A Comparison of Narrative and Non-narrative Messages for Promoting Zika-related Preventative Health Behaviors in At-Risk Male Populations

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A COMPARISON OF NARRATIVE AND INFORMATIVE MESSAGES FOR PROMOTING ZIKA-RELATED PREVENTATIVE HEALTH BEHAVIORS IN AT-RISK MALE POPULATIONS

CHELSEA FOSTER & HANNAH ISHMAEL
The World Health Organization (WHO) recognizes the Zika virus (ZIKV) as a rapidly reemerging emerging infectious disease spread by the *Aedes* mosquito. The outbreaks started in South America and quickly spread throughout Latin America before coming to the United States.

**Symptoms:**
- Fever, rash, conjunctivitis, muscle and joint pain, headaches, microcephaly, and even serving as a trigger for Guillain-Barre syndrome.
- The first case of the virus, in January 2016, came from a Texan patient who had recently returned from Latin America. Since then, there have been 5,158 cases of ZIKV reported in the U.S.
- Narrative theory is a persuasive theory that focuses on storytelling to influence decisions based on reasoning “derived from the narratives people engage with by way of historical/cultural and personal backgrounds” (Clair et al., 2014).
- Previous health-related applications include cancer care (Wang, Walther, Pingree, & Hawkins, 2008), HIV/AIDS risk reduction (Jones, Hoover, & Lacroix, 2013), Colon Cancer Screening (Dillard et al., 2010), and more.
Due to the uncertainty surrounding the spread and acquisition of Zika, the purpose of this experimental study is to:

- (1) better understand the most effective way to communicate disease prevention information to male populations
- (2) to compare the persuasive appeals of narrative versus educational/informational disease prevention messages,
- (3) to assess the impact of these messages on disease-specific knowledge, as well as the severity of the threat and their personal susceptibility to the virus.

To do this, the study asked the following research question/hypotheses:

- H1: Narratives of matched racial identification will result in greater perceptions of
  - a.) threat severity and/or
  - b.) personal susceptibility.
- H2: Compared to educational information from the CDC, narrative messages will elicit greater perception of threat severity and personal susceptibility.
- RQ1: Will there be a difference in behavioral intentions based on the message they receive?
Approved by the PSU Institutional Review Board

While serving as the Communication Research Lab's principal investigator, I designed a study with a $250 grant to recruit participants using Qualtrics and Mturk Software.

- August 2016: Literature Review
- September/October 2016: Survey Design and Measurements
- November 28, 2016-December 2, 2016: Data Collection
- January 2017: Data analysis
- April 2017: Findings will be presented at the 2017 National DCHC Health Conference at George Mason University in Fairfax, VA.

Using Amazon TurkPrime & MTurk Software, the Communication Research Lab enlisted male participants over the age of 18 who had been sexually active in the last 180 days in at-risk regions, including Florida and Texas.

Early questions assessed demographics, sexual history, knowledge tests, and gave a communication audit. In a pre- and post-test form, it measured their perceived susceptibility to and severity of ZIKV.

Between the pre- and post-test, each participant received either a narrative or informational message depending on the survey taken.
EXPERIMENTAL TREATMENTS
100% Males
57.4% between the ages of 18-34
66% identified as White/Caucasian
60.8% reported having a degree
48.3% indicated having an annual income of $24,000 to $54,000
87.6% of the participants had been sexually active within the last 30 days
82.9% reported receiving their health-related information regarding ZIKV from media
Participants who received the narrative message instead of the CDC message almost always indicated greater intentions to change behavior pertaining to Zika prevention/transmission.

<table>
<thead>
<tr>
<th>TABLE 1: MESSAGE IMPACT ON PREVENTATIVE BEHAVIOR</th>
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<tbody>
<tr>
<td>NARRATIVE (n=161)</td>
</tr>
<tr>
<td>INFORMATIONAL (n=45)</td>
</tr>
<tr>
<td>Delay Family Planning</td>
</tr>
<tr>
<td>Screened/Tested</td>
</tr>
<tr>
<td>Abortion</td>
</tr>
<tr>
<td>Bug Repellant</td>
</tr>
<tr>
<td>Dr./R.N. for Info</td>
</tr>
<tr>
<td>Avoid Travelling</td>
</tr>
<tr>
<td>Mosquito Nets</td>
</tr>
</tbody>
</table>
RESULTS: HYPOTHESIS #1

- Although not statistically significant, the results were still relevant as we found an increase in perceived severity and perceived susceptibility after the participants had received the male-narrative message consisting of Zika-related information.

- The data also shows that people find ZIKV as very severe, but rank their personal susceptibility fairly low.

<table>
<thead>
<tr>
<th>TABLE 2: PRE AND POST TEST FEELINGS OF SEVERITY AND SUSCEPTIBILITY</th>
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<tr>
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<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>AA (n=15)</td>
</tr>
<tr>
<td>AS (n=11)</td>
</tr>
<tr>
<td>CA (n=106)</td>
</tr>
<tr>
<td>HS (n=30)</td>
</tr>
</tbody>
</table>
RESULTS: HYPOTHESIS #2

- Although not significant, participants that received the male-narrative message reported the severity of the virus higher than the informative; but the participants that received the informative perceived their susceptibility to the virus higher than those with the narrative.

- Limited evidence that narratives relay the severity of the ZIKV better than informative message. Also, disproves that narratives lead to a higher perception of susceptibility than the informative version.

| TABLE 3: FEELINGS OF SEVERITY AND SUSCEPTIBILITY IN NARRATIVE AND INFORMATIVE FORMS |
|----------------------------------------|-----------------|-----------------|-----------------|-----------------|
|                                       | SEVERITY 1      | SEVERITY 2      | SUSCEPTIBILITY 1 | SUSCEPTIBILITY 2 |
| NARRATIVE (n=161)                     | 3.86 (.80)      | 4.08 (.82)      | 3.09 (.97)       | 3.31 (.96)       |
| INFORMATIVE (n=45)                    | 3.76 (.85)      | 3.89 (.90)      | 3.14 (.95)       | 3.44 (.94)       |
Although our results were not statistically significant, the data suggests that narratives can be quite helpful in health communication scenarios.

Consider:

- Importance of how we communicate and who we communicate to regarding public health disease outbreaks.
  - Initially communicated as a “female” health issue which led to miscommunication and lack of education.

- It is a Reemerging disease; California has active ZIKV circulation in 129 counties as of April 3rd.
CONCLUSION

- SINCE THIS INITIAL ANALYSIS, WE HAVE RE-ANALYZED THE DATA USING THE VARIABLES OF NARRATIVE THEORY CONCERNING IDENTIFICATION, TRANSPORTATION, AND INFORMATION-SEEKING/SHARING BEHAVIORS.
  - This study is currently under review with the National Communication Association Health Communication division and the Health Education Journal at this time.

ACKNOWLEDGEMENTS:

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