

Believability of Cigar Warnings: Impact of Source and Message

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Background

- More than 7% of US adults smoke cigars
- Many cigar smokers have little knowledge about health risks of cigar use
- FTC requires that cigars display one of 5 warnings on a rotating basis
- Little research on effectiveness or believability of cigar warnings
- This research examines how the source and message affect the believability of cigar warnings

Methods

- Between September 2014 and June 2015 a nationally representative phone survey of adults was conducted (Table 1)
- Each adult was randomly assigned to one of 12 cigar warning conditions, with the source and message type varied
- Sources
 - Warning (no source)
 - Surgeon General Warning
 - FDA Warning
 - CDC Warning
- Messages
 - *Cigar smoking can cause cancers of the mouth and throat, even if you do not inhale*
 - *Cigar smoking can cause lung cancer and heart disease*
 - *Cigars are not a safe alternative to cigarettes*
- Participants were asked 'How believable is this warning? Would you say...not at all, somewhat, or very?'
- Probability of rating the warning as very believable was modeled with logistic regression as a function of warning source and warning message, controlling for variables presented in Table 2.



TABLE 1. Demographic characteristics of adult phone survey sample – CRRTC National Adult (≥18 years) Phone Survey 2014-2015, N = 5014

Age	
Mean	46.7
Range	18-95
Sex	
Male	48.5%
Female	51.5%
Race/Ethnicity	
White Non-Hispanic	62.0%
Black Non-Hispanic	18.3%
Hispanic	13.8%
Other Non-Hispanic	5.9%
Tobacco Use	
Little Cigar/Cigarillo Users	7.4%
Current Use of Any Other Tobacco Product	21.0%
Low Trust in Government	42.4%
Low Socio-Economic Status	20.3%
Low Education (HS or Less)	42.6%

Results

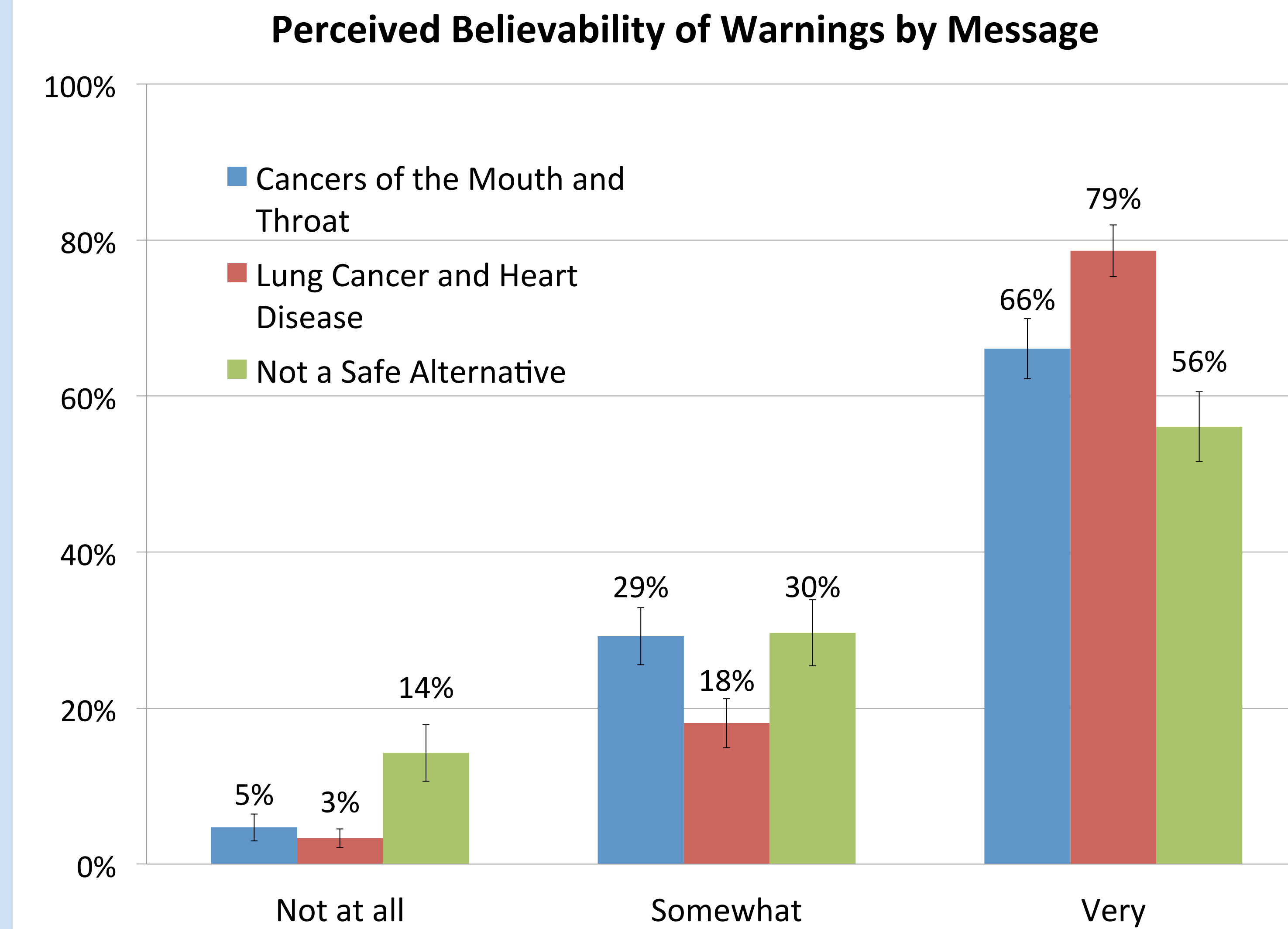


TABLE 2. Weighted logistic regression predicting perceived believability of cigar warnings, CRRTC National Adult (≥18 years) Phone Survey 2014-2015, N = 4920

Variable	aOR	95% CI
Source (Compared to No Source)		
Surgeon General	0.96	0.71-1.30
FDA	1.02	0.75-1.40
CDC	0.87	0.64-1.19
Message (Compared to Cancers of the Mouth and Throat)		
Lung Cancer and Heart Disease	1.97	1.52-2.56
Not a Safe Alternative	0.69	0.54-0.88
Race (Compared to White Non-Hispanic)		
Black Non-Hispanic	0.71	0.53-0.95
Hispanic	0.65	0.46-0.90
Other Non-Hispanic	0.60	0.40-0.88
Tobacco Use (Compared to Non-Tobacco Users)		
Little Cigar/Cigarillo Users	1.13	0.72-1.78
Current Use of Any Other Tobacco Product	0.76	0.58-0.99
Low Trust in Government		
Low Socio-Economic Status	0.98	0.73-1.32
Low Education (HS or Less)	1.06	0.83-1.36
Indicates significant predictor		

Discussion

- Source of cigar warnings does not significantly impact believability of cigar warnings
- The lung cancer and heart disease message was significantly more likely than the other two messages to be rated as very believable
- The cancers of the mouth and throat message was significantly more likely than the not a safe alternative message to be rated as very believable
- Respondents who identified as African Americans, Hispanic or Latino, or any other race were significantly less likely to believe cigar warnings than Non-Hispanic White respondents
- Use of Little Cigars and Cigarillos did not significantly impact perceived believability of cigar warnings
- Respondents who reported use of tobacco products other than Little Cigars and Cigarillos were significantly less likely to rate warnings as very believable
- Respondents with Low Trust in Government were significantly less likely to believe cigar warnings
- Socio-economic status did not significantly impact perceived believability of cigar warnings



Limitations

- The impact of a warning that is heard over the phone may be different than when it is seen on a cigar package
- Perceived believability was measured with only one item due to time constraints in the phone survey
- Current use of any type of cigar was not measured
- Only 3 of the FTC mandated 5 warnings were tested

Conclusion

- These results indicate that some cigar warning messages mandated by the FTC are more believable than others
- Unclear how the source of a warning message may impact outcomes
- Further research is necessary to better understand how to optimize cigar health warnings to educate and prevent uptake and use of cigars
- Future work will include subgroup analyses to determine which warnings are the most believable among tobacco users and vulnerable populations

Please Contact Kristen Jarman if you have questions about this research
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