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The Differential Impact of Statistical and Narrative Evidence on Beliefs, Attitude, and Intention: A Meta-Analysis

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Although "evidence" is often used as an important argument in persuasive health campaigns, it remains unclear what type of evidence has the strongest impact on particular outcome variables. We conducted a meta-analysis in which the effects of statistical and narrative evidence on beliefs, attitude, and intention were separately compared. Statistical evidence was found to have a stronger influence than narrative evidence on beliefs and attitude, whereas narrative evidence had a stronger influence on intention. We explain these findings in terms of the match between the specific characteristics of the two types of evidence and those of the outcome variables. Statistical evidence, beliefs, and attitude all relate primarily to cognitive responses, whereas both narrative evidence and intention relate more specifically to affective responses. We conclude that communication professionals developing health campaigns should match the type of evidence to the main communication objectives.

Persuasive health communication campaigns attempt to persuade people to adopt a healthy behavior. Such campaigns usually involve messages that provide evidence in favor of the advocated position. To determine the most promising strategy, developers of these campaigns want to know what type of evidence is most likely to help them achieve their goal. Researchers have attempted to determine this by comparing the persuasiveness of several types of evidence (e.g., Hoeken, 2001; Kreuter et al., 2010).

In particular, much attention has been paid to the difference between statistical and narrative evidence. Statistical evidence summarizes quantitative information on a large number of cases and can be generalized across a population (Allen & Preiss, 1997). For example, statistical evidence was applied in a campaign that aimed to raise homosexual men's awareness of the risk of getting infected with the hepatitis B virus. The evidence showed that the risk of getting infected with this virus through unprotected sex was 10 to 100 times higher than the risk of HIV, and that the number of chronic infections with the hepatitis B virus had increased by 80%. Furthermore, the evidence showed that 30% of hepatitis B infections were among homosexual men, whereas homosexual men represent only a 5% share of the total population (De Wit, Das, & Vet, 2008).

Narrative evidence, on the other hand, presents a cohesive story that describes a setting and episode, often from the perspective of one or more protagonists and often involving

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information about goals, plans, actions, and outcomes (Kopfman, Smith, Ah Yun, & Hodges, 1998). For example, De Wit and colleagues (2008) also included narrative evidence to see whether this raised homosexual men's awareness about the risk of getting infected with the hepatitis B virus. In this condition, a man called Remco was introduced. The narrative described Remco's behavior showing him as a typical, sexually active gay man. It continued, however, describing how Remco got infected with the hepatitis B virus, even though he had never perceived himself as being vulnerable to such an infection.

Although there have been several attempts to show that one type of evidence is more effective than the other, there is no consensus to date. Previous studies have produced contradictory results, as shown in two systematic reviews. A vote-counting study found that narrative evidence is more powerful than statistical evidence (Baesler & Burgoon, 1994), whereas a meta-analysis found that statistical evidence is more persuasive (Allen & Preiss, 1997). As meta-analysis is generally seen as a more accurate method of systematically reviewing results than vote counting (Borenstein, Hedges, Higgins, & Rothstein, 2009, pp. 251–255), we are inclined to think that statistical evidence is more persuasive.

However, closer scrutiny of Allen and Preiss's (1997) meta-analysis reveals that they did not discriminate among outcome variables, whereas meta-analyses in other areas have shown that results are likely to differ across variables (e.g., Gallagher & Updegraff, 2012). The same can be found in individual studies. For example, a study on tanning-bed use found that statistical evidence had a stronger impact on people's beliefs about perceived susceptibility, whereas narrative evidence had a stronger impact on people's intentions (Greene & Brinn, 2003). In failing to discriminate among outcome variables, Allen and Preiss's study is unable to provide insights into differences across outcome variables, which might have relevant consequences for health campaigns.

To provide more comprehensive insight into differences between the effects of statistical and narrative evidence, we present a new meta-analysis that discriminates among important outcome variables in research on persuasion: beliefs, attitude, and intention. Attitude is one of the most commonly studied outcome variables, as it is assumed to be a key determinant of behavior (Brock & Green, 2005; Kraus, 1995). Expectancy-value theory states that people base their attitudes on their beliefs (Ajzen & Fishbein, 2008). Hence, persuasion often targets beliefs; thus, both beliefs and attitudes are important in research on persuasion. In addition, to gain insight into people's expected behavior, researchers often examine people's behavioral intention, which is perceived to be the immediate determinant of behavior (Ajzen & Fishbein, 1980). Because beliefs, attitude, and intention are among the most important variables in research on persuasion and have been examined regularly in studies that compare both statistical and narrative evidence, these variables are the central focus of the present study.

MATCHING EVIDENCE CHARACTERISTICS TO OUTCOME VARIABLES

To understand which type of evidence has the strongest impact on a particular outcome variable, it is necessary to know the specific characteristics of the different types of evidence and outcome variables and how these relate to each other. A belief is the perceived probability that a given behavior will lead to a particular outcome and how this outcome is evaluated (Ajzen & Fishbein, 2008). Statistical evidence provides a strong case that a given behavior will have specific benefits or damage for an individual's health, because this outcome has been seen among a large number of people who have engaged in the same behavior. Narrative evidence, on the other hand, is based on only one or a small number of cases, which raises the possibility that such evidence is not common and that it does not relate to the message receiver (Baesler & Burgoon, 1994). For instance, after reading the narrative evidence in the study about hepatitis B infection that we referred to (De Wit et al., 2008), the reader might see himself as very dissimilar to Remco, the character in the narrative. Consequently, this reader might argue that this dissimilarity makes him less vulnerable to contracting hepatitis B. To summarize, we expect statistical evidence to have a stronger influence than narrative evidence on beliefs, because statistical evidence provides stronger arguments regarding the probability that people will experience similar outcomes as a result of a given behavior.

H1: Statistical evidence has a stronger influence on beliefs than narrative evidence.

According to expectancy-value theory, beliefs are the underlying determinants of attitude, which has been defined as the evaluative dimension of a concept (Osgood, Suci, & Tannenbaum, 1957). This is supported by empirical evidence. In their meta-analysis, Conner and Sparks (2005) found a strong correlation between beliefs and attitude. Therefore, statistical and narrative evidence are expected to have a similar effect on attitude as they have on beliefs.

H2: Statistical evidence has a stronger influence on attitude than narrative evidence.

Although attitude is an important predictor of intention, meta-analysis has shown that affective responses have a stronger effect on intention than attitude (Sandberg & Conner, 2008). Affective responses that favor a certain behavior create a state of readiness for that behavior, whereas affective responses that disfavor such a behavior lead to a state of inaction (Anderson, 2003). Consequently, people's intentions depend largely on their affective responses. This notion is supported by studies involving several kinds of health behaviors, such as wearing a seatbelt, engaging in moderate exercising, and eating fruit. These studies have shown that affect has a stronger influence on intention

than cognition and overall attitude (Keer, Van den Putte, & Neijens, 2010; Trafimow et al., 2004).

It has been suggested that narrative evidence has a stronger influence on people's affective responses than statistical evidence because narrative evidence provides information about the feelings involved in a given behavior (Kopfman et al., 1998). Statistical evidence is not likely to provide such information, because it tends to focus exclusively on the practical outcomes of behavior (e.g., De Wit et al., 2008; Mazor et al., 2007). When people read a narrative, they can experience the feelings described in the narrative as if these were real, resulting in positive or negative affective responses (Green & Brock, 2000). Because affective responses have a strong influence on intention, we expect narrative evidence to have a stronger effect on intention than statistical evidence.

H3: Narrative evidence has a stronger influence on intention than statistical evidence.

METHODS

Comparison Strategy

There were two possible approaches to compare the impact of statistical and narrative evidence in a meta-analysis. In the first approach, we would focus exclusively on studies that include a condition with only statistical as well as a condition with only narrative evidence, enabling us to compare both types of evidence directly in a given study. In the second approach, we would include studies that compared the impact of either statistical or narrative evidence to a baseline measurement (i.e., a control condition or a pretest), enabling us to compare separate mean effect sizes over the studies for statistical and narrative evidence. Our literature search revealed that 15 studies fit the first approach, whereas only three studies on narrative evidence fit the second approach. Hence, we decided to apply the first approach, as this was the only way to obtain a sufficient number of studies to conduct a meta-analysis, though admittedly still small. An additional advantage of the first approach was that participants of the studies we included were randomly assigned to one of the two conditions. This decreased the possibility that any differences were caused by other factors than evidence type. This approach allowed us to make the most optimal valid comparison between statistical and narrative evidence.

Inclusion Criteria

To be included in our meta-analysis, studies had to meet two criteria. First, they had to involve experiments that compared narrative and statistical evidence in separate conditions within one design. Second, they had to compare the effect of statistical and narrative evidence on at least one of our dependent variables of interest (beliefs, attitude, or intention).

The literature presents us with many different terms that fit our definition of beliefs: for example, *perceived severity, perceived susceptibility, perceived risk, perceived behavioral efficacy*, and *perceived benefits.* We included all studies, which used variables that were operationalized in a manner consistent with our definition, regardless of what these variables were called.

Search Method

The literature search comprised three steps. First, we conducted a database search in Communication & Mass Media Complete, ERIC, Linguistics and Language Behavior Abstracts, Medline, ProQuest Dissertations & Theses, and PsycINFO. To find a large initial selection of studies, we applied a broad range of keywords that related to the topic of interest (Lipsey & Wilson, 2001, p. 26). These keywords included *exemplar, testimonial, anecdote, narrative, case specific information, abstract information, individuating information, statistical, informational, base-rate, belief, attitude*, and *intention*. The search was conducted in October 2012. Second, we searched additional literature by checking the reference lists of the articles that we selected for analysis. Third, we conducted a cited reference search for the selected articles through Web of Science. We repeated the second and third steps until no additional articles could be found.

In total, we included 15 articles, of which nine reported effects on beliefs, five on attitude, and seven on intention (see Table 1). We retrieved two dissertations, but did not include them, because the studies were already reported in a journal article that we did include (Baesler, 1991; Hong, 2009). Ten of these 15 studies included evidence on health behavior. Other topics included juvenile delinquency (Baesler & Burgoon, 1994), global warming (Kim et al., 2012), government plans (Hoeken, 2001), and marketing (Hong & Park, 2012; Krupat, Smith, Leach, & Jackson, 1997).

Surprisingly, only two of these 15 studies were included in the earlier meta-analysis by Allen and Preiss (1997). This discrepancy can mainly be attributed to the fact that Allen and Preiss (1997) included studies that did not compare statistical and narrative evidence (Hamill, Wilson, & Nisbett, 1980; Harte, 1972; Ryland, 1973; Sherer & Rogers, 1984; Wells & Harvey, 1977; Yalch & Elmore-Yalch, 1984). For example, Hamill et al. (1980) used one condition containing a narrative that was presented together with statistics that were in line with the story, suggesting that the narrative represented a typical case. In their second condition, the same narrative was presented with statistics that contradicted the story, suggesting that it was an atypical case. Although such studies provide valuable knowledge about the conditions under which narratives have effects, they do not allow us to compare statistical and narrative evidence and should, therefore, not be included in a meta-analysis. Furthermore,

TABLE 1
Overview of Characteristics of Each Study

Study	*Sample*	*Channel/Medium*	*Length*	*Measures*	*Topic*
Baesler (1997)	S	Print	Not reported	General beliefs measure	Birth control, internships, crime
Baesler and Burgoon (1994)	S	Print	Not reported	General beliefs measure	Juvenile delinquency
De Wit, Das, and Vet (2008)	P	Web	225 words	Perceived risk Perceived severity Intention to get vaccinated	Sexual risk behavior
Gray and Harrington (2011)	S	Web	225 words	Attitude (affective and instrumental) Intention	Exercising
Greene and Brinn (2003)	S	Not reported	Not reported	Perceived susceptibility	Tanning-bed use
Greene, Campo, and Banerjee (2010)	S	Print	Less than half a page	Perceived susceptibility Perceived severity Perceived benefits General beliefs measure Intention	Tanning-bed use
Hoeken (2001)	P	Not reported	Not reported	General beliefs measure	Government plans
Hong and Park (2012)	S	Web	75 words	Attitude (instrumental)	Product reviews
Kazoleas (1993)	S	Print	Varying	Attitude (no measures reported)	Seatbelt use
Kim et al. (2012)	S	Not reported	Not reported	Attitude toward global warming, three items (e.g., "Global warming represents a major problem")	Global warming
Krupat et al. (1997)	S	Not reported	Not reported	General beliefs measure	A car
Limon and Kazoleas (2004)	S	Video	Not reported	Attitude (no measures reported)	Sunbathing and tanning-bed use
Mazor et al. (2007)	P	Video	Not reported	General beliefs measure Intention	Laboratory testing of patients who use warfarin (medicine)
Van Laer and De Ruyter (2010)	S	Web	Not reported	Intention	Switching to other general practitioner
Yu, Ahern, Connolly-Ahern, and Shen (2010)	S	Print	Not reported	Perceived fear Perceived external efficacy Intention	Avoiding fetal alcohol spectrum disorder

Note. P = population; S = student. The beliefs and intention effect sizes of De Wit et al. (2008) and the beliefs effect size of Green and Brinn (2003) are based on corrected information provided by the authors.

in two cases, Allen and Preiss (1997) included studies twice, having been reported both in a dissertation and in a journal article (Baesler, 1991; Baesler & Burgoon, 1994; Harte, 1972; Harte, 1976). Finally, some studies that Allen and Preiss (1997) included only considered outcome variables that were irrelevant for this study, such as an estimation of the number of times a machine from a specific brand fails (Dickson, 1982).

Meta-Analytic Procedures

Most of the studies that we retrieved provided separate means and standard deviations for the narrative and statistical conditions. Therefore, Cohen's *d* was considered the most appropriate index of effect sizes (Borenstein et al., 2009). When the means and standard deviations were not reported for the separate conditions, we used widely available formulas to compute the effect size based on other information, such as *t*-values and F-values (Lipsey & Wilson, 2001). Some studies reported several measures of beliefs. In those cases, we computed an average of the reported outcome measures (Borenstein et al., 2009). Effect sizes (Table 2) were computed in such a way that a negative value indicated that statistical evidence was more powerful than narrative evidence, and a positive value indicated that narrative evidence was more powerful than statistical evidence. Random-effects models were used, because we did not assume that there would be one true effect size, and we wanted to generalize our findings beyond the included studies (Borenstein et al., 2009).

RESULTS

The mean effect sizes for the outcome variables were in the predicted direction (Table 3). Statistical evidence had a stronger impact on beliefs (mean ES = –0.16; $SE = 0.07$; $p = .014$) and attitude (mean ES = –0.11; $SE = 0.06$; $p = .058$), whereas narrative evidence had a stronger impact on intention (mean ES = 0.10; $SE = 0.05$; $p = .061$). For all

TABLE 2
Effect Sizes of Beliefs, Attitude, and Intention for Each Study

		Beliefs		*Attitude*		*Intention*	
Study	*n*	*d*	V_d	*d*	V_d	*d*	V_d
Baesler (1997)	100	−0.312	0.128				
Baesler and Burgoon (1994)	292	−0.233	0.014				
De Wit, Das, and Vet (2008)	50	0.023	0.061			0.482	0.082
Gray and Harrington (2011)	345			−0.057	0.012	0.151	0.012
Greene and Brinn (2003)	100	−0.448	0.041			0.245	0.040
Greene, Campo, and Banerjee (2010)	372	−0.006	0.067			0.143	0.011
Hoeken (2001)	216	−0.365	0.019				
Hong and Park (2012)	181			0.118	0.028		
Kazoleas (1993)	88			−0.103	0.046		
Kim et al. (2012)	1140			−0.213	0.004		
Krupat, Smith, Leach, and Jackson (1997)	45	0.295	0.090				
Limon and Kazoleas (2004)	95			0.000	0.042		
Mazor et al. (2007)	159	−0.153	0.025			0.042	0.025
Van Laer and De Ruyter (2010)	100					0.019	0.042
Yu, Ahern, Connolly-Ahern, and Shen (2010)	212	0.006	0.014			−0.110	0.019

Note. The beliefs and intention effect sizes of De Wit et al. (2008) and the beliefs effects size of Green and Brinn (2003) are based on corrected information provided by the authors.

TABLE 3
Estimation of Mean Effect Size for Each Outcome Variable and Results of Heterogeneity Test

	Estimation Mean Effect Size						*Heterogeneity*		
	Number of Studies	*Total n*	*Mean ES*	*SE*	*CI*	*p*	*Q*	*df*	*p*
Beliefs	9	1546	−0.16	0.07	−0.29 *to* −0.03	.014	9.97	8	.267
Attitude	5	1850	−0.11	0.06	−0.23 *to* 0.00	.058	4.77	4	.312
Intention	7	1338	0.10	0.05	0.00 *to* 0.20	.061	5.64	6	.465

outcome variables, we found a small mean effect size. The heterogeneity test did not show a significant amount of unexplained variance for the effect on beliefs ($Q(8) = 9.97$; $p = .267$), attitude ($Q(4) = 4.77$; $p = .312$), or intention ($Q(6) = 5.64$; $p = .465$), which implies that there was no significant difference between studies, for example, between studies on health behaviors and those on other topics. Based on these results, we accepted all three hypotheses. However, it should be noted that the outcomes for attitude (H2) and intention (H3) were only marginally significant.

In addition to the tests of our hypotheses, an analysis of variance showed that there was a significant difference in the average effect sizes of the three outcome variables ($Q_{bet}(2) = 11.97$, $p = .003$). Post hoc tests revealed a significant difference between the effects on beliefs and the effects on intention (DIF = 0.26; $SE = 0.08$; $z = 3.10$; $p = .002$) and between attitude and intention (DIF = 0.21; $SE = 0.08$; $z = 2.66$; $p = .008$). The difference between the effects on beliefs and effects on attitude was not significant (DIF = –0.05; $SE = 0.09$; $z = 0.56$; $p = .573$).

CONCLUSION

In this article, we have sought to contribute to the literature on health communication by examining the effects of statistical and narrative evidence on beliefs, attitude, and intention. We hypothesized that statistical evidence would have a stronger influence on beliefs (H1) and attitude (H2), whereas narrative evidence would have a stronger influence on intention (H3). All hypotheses were supported, although the effects for attitude and intention were only marginally significant. Differences between the average effects of statistical and narrative evidence were significant for beliefs and intention and for attitude and intention, but not for beliefs and attitude. We conclude that whether statistical or narrative evidence has the strongest persuasive effect depends on the outcome variables of interest.

In the theory section we have elaborated on the characteristics of statistical and narrative evidence that might explain these findings. Statistical evidence provides information about how common particular outcomes are, whereas

narrative evidence does not. In the latter case, people may have more reason to doubt that they will experience similar outcomes themselves, arguing that the narrative situation does not apply to their own lives. As the probability of outcomes is an important dimension of beliefs, and consequently of attitude, we expected that statistical evidence has a stronger influence on these outcome variables than narrative evidence. Narrative evidence, however, is believed to enable people to experience affective responses as if the events that triggered them were real. These affective responses have an effect on intention, and depending on their valence, they can lead to a state of action or inaction (Anderson, 2003); affective responses have been found to have a stronger influence on intention than attitude (Keer et al., 2010; Trafimow et al., 2004). As statistical evidence is less likely to trigger affective responses, narrative evidence was expected to have an advantage over statistical evidence in influencing intention.

It is important to note that our theoretical framework is based on a traditional expectancy-value perspective. There is an ongoing discussion, for example, in the context of the theory of planned behavior, on whether affective responses have an additional value beyond expectancy-value-based belief measures (e.g., Ajzen & Sheikh, 2013; Conner, Godin, Sheeran, & Germain, 2013). Another perspective is also offered by attitude base theory, which distinguishes between cognitively and affectively formed attitudes (e.g., Fabrigar & Petty, 1999). However, because most studies in our meta-analysis did not take these alternative perspectives into consideration, we adopted the expectancy-value perspective. In concurrence, we found that attitude was more influenced by statistical evidence. Nevertheless, we expect that in future studies that take the affective component of attitude into account, narratives can have a relevant effect on attitude as well. Thus, regarding optimizing effects on attitude, the choice between narrative and statistical evidence might depend on how attitude is defined and operationalized.

Our main interest was related to health communication, which includes a broad range of topics such as smoking, medicine use, and sunbathing. However, due to the relatively small number of published studies that have compared statistical and narrative evidence, our study also included a few studies on other topics such as global warming and juvenile delinquency. Including studies on other topics did not have an impact on the validity of our findings for health behavior. The effect sizes of studies on other topics generally reveal a pattern similar to those on health behaviors, and the heterogeneity test does not suggest a systematic difference between the studies. Hence, we conclude that the outcomes of the comparison between statistical and narrative evidence are not influenced by the topic at hand. Similarly, some of the included studies focused on behaviors (e.g., Kazoleas, 1993), whereas others focused on objects (e.g., Kim et al., 2012). However, we did not encounter any indications that suggested that this had any influence on our results.

We can conclude that this study contributes to the existing knowledge about the persuasiveness of statistical and narrative evidence in three ways. First, this study is the first to distinguish between the effects of different outcome variables in a systematic review. This distinction showed that the type of evidence that is most persuasive depends on the outcome variable being examined. Second, this study is the first meta-analysis to include only studies that make a direct comparison between statistical and narrative evidence, enabling us to make an optimal and valid comparison between both types of evidence. Third, the majority of the relevant studies have been published since the only earlier meta-analysis on this topic (Allen & Preiss, 1997). We were therefore able to include many studies that were not included before.

Our findings have implications for future studies. As our results suggest, researchers should base their expectations regarding the persuasiveness of statistical and narrative evidence on the match between the characteristics of the evidence and the targeted outcome variable. It is unlikely that a single type of evidence will have the strongest persuasive effect on all outcome variables. This notion is supported by the fact that all the individual studies in our meta-analysis that tested several outcome variables showed different effects for these variables (e.g., Gray & Harrington, 2011; Greene & Brinn, 2003).

To interpret our findings, we offered some explanations that have not yet been examined empirically. It would be of great interest for researchers to examine the mediating role of affective responses. We have suggested that narrative evidence is more likely to result in affective responses than statistical evidence; in turn, affective responses are expected to mediate the effect of the evidence on intention. Although earlier studies provide tentative support for the claim that narrative evidence triggers more affective responses than statistical evidence (Kopfman et al., 1998; Mazzocco, Green, Sasota, & Jones, 2010), no study to date has examined the mediating role of affective responses on intention.

Future studies should also focus on the persistence of these effects, as the experience of affect is temporal and likely to diminish over a short period of time (Baumeister, Vohs, DeWall, & Zhang, 2007). For example, people may experience fear after exposure to narrative evidence that tobacco causes lung damage. After a short time, however, this fear may disappear because people continue to engage in other situations that may trigger different responses. This suggests that the effect of statistical evidence should last longer than that of narrative evidence. On the other hand, though the experience of affect may disappear, people may learn to anticipate similar feelings in future situations. If this mechanism is effective, the effects of evidence might endure (Baumeister et al., 2007; Richard, Van der Pligt, & De Vries, 1995). To gain insight into the persistence of effects, researchers should apply research designs with both immediate and delayed post-measurements.

In practical terms, our findings suggest that health communication professionals should determine their primary goal before deciding which specific type of evidence to use in their campaigns. Specifically, if a health campaign emphasizes beliefs or attitude, statistical evidence should be employed, whereas if its goal is to affect people's intentions, narrative evidence should be used. This is, however, an oversimplification, because few campaigns have a single goal, and it is currently common practice to combine multiple messages within a single campaign to reach different goals. Hence, communication professionals could design campaigns including different types of evidence that target different types of outcome variables. If such a campaign were spread over a longer term, it might also be possible to target specific outcome variables at different stages. For example, an initial stage of a campaign could target people's beliefs and attitude with a statistical message. Later, a second stage could use a narrative message aimed at influencing people's behavioral intentions. Additional research could help determine the most efficient way to combine messages that include different types of evidence.

Although our meta-analysis included only behavioral determinants, behavior change is probably the main concern of communication professionals when they are designing a health campaign. As most theories on persuasion suggest that communication is not likely to influence behavior directly, our focus on behavioral determinants makes sense. By influencing these determinants more effectively, communication professionals will most likely also be more successful in influencing behavior, albeit indirectly. Moreover, developing more effective health messages implies that more cost-effective campaigns could be designed, as fewer resources would be necessary to achieve the desired outcomes.

Although we have tried to be as thorough as possible, this study has some limitations. First, the number of studies included in our meta-analysis is relatively small, as few studies have directly compared statistical and narrative evidence. Second, to examine beliefs, the included variables were operationalized in a way that fit our definition of beliefs. In several cases, these variables focused exclusively on a specific type of outcome (e.g., perceived risks or perceived benefits), whereas the general construct "beliefs" focuses on both positive and negative outcomes. A recent review, which compared numerical versus nonnumerical information about prescription drugs, also revealed that numerical information had a stronger impact on people's understanding of risks and benefits (West et al., 2013). Nevertheless, it is unclear whether and how the difference between beliefs measures influences our results. Therefore, it would be valuable for future research to examine differences in the effects of statistical and narrative evidence on different categories of belief variables.

We believe that our study contributes meaningfully to the field of persuasive health communication by showing that the type of evidence likely to be most persuasive depends on the targeted outcome variable. These results have important practical implications, as they can be used to improve the effectiveness of health communication campaigns. Furthermore, the research directions that we suggest may result in future contributions that reveal the mechanisms that underlie the effects of different types of evidence. This will help us to better understand not only that particular types of evidence have more influence on particular outcome variables, but also why this is the case.

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