesized to lead to a sense of parasocial relationships with those characters (Brown & Basil, 1995; Slater & Rouner, 2002). In health promotion contexts, media or personally delivered, the story may be perceived as more than a one-way delivered message, but rather it may evoke a sense of involvement in social others and vicarious experience interpreted as modeling social norms. Thus, the mediators of identification and transportation may prompt one to imagine oneself, and others in one's social reference group, capable of engaging in the changed behaviors (perceived behavioral control or self-efficacy and social norms), providing impetus for behavioral change.

Beyond these mediators, it is expected that people who hear a good story will share it with others, initiating a pattern of *social proliferation*. Particularly when narratives are used to teach in group settings, or even communities, discussion of story characters and content is expected to create diffusion of information beyond those who heard the initial narrative. In the event that individuals consider changing behavior, discussions often proceed toward rehearsal of behaviors, reinforcing and supporting one another toward that end (Papa et al., 2000; Slater & Rouner, 2002). The newer phenomenon of online "viral" messages (*Viral Messages*, 2008) provides an example of this proliferation. Viral messages are passed through the Internet from user to user, sometimes intact (e.g., the advertisements for some e-mail providers at the bottom of e-mails or YouTube videos sent as www sites), while some are altered, expanded upon, or reinforced as they pass from person to person.

Groups engaging in health behavior change led by a peer health educator have identified similar reciprocal support processes (Larkey, 2006), including expressions of group expectations of normed behavior, and a sense of caring and obligation among those who discuss and reinforce the behaviors amongst themselves. Thus, the trigger of health behavior changes messages coming through peer narratives

may further proliferate through these reciprocal support processes. A final step in the model, then, may be the translation from the experience of story to the world of interaction where story elements and norms are woven into discussion and rehearsal in life (Vaughan & Rogers, 2000), and support is generated through others, potentially building a sense of caring and obligation to enact the norms.

Although it may be argued that media studies are different from the context of storytelling in small group, individual, or clinic settings, it is possible that the effects of a story are more dependent upon the characteristics of the story that "transport" listeners/viewers than upon the mode or source of delivery (Green, Brock, & Kaufman, 2004). Perhaps, narratives reproduced in mundane contexts are capable of more powerful effects when the stories are told by similar others who care and who continue to interact to reinforce the shifting norms.

In short, we suggest that the narrative characteristics need to include an engaging story and characters who people will care about and connect with, and that when working with a population with a strong sense of cultural identity, have a sense of cultural embeddedness of content that creates a sense of resonance. Under these conditions, messages are expected to engender a sense of identification on a personal and social group level, transport the listener into the story, and generate discussion, rehearsal, and reciprocal support for behavior change. These mediating factors point to attitude changes related to intention and action, such as developing a health self-identity and perceptions of social norms consistent with the behaviors modeled by the stories.

Implications and Application

Testing the Model

First, we present the model as a whole, suggesting that some aspects of the model have demonstrated relative support from previous research (e.g., as described above for the constructs of identification and transportation). Other relationships posed have been less thoroughly examined, but they are testable as directional hypotheses. The model predicts that each narrative characteristic affects each mediating variable and that these mediators affect behavior. It would be possible to examine a number of the suggested relationships among these variables, many with measures that have been developed and validated, with structural equation modeling and other statistical techniques that incorporate multilevel modeling. Examples of how some of the key constructs have been measured, or publications that describe factors that could contribute to compiling a measures of these constructs (e.g., including homophily, empathy, and likeability to create measures for engaging characters) are described in Table 2.

Ideally, a comprehensive test of the model would utilize a longitudinal design examining how exposure to stories affects the proposed mediators and testing how the mediators influence behavioral outcomes at a later point in time. Aspects of the model that address individual perceptions and responses could be tested alongside those that imply sociocultural level involvement, even identifying which factors seem to be more salient or important. For example, separate hypotheses could be tested to examine the pathways from character and story characteristics to identification and effects on engagement, both with and without emphasis on perceived cultural resonance. Identifying relationships and purported causal pathways fit with "small theory

Table 2. Sample measurement instruments related to model constructs

Construct	Examples of source instruments
Engaging story and characters (including homophily, empathy, likeability)	Larkey, Lopez, & Roe, 2008 (emotionally engaging story) Slater, Rouner, & Long, 2006 (homophily, empathy) Green & Brock, 2000 (likeability)
Cultural embeddedness	Larkey, Lopez, & Roe, 2008 (cultural elements)
Identification	Brown & Basil, 1995; Slater & Rouner, 2002
Transportation	Green, Brock, & Kaufman, 2004
Social proliferation	McCarty, 2002 (network diffusion) Larkey, 2006 (reciprocal support)

of treatments'' standards (Lipsey, 1993); by conducting such tests, this model potentially could be moved to the status of small theory if confirmed in this way.

Finally, stronger tests could be accomplished using comparison interventions that do not incorporate culture-centric narratives, but instead use culture-different narratives, or no narratives, to see if the posited relationships hold and behavioral outcomes are differentially affected by narrative versus control interventions. Even more specific hypotheses on the role of culture could include, for example, a test of how the degree of perception of narratives as reflecting culture (as a measure of how well cultural elements are represented in the story) may be more likely to produce social proliferation than those not recognized as reflecting culture.

Boundary of "Cultural" Group

The cultural embeddedness factor of the model requires that programs and messages be developed from a within-culture view, building upon cultural themes, events, language, and characters, by and for those from the culture. At issue is the level of specificity of the targeted cultures and the variation within groups that often exceeds that between groups (i.e., will urban, middle-class African Americans from Chicago relate to the same stories as lower-income African Americans from a marginalized community in rural New Mexico; Gould, 1981). This factor, the boundaries and overlapping nature of cultural recognition, needs to be addressed in each program, as the target population is defined and represented in the content. Culture may differ by ethnicity, race, age, and region (and many other group-defining criteria including religion, class, gender) as well as their interpenetrations; consciously defining groups and subgroups is important to the task of designing narratives that fit. One approach that avoids ethnic ''glossing'' or overgeneralizations is examination of various identities and levels of identification within a group. An identity-based approach provides a level of nuance that may be lacking when a priori groups are examined (Hecht & Krieger, 2006). Thus, one would not talk about ''Latino culture,'' but rather Latino/a identities that might include those based on intersections of factors such as culture of origin, gender, socioeconomic status (SE), and religion.

Conversely, cultural fluidity among and between groups may allow for stories to be created across cultures usually considered to be boundaried. An important

consideration in creating overlapping boundaries in targeting cultural groups is whether a group and its various subgroups interact in positive ways. When this is so, such as grandparent to grandchildren interaction, or Philly to Belair images (as in the Fresh Prince), there is an opportunity to create stories of interaction so that a larger number of subgroups may find the story, characters, and cultural events appealing and provocative. For example, in "Papa's Story," a novella-like story video created for promoting colorectal screening in a study in progress in low-income clinics in Arizona, characters from several cultural backgrounds have been included, but they have depicted a storyline and events with personalities viewed as typical and likeable across the clinic population. In this case, the regional flavor, the income level, diverse cultural family and friendship circles, and neighborhood images create a sense of culturally similar others.

This sort of processing may explain why the culturally targeted version of the keepin' it REAL substance use prevention curriculum fared no better, and for some outcomes worse, than the multicultural version even among the Mexican Americans in the clinical trial (Kulis, Yabiku, Marsiglia, Nieri, & Crossman, 2007). Identification may cut across the typical conceptualization of culture, particularly among youth for whom the "youth" culture could as well be multicultural as opposed to narrowly defined by one's own ethnic background.

The friendly aspect of our theory that allows for an operational boundary of a culture is that any story-based messages could be pretested in broader populations by asking the questions about narrative elements in both general and cultural terms (e.g., Do these characters seem like they are similar to you? Are they likeable? Does the story reflect your culture?). Then, the responses on the factors expected to mediate behavior change (e.g., Did you identify with, become transported by . . . ?) can be assessed related to the responses. If the responses are strong, then however the story is constructed, that is, within a single cultural ground or multiple grounds, may be preassessed for potential effect.

Difference in the Visibility of Storytelling in a Given Culture: Delivery Source Considerations

The image of the storyteller around the campfire is not common in most modern cultures. Personally delivered narratives largely have been replaced by media-generated narratives, some with real-time interaction, others posted online for others to view and comment upon. Paying attention to the source of the message so that it is a culturally familiar delivery mode becomes important in the planning of narrative health promotion campaigns. Among indigenous cultural groups, cultural beliefs, customs, and traditions often are transmitted from elders to children via oral story-telling traditions, as practiced, for example, within Talking Circles among American Indians (Fredericks & Hodge, 1999). Other groups within mainstream U.S. populations still adhere to oral traditions and often lean upon friends and families' experiences to make health decisions (Hunter et al., 2004). Most groups still have some sense of talk within families, some more intergenerational than others, while peer-talk may be the most important source of narrative information and influence among preteens and adolescents. These differences simply highlight the importance of assessing the context and source of messages that would be the most "culturally embedded" delivery modes for a story. Designing narratives that take this into account, asking the question, "who or what would be the most typically represented source for this

information within this particular cultural and age group,'' at the same time that some of the factors that may be reflected in that source may produce variable effects. For example, credibility or perception of authority may differentially impact response to messages in different cultures. A similar issue arises in the consideration of the ''realism'' of the content, in that perceived realism is likely to have more impact (Slater & Rouner, 2002; Wilson & Busselle, 2004). A number of competing issues for delivery source, then, are potential areas of research, as the variable impact of elements may or may not be as influential as the narrative elements we propose to be central.

Limitations of the Model and Divergent Views

There are a number of limitations to this model. One is its inherent complexity. The factors introduced are overlapping and intersecting in many ways. For example, the inherent tug of individual and cultural identifications will be difficult to separate methodologically and in modeling. In fact, culture may become invisible if narratives produce effects even across cultural groups. It would be important to discover more about the conditions and cultural environments in which this would be more or less affecting responses.

Another area that this model does not specifically address or test, but that would be important to work through, is the role of emotion in persuasion. Narrative delivery has been shown to reduce fear in response to prevention messages, similar to response to standard risk information (Larkey & Gonzalez, 2007; Larkey, Lopez, Gonzalez, & Minnal, 2006), and in another case has been shown to assist in alleviating fear for women with cancer when they hear other's experiences. How emotions, positive or negative, either frame or influence persuasive processes would be important to understand as part of the work on narrative in culture-centric health promotion.

We expect that additional limitations will be pointed out as others interact with the model. This effort is meant as a beginning to the conversation about narratives and culturally specific health promotion in the process, rather than as an end.

Summary

The very heart of this model is the cultural nature of narrative. Messages cannot ever be culturally neutral; our model acknowledges the value of going beyond conventional theory and adopting a culturally grounded view of how behavior is shaped and normed within sociocultural contexts. On the other hand, a premise of multiculturalism is the inclusion rather than exclusive focus and the key to message success (Hecht & Miller-Day, 2009). We also believe that messages tailored to the individual must be inclusive of the complexity of individual identities. Regardless, the model of culture-centric narratives can accomplish either targeting or inclusion.

Conventional theory also may be addressed or play a role. For example, the Theory of Planned Behavior (TPB) addresses the perceptions of behavioral control, attitudes about the behavior, and social norms, all factors that could be impressively represented in cultural, lived content. We argue that the central feature of our model is cultural narrative as the source of messages and the frame from which culturally grounded narratives can create identification and engagement more powerfully. The TBP factors known to predict health behaviors would be important to assess as

outcomes of the narrative mediator effects, in order to better understand and incorporate standard theories into the cultural model.

Stories as a cultural narrative form that resonates with cultural identifications provide lessons with consequences in simple and entertaining ways, engaging and transporting the listener through a sense of identification with his or her own culture. Interestingly, when issues of culture, including the formation and transmission of culture, are addressed, the stories that are representative of any cultural identities are also considered to be a key formative aspect, paralleling the concept of self-development in psychological views and development of the substance of culture in sociocultural accounts. We expect that the factors posited as important to constructing culturally grounded narratives for health promotion will effectively guide the development of interventions that lead to the mediators of behavior change. There is much work ahead to more fully explicate the model in a variety of environments and conditions, and test the relationships among the factors suggested.

References

Airhihenbuwa, C. O. (2006). The inaugural SOPHE summit on eliminating racial and ethnic health disparities. *Health Promotion Practice*, *7*(3), 293–295.

Atraud, A. (1970). *Theater and its double*. Victor Corti (Trans.). London: Calder and Boyars.

Ben Chaim, D. (1984). *Distance in the theater: The aesthetics of audience response*. Ann Arbor: University of Michigan Research Press.

Berleant, A. (1991). *Art and engagement*. Philadelphia, PA: Temple University Press.

Blythe, M. A., Overbeeke, K., Monk, A. F., & Wright, P. C. Eds. (2004). *Funology: From usability to enjoyment (Human-Computer Interaction Series)*. Norwell, MA: Kluwer Academic Publishers.

Boesch, M. (1999). *Nana's story*. [Brochures]. Tuscon: Arizona Cancer Center, University of Arizona.

Boorstin, J. (1990). *Making movies work: Thinking like a filmmaker*. Los Angels, CA: Silman-James Press.

Botvin, G. J., Dusenbury, L., Baker, E., James-Ortiz, S., & Kerner, J. (1989). A skills training approach to smoking prevention among Hispanic youth. *Journal of Behavioral Medicine*, *12*(3), 279–296.

Botvin, G. J., Dusenbury, L., Baker, E., James-Ortiz, S., Botvin, E. M., & Kerner, J. (1992). Smoking prevention among urban minority youth: Assessing effects on outcome and mediating variables. *Health Psychology*, *11*(5), 290–299.

Botvin, G. J., Schinke, S. P., Epstein, J. A., & Diaz, T. (1994). Effectiveness of culturally-focused and generic skills training approaches to alcohol and drug abuse prevention among minority youth. *Psychology of Addictive Behaviors*, *8*, 116–127.

Botvin, G. J., Schinke, S. P., Epstein, J. A., Diaz, T., & Botvin, E. M. (1995). Effectiveness of a culturally-focused and generic skills training approaches to alcohol and drug abuse prevention among minority adolescents. *Psychology of Addictive Behaviors*, *9*, 183–194.

Brown, W. J., & Basil, M. D. (1995). Media celebrities and public health: Responses to "Magic" Johnson's HIV disclosure and its impact on AIDS risk and high-risk behaviors. *Health Communication*, *7*(4), 345–370.

Buller, D. B., Buller, M. K., Larkey, L. K., Sennott-Miller, L., Taren, D., Aickin, M., et al. (2000). Implementing a 5-a-Day peer health educator program for public sector labor and trades employees. *Health Education & Behavior*, *27*, 232–240.

Buller, D. B., Morrill, C., Taren, D., Aickin, M., Sennott-Miller, L., Buller, M. K., et al. (1999). Randomized trial testing the effect of peer education at increasing fruit and vegetable intake. *Journal of the National Cancer Institute*, *91*, 1491–1500.

Burhansstipanov, L., Bemis, L. T., & Dignan, M. (2002). Native American recommendations for genetic research to be culturally respectful. *Jurimetrics*, *42*(2), 149–157.

Burhansstipanov, L., Krebs, L. U., Bradley, A., Gamito, E., Osborn, K., Dignan, M. B., & Kaur, J. S. (2003). Lessons learned while developing "Clinical Trials Education for Native Americans" curriculum. *Cancer Control*, *10*(5 Suppl.), 29–36.

Cage, T., & Rosenfeld, L. B. (1989). Ekphrastic poetry in performance: An examination of audience perceptions of the relationship between poetry and painting. *Text and Performance Quarterly*, *9*(3), 199–206.

Castro, F. G., Barrera, M. Jr., & Martinez, C. R. (2004). The cultural adaptation of prevention interventions: Resolving tensions between fidelity and fit. *Prevention Science*, *5*(1), 41–45.

Castro, F. G., & Hernández-Alarcon, E. (2002). Integrating cultural factors into drug abuse prevention and treatment with racial/ethnic minorities. *Journal of Drug Issues*, *32*, 783–810.

Charon, R., & Montello, M. (Eds.). (2002). *Stories matter*. New York: Routledge.

Cohen, J. (2001). Defining identification: A theoretical look at the identification of audiences with media characters. *Mass Communication and Society*, *4*, 245–264.

Community PROMISE: Peers Reaching Out and Modeling Intervention Strategies for HIV/AIDS Risk Reduction in Their Community Guidelines. Retrieved January 23, 2010, from http://www.cdc.gov/hiv/topics/prev_prog/rep/packages/pdf/PROMISE.pdf

Davenport-Sypher, B., McKinley, M., Ventsam, S., & Valdeavellano, E. E. (2002). Fostering reproductive health through entertainment-education in the Peruvian Amazon: The social construction of Bienvenida Salud. *Communication Theory*, *12*(2), 192–205.

Dutta, M. J. (2008). *Communicating health. A culture-centered approach*. Maldon, MA: Polity Press.

Farr, A. C., Witte, K., Jarato, K., & Menard, T. (2005). The effectiveness of media use in health education: Evaluation of an HIV/AIDS radio campaign in Ethiopia. *Journal of Health Communication*, *14*(3), 225–235.

Fishbein, M., & Yzer, M. C. (2003). Using theory to design effective health behavior interventions. *Communication Theory*, *13*(2), 164–183.

Fisher, W. R. (1984). Narration as human communication paradigm: The case of public moral argument. *Communication Monographs*, *51*, 1–22.

Fredericks, L., & Hodge, F. S. (1999). Traditional approaches to health care among American Indians and Alaska Natives. In R. M. Huff & M. V. Kline (Eds.), *Promoting health in multicultural populations: A handbook for practitioners* (pp. 313–236.) Thousand Oaks, CA: Sage.

Gosin, M., Marsiglia, F. F., & Hecht, M. L. (2003). Keepin' it REAL: A drug resistance curriculum tailored to the strengths and needs of pre-adolescents of the Southwest. *The Journal of Drug Education*, *33*(2), 119–142.

Gould, S. J. (1981). *The mismeasurement of man WW*. New York: Norton and Co.

Green, M. C. (2006). Narratives and cancer communication. *Journal of Communication*, *6*, S163–S183.

Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology*, *79*, 701–721.

Green, M. C., Brock, T. C., & Kaufman, G. F. (2004). Understanding media enjoyment: The role of transportation into narrative worlds. *Communication Theory*, *14*(4), 311–327.

Harwood, A. (1998). *Ethnicity and medical care*. Cambridge, MA: Harvard University Press.

Headland, T., Pike, K., & Harris, M. (1990). *Emics and etics: The insider/outsider debate* (vol. 7). Newbury Park, CA: Sage.

Hecht, M. L. (1993). 2002—A research odyssey: Toward the development of a communication theory of identity. *Communication Monographs*, *60*, 76–82.

Hecht, M. L., & Baldwin, J. R. (1998). Layers and halograms: A new look at prejudice. In M. L. Hecht (Ed.), *Communicating prejudice* (pp. 57–86). Thousand Oaks, CA: Sage.

Hecht, M. L., Graham, J. W., & Elek, E. (2006). The drug resistance strategies intervention: Program effects on substance use. *Health Communication*, *20*(3), 267–276.

Hecht, M. L., Jackson, R. L., & Ribeau, S. (2003). *African American communication: Exploring identity and culture* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associate, Inc.

Hecht, M. L., & Krieger, J. L. R. (2006). The principle of cultural grounding in school-based substance abuse prevention. *Journal of Language and Social Psychology*, *25*, 301–319.

Hecht, M. L., Marsiglia, F. F., Elek-Fisk, E., Wagstaff, D. A., Kulis, S., Dustman, P., & Miller-Day, M. (2003). Culturally-grounded substance use prevention: An evaluation of the Keepin' it R.E.A.L. curriculum. *Prevention Science*, *4*, 233–248.

Hecht, M. L., & Miller-Day, M. (2007). The drug resistance strategies project as translational research. *Journal of Applied Communication Research*, *35*, 343–349.

Hecht, M. L., & Miller-Day, M. (2009). The Drug Resistance Strategies Project: Using narrative theory to enhance adolescents' communication competence. In L. Frey & K. Cissna (Eds.), *Routledge handbook of applied communication* (pp. 535–557). New York and London: Routledge.

Hecht, M. L., Warren, J., Jung, J., & Krieger, J. (2004). Communication theory of identity. In W. B. Gudykunst (Ed.), *Theorizing about intercultural communication* (pp. 257–278). Newbury Park, CA: Sage.

Hinyard, L. J., & Kreuter, M. W. (2007). Using narrative communication as a tool for health behavior change: A conceptual, theoretical, and empirical overview. *Health Education Behavior*, *34*(5), 777–792.

Hoffman, B. R., Monge, P. R., Chou, C.-P., & Valente, T. W. (2007). Perceived peer influence and peer selection on adolescent smoking. *Addictive Behaviors*, *32*(8), 1546–1554.

Hoshmand, L. T. (2005). Narratology, cultural psychology, and counseling research. *Journal of Counseling Psychology*, *52*(2), 178–186.

Hunter, J. B., de Zapien, J. G., Papenfuss, M., Fernandez, M. L., Meister, J., & Giuliano, A. R. (2004). The impact of a promotora on increasing routine chronic disease prevention among women aged 40 and older at the U.S.-Mexico border. *Health Education & Behavior*, *31*(4 Suppl.), 18S–28S.

Institute of Medicine. (2002). *Speaking of health: Assessing health communication strategies for diverse populations*. Washington, DC: National Academy Press.

Janz, N. K., Zimmerman, M. A., Wren, P. A., Israel, B. A., Freudenberg, N., & Carter, R. J. (1996). Evaluation of 37 AIDS prevention projects: Successful approaches and barriers to program effectiveness. *Health Education Quarterly*, *23*(1), 80–97.

Kim, Y. M., Kols, A., Nyakauru, R., Marangwanda, C., & Chibatamoto, P. (2001). Promoting sexual responsibility among young people in Zimbawe. *International Family Planning Perspectives*, *27*(1), 11–19.

Kincaid, D. L. (2002). Drama, emotion, and cultural convergence. *Communication Theory*, *12*, 136–152.

Klinger, M., & Romer, E. (2007). Do measures of media engagement correlate with product purchase likelihood? *Journal of Advertising Research*, *10*(4), 313–325.

Knobloch, S., Patzig, G., Mendie, A. M., & Hastall, M. (2004). Affective news: Effects of discourse structure in narratives on suspense, curiosity, and enjoyment while reading news and novels. *Communication Research*, *31*(3), 259–287.

Knobloch-Westerwick, S., & Keplinger, C. (2007). Thrilling news: Factors generating suspense during news exposure. *Media Psychology*, *9*(1), 193–210.

Komro, K. A., Perry, C., Veblen-Mortenson, S., Bosma, L. M., Dudovitz, B. S., Williams, C. L., et al. (2004). Brief report: The adaptation of project northland for urban youth. *Journal of Pediatric Psychology*, *29*, 457–466.

Korhonen, T., Huizink, A. C., Dick, D. M., Pulkkinen, L., Rose, R. J., & Kaprio, J. (2008). Role of individual, peer and family factors in the use of cannabis and other

illicit drugs: A longitudinal analysis among Finnish adolescent twins. *Drug and Alcohol Dependence*, *97*(1–2), 33–43.

Kreuter, M. W., Buskirk, T. D., Holmes, K., Clark, E. M., Robinson, L., Si, X., Rath, S., Erwin, D., Philipneri, A., Cohen, E., & Mathews, K. (2008). What makes cancer survivor stories work? An empirical study among African American women. *Journal of Cancer Survivorship*, *2*, 33–44.

Kreuter, M., Green, M., Cappella, J., Slater, M., Wise, M., & Storey, J. D. (2007). Narrative communication in cancer prevention and control: A framework to guide research and application. *Annals of Behavioral Medicine*, *33*(3), 221–235.

Kreuter, M. W., Lukwago, S. N., Bucholtz, D. C., Clark, E. M., & Sanders-Thompson, V. (2003). Achieving cultural appropriateness in health promotion programs: Targeted and tailored approaches. *Heath Education and Behavior*, *30*, 133–146.

Kreuter, M. W., Sugg-Skinner, C., Holt, C. L., Clark, E. M., Haire-Joshu, D., Fu, Q., Booker, A. C., Steger-May, K., & Bucholtz, D. (2005). Cultural tailoring for mammography and fruit and vegetable intake among low-income African-American women in urban public heath centers. *Preventive Medicine*, *41*, 53–62.

Kulis, S., Yabiku, S. T., Marsiglia, F. F., Nieri, T., & Crossman, A. (2007). Differences by gender ethnicity, and acculturation in the efficacy of the Keepin' it REAL model prevention program. *Journal of Drug Education*, *37*(2), 123–144.

Larkey, L. K. (2006). Toward a measure of reciprocal support in health promotion. *Annals of Behavioral Science and Medical Education*, *12*(2), 58–64.

Larkey, L. K., & Gonzalez, J. A. (2007). Storytelling for promoting colorectal cancer prevention and early detection among Latinos. *Patient Education and Counseling*, *67*(Spec Issue), 272–278.

Larkey, L. K., Hecht, M. H., Miller, K. I., & Alatorre, C. (2001). Hispanic cultural norms for health-seeking behavior in the face of symptoms. *Health Education and Behavior*, *28*, 65–80.

Larkey, L. K., Lopez, A. M., Gonzalez, J., & Minnal, A. (2006, February). Storytelling vs. numeric risk communication for promoting colorectal cancer screening among underserved latinos. Presented at the American Society of Preventive Oncology annual conference, Bethesda, MD.

Larkey, L. K., Lopez, A. M., Roe, D. (2008, November). *Measures to assess narrative influences on cancer prevention behaviors*. Poster presentation at American Association for Cancer Research: Frontiers in Cancer Prevention Research, Washington, DC.

Larkey, L. K., Staten, L. K., & Ritenbaugh, C. (2000). Communication strategies used by Latina lay advocates of the Women's Health Initiative. *Women and Cancer*, *2*, 37–42.

Lee, J. K., Hecht, M. L., & Miller-Day, M. L. (2008). Evaluating narrative videotaped messages: The video performance scale. Presented to the Health Communication Division at the Annual Meeting of National Communication Association Conference, San Diego, CA.

Lipsey, M. W. (1993). Theory as method: Small theories of treatments. *New Directions for Program Evaluation*, *57*, 5–38.

Livo, N. J., & Rietz, S. A. (1986). *Storytelling process and practice*. Littleton, CO: Libraries Unlimited.

Locke, D. C. (1998). *Increasing multicultural understanding: A comprehensive model* (2nd ed.). Thousand Oaks, CA: Sage.

McAdams, D. P. (1993). *The stories we live by: Personal myths and the making of the self*. New York: Morrow.

McCarty, C. (2002). Structure in personal networks. *Journal of Social Structure*, *3*(1): Online.

McLean, K. C. (2005). Late adolescent identity development: Narrative meaning making and memory telling. *Developmental Psychology*, *41*(4), 683–691.

Miller, M., Hecht, M., & Stiff, J. (1998). An exploratory measurement of engagement with live and film media. *Journal of the Illinois Speech and Theatre Association*, *49*, 69–97.

Papa, M., Singhal, A., Law, S., Pant, S., Sood, S., Rogeres, E. M., & Shefner-Rogers, C. (2000). Entertainment-education and social change: An analysis of parasocial interaction, social learning, and paradoxical communication. *Journal of Communication*, *50*(4), 31–55.

Parks, S. E., & Kreuter, M. W. (2007). Cultural appropriateness in interventions for racial and ethnic minorities. In L. S. Doll, S. E. Bonzo, D. A. Sleet, J. A. Mercy, & E. N. Haas (Eds.), *Handbook of injury and violence prevention*. New York, NY: Springer.

Philipsen, G. (1987). The prospect for cultural communication. In D. L. Kincaid (Ed.), *Communication theory: Eastern and Western perspectives* (pp. 245–254). New York: Academic Press.

Resnicow, K., Baranowski, T., Ahluwalia, J. S., & Braithwaite, R. L. (1999). Cultural sensitivity in public health: Defined and demystified. *Ethnicity and Disease*, *9*(1), 10–21.

Rhodes, T. R., & Cusick, L. (2002). Accounting for unprotected sex: Stories of agency and acceptability. *Social Science and Medicine*, *55*, 211–226.

Riley, T., & Hawe, P. (2005). Researching practice: The methodological case for narrative inquiry. *Health Education Research*, *20*(2), 226–236.

Sharan, M., & Valente, T. W. (2002). Spousal communication and family planning adoption: Effects of a radio drama serial in Nepal. *International Family Planning Perspectives*, *28*(1), 16.

Singer, J. A. (2004). Narrative identity and meaning making across the lifespan: An introduction. *Journal of Personality*, *72*(3), 437–459.

Singhal, A., Cody, M. J., Rogers, E. M., & Sabido, M. (2004). *Entertainment-education and social change; History, research, and practice*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Singhal, A., & Rogers, E. M. (2002). A theoretical agenda for entertainment-education. *Communication Theory*, *12*(2), 117–135.

Slater, M. D., Buller, D. B., Waters, E., Archibeque, M. D., & LeBlanc, M. (2003). A test of conversational and testimonial messages versus didactic presentations of nutrition information. *Journal of Nutrition Education and Behavior*, *35*(5), 255–259.

Slater, M. D., & Rouner, D. (2002). Entertainment-education and elaboration likelihood: Understanding the processing of narrative persuasion. *Communication Theory*, *12*(2), 173–191.

Slater, M. D., Rouner, D., & Long, M. A. (2006). Television dramas and support for controversial public policies: Effects and mechanisms. *Journal of Communication*, *56*(2), 235–252.

Sharan, M., & Valente, T. W. (2002). Spousal communication and family planning adoption: Effects of a radio drama serial in Nepal. *International Family Planning Perspectives*, *28*(1), 16.

Smith, R. A., Downs, E., & Witte, K. (2007). Drama theory and entertainment education: Exploring the effects of a radio drama on behavioral intentions to limit HIV transmission in Ethiopia. *Communication Monographs*, *74*, 133–153.

Sood, S., Menard, T., & White, K. (2004). The theory behind entertainment-education. In A. Singhal, M. J. Cody, E. M. Rogers, & M. Sabido (Eds.), *Entertainment-educations and social change: History, research, and practice*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Soul City Institute. (2007). Retrieved January 3, 2010, from: http://www.soulcity.org.za/programmes/research/evaluations/soul-city-its-real-evaluation-report-2007/

Storey, D., Boulay, M., Karki, Y., Heckert, K. & Karmacharya, D. M. (1999). Impact of the integrated radio communication project in Nepal, 1994–1997. *Journal of Health Communication*, *4*, 271–294.

Strickland, C. T., Squeoch, M. D., & Chrisman, N. J. (1999). Health promotion in cervical cancer prevention among the Yakama Indian women of the Wa'Shat Longhouse. *Journal of Transcultural Nursing*, *10*, 190–196.

Vaughan, P. W., & Rogers, E. M. (2000). A staged model of communication effects: Evidence from an entertainment-education radio soap opera in Tanzania. *Journal of Health Communication*, *5*(3), 203–227.

Vaughan, P. W., Rogers, E. M., Singhal, A., & Swalehe, R. M. (2000). Entertainment-education and HIV/AIDS prevention: A field experiment in Tanzania. *Journal of Health Communication*, *5*, 81–100.

Viral Messages. Retrieved July 10, 2008, from http://en.wikipedia.org/wiki/Viral_Messages

Williams-Brown, S., Baldwin, D. M., & Bakos, A. (2002). Storytelling as a method to teach African American women breast health information. *Journal of Cancer Education*, *17*, 227–230.

Wilson, B., & Busselle, R. (2004, May). Transportation into the narrative and perceptions of media realism. Presented at the International Communication Association (Information Systems Division), New Orleans, LA.