

## Motivating Meningitis Vaccinations Using Mixed Fear Appeals

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### ABSTRACT

In 2015 a vaccine was introduced for students to combat the rise of meningococcal meningitis. However, in 2016 only 33% of students were vaccinated (meningitis.org). Low vaccination rates can be attributed to the rarity of the disease and the vaccination cost. Specifically, the risk of contracting meningitis is low, (approximately 1.4 persons out of 100,000 will contract the disease), resulting in low perceived vulnerability. Additionally, the cost of the vaccine is high, and it is not consistently covered under health insurance plans. In fact, given the low risk of the disease and high cost of vaccination, the CDC does not recommend universal vaccination even among college-aged students (CDC.gov). Still given the potentially deadly consequences of this disease and the increasing outbreaks the question must arise of how can we motivate vaccination?

Fear appeals were the gold standard for motivating health protection behaviors. However, recently, mixed fear appeals have gained attention. For example, research by Passyn and Sujun (2006) found that adding high self-accountability emotions to fear appeals motivated health protection behaviors. This research extends these findings to investigate the effectiveness of adding high self-accountability emotions to fear appeals to motivate low vulnerability, high-cost health behaviors. Specifically, this study examines the effectiveness of adding guilt and challenge (both high self-accountability emotions) to fear appeals versus straight fear or fear plus hope appeals to motivate individuals to get a costly, \$75, vaccination to protect against a low-risk disease, meningitis.

The four experimental conditions were fear plus guilt, fear plus challenge, fear plus hope, and straight fear. Analysis revealed all conditions evoked similar perceptions of fear. Manipulation checks also confirmed that perceptions of hope, guilt, and challenge were all successfully added to the baseline of fear in their respective conditions. These emotion manipulations did not variably impact perceptions of vulnerability. As predicted, layering the fear appeal with either guilt or challenge increased perceptions of self-accountability over the straight fear and the fear plus hope condition.

Behavioral intentions were significantly higher in the high self-accountability conditions than the low self-accountability conditions. The intention results were directionally supported with the behavioral data. Although not statistically significant, from a medical perspective the finding that 17% of participants in the high self-accountability conditions were vaccinated versus 6% in the low self-accountability conditions is provocative. The table below summarizes study results.

### STUDY MEANS

	<i>Conditions</i>			
	<i>Straight Fear</i>	<i>Fear &amp; Hope</i>	<i>Fear &amp; Guilt</i>	<i>Fear &amp; Challenge</i>
Felt Emotions:				
Fear	5.60	5.00	5.60	5.40
Hope	5.73	<b>6.67*</b>	6.26	5.80
Guilt	3.73	3.13	<b>5.07**</b>	3.67
Challenge	4.73	4.20	5.27	<b>6.00**</b>
Other Checks:				
Vulnerability	3.73	3.13	3.67	3.24
Valence	5.47	<b>6.33**</b>	5.93	<b>7.13**</b>
Self-Accountability	4.40	4.53	<b>5.87**</b>	<b>5.93**</b>
Behavioral Intentions	4.40	4.53	<b>5.87**</b>	<b>5.93**</b>
Behavioral Compliance	6%	6%	17%	13%
*indicates that the (combined) means(s) in bold to other means was marginally significant, $p < .10$				
**indicates that the (combined) means(s) in bold to other means was significant, $p < .05$				

This study investigated how to motivate undergraduate students to get inoculated against meningitis. More specifically, the study assessed if fear appeals could be enhanced with emotions that elicit a sense of self-accountability to positively impact behavioral intentions and behavioral compliance with a costly and low vulnerability health behavior. Overall study results supported the prediction with participants in the high self-accountability, guilt and challenge, conditions reporting stronger behavioral intentions and being more likely, (although not significantly) to purchase the \$75 vaccination.

This study adds to the literature that suggests that fear appeals can be enhanced by layering them with secondary emotions. Unique to this study, the advocated behavior is both costly and associated with low vulnerability. High cost and a lack of vulnerability have previously been associated with low compliance. Therefore, this research may apply to other such behaviors such as getting vaccinated against HPV, another vaccination associated with low vulnerability and high cost (CDC.gov).

An alternative explanation for our results is that we manipulated self-efficacy or some other Protection Motivation variable in addition to accountability. However, control checks indicated no differences across conditions. Another alternative explanation is that the effects of guilt on behavioral intentions can be attributed to guilt being an other-referenced emotion and other-referencing can be more persuasive for high anxiety messages (Keller & Block, 1996). Additional research is needed to answer this question. However, given the findings in this study for guilt, other-referenced, and challenge, self-referenced, the likelihood that other-referencing motivated the behavior is unlikely. In conclusion, this study suggests that undergraduate students can be motivated to get a meningitis vaccination by layering fear appeals with guilt or challenge.

## REFERENCES

- Center for Disease Control and Prevention (2017) Human Papilloma Virus. [Online] Available from <https://www.cdc.gov/hpv/> [Assessed on May 25, 2017]
- Keller, P. A. & Block, L.G. (1996) Increasing the Persuasiveness of Fear Appeals: The Effect of Arousal and Elaboration. *Journal of Consumer Research*. 22 (March), p. 448-459.
- Meningitis Research Foundation (2017) For a World Free from Meningitis and Septicemia. [Online] Available from <http://www.meningitis.org/> [Assessed on May 23, 2017]
- Passyn, K. & Sujan, M. (2006) Self-Accountability Emotions and Fear Appeals: Motivating Behavior. *Journal of Consumer Research*. 32 (4): p. 583-589.

**Keywords:** *fear appeals, mixed emotions, health protection behaviors*

**Relevance to Marketing Educators, Researchers, and Practitioners:** Insights into how to motivate meningitis and possibly other vaccinations using mixed fear appeals.

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**TRACK: Health Care Marketing**