

Frequency of repetition affects risk salience but not risk perception

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Abstract

Lu et al. (2015) found participants perceive a risk (about Red Bull) to be greater as they read about it more frequently. However, as the repetition of a risky statement increased beyond a threshold, participants' risk perception decreased due to over exposure. As a result risk perception follows an inverted U-shape function of risk. In the current study we examined three potential mediators (salience, emotionality, and credibility) of this inverted U-shape function of risk perception. Our results showed that there is a trend towards an inverted U-shape relationship between frequency of repetition and salience instead of risk perception.

Background and Motivation

- People perceive a risk to be greater as they read about it more frequently, but as the repetition of a risky statement increases beyond a threshold, risk perception goes down (Lu et al., 2015)
- In the present study we tested potential mediators (salience, emotionality, and credibility) that may play a role in the inverted U-shape function of risk perception

Experimental Design & Procedure

- Undergraduates (N=357) participated online and were randomly assigned to one of five frequency repetition conditions (3, 9, 15, 21, 30); i.e. in the 3 condition Ss saw the risky target information presented 3 times
- Ss read news blurbs on 3 webpages. Each page had 16 messages which consisted of target information (about the risks of Red Bull), regular fillers, and splittable fillers
- **Example target:** The Red Bull controversy has two parts to it. First, its ingredients do not follow national regulations. Second the caffeine and sodium benzoate in Red Bull are close 200PPM. The side effects of sodium benzoate are similar to that of narcotic drugs.
- **Example Splittable Filler:** 1) Don't be outspoken; no matter what mood you are in, listen to others. 2) You think what you say to others will not get out, but somehow everyone knows.

	Condition 3	Condition 9	Condition 15	Condition 21	Condition 30
Regular	12	12	12	12	12
Splitable	33	27	21	15	6
Target	3	9	15	21	30
Total	48	48	48	48	48

Dependent Measures (examples from scales)

Risk: How likely is it that your health will be damaged by drinking Red Bull?" 0= (Not likely at all) 100= (extremely likely)

Credibility: How credible did you think the statements about the dangers of Red Bull were?" 1= (not at all credible) 7= (Very credible)

Emotionality: How positive or negative did you feel about the Red Bull statements (1=Very negative, 7=Very positive).

Salience: How much did the statements about Red Bull stand out?" 1= Did not stand out at all 7=Stood out a lot

Results

Only Ss who took more than 90 seconds to complete the study and passed the manipulation check question were included in the final results analysis.

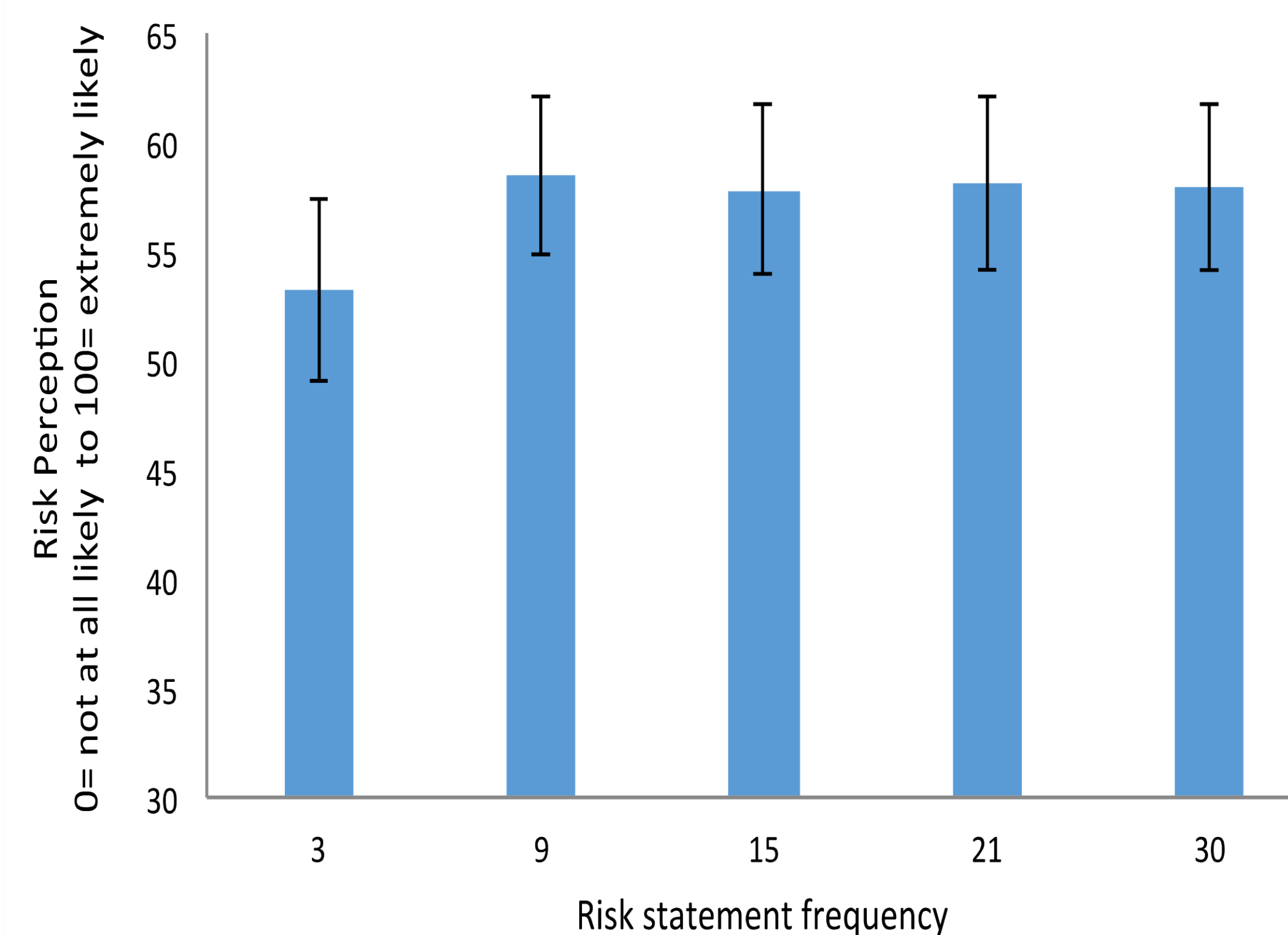


Figure 1. No significant effect of frequency of risk exposure on risk perception ($F(4, 205)=.283, p=.889$) Standard error bars are shown.

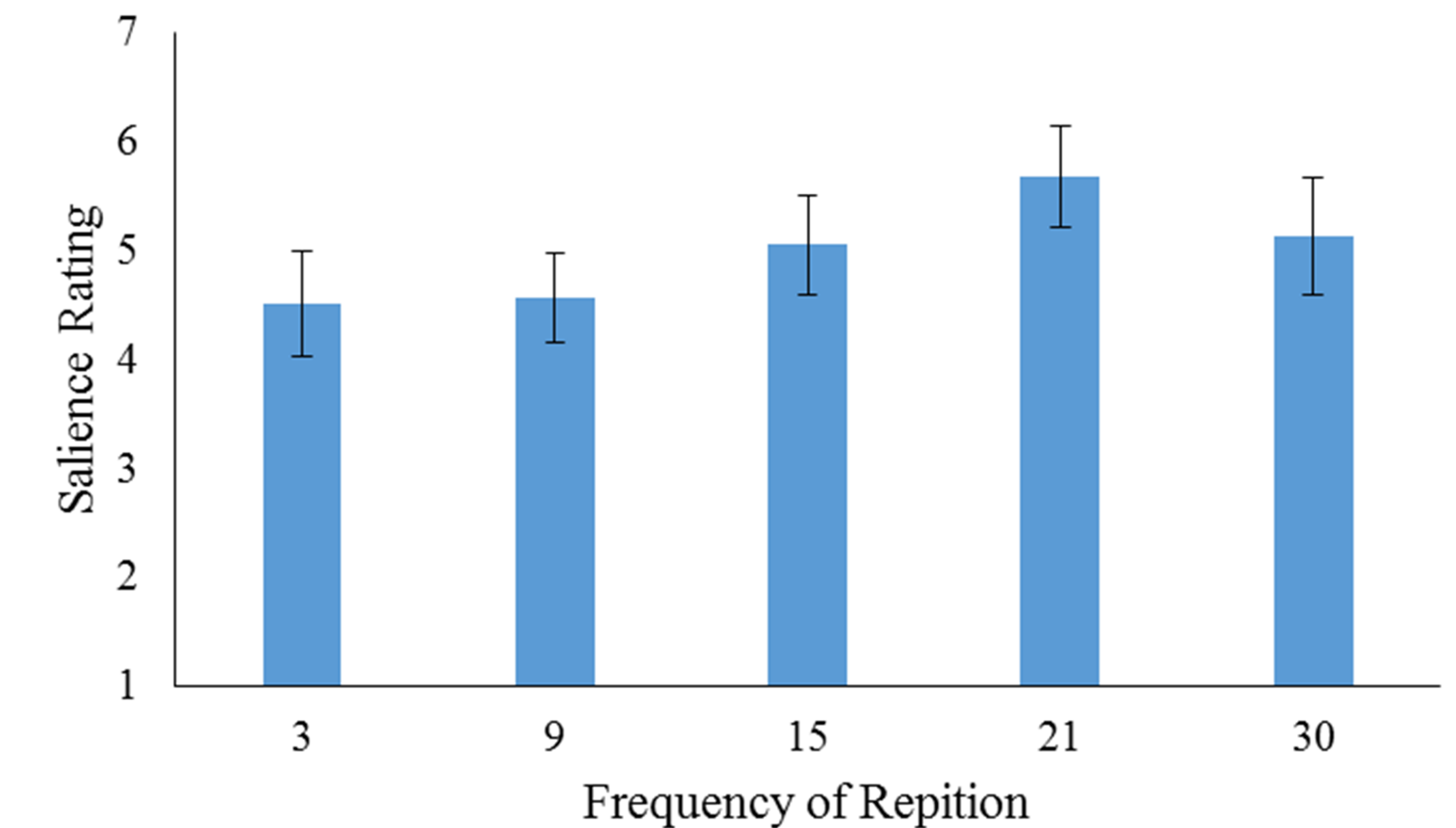


Figure 2. Frequency of risk exposure increased risk salience ($F(4, 203)= 4.04, p=.004, \eta^2=.074$).

	Risk	Credibility	Emotionality
Risk			
Credibility	.541**		
Emotionality	.056	.231**	
Salience	.225**	.234**	.025

Figure 3. Correlation matrix with credibility, emotionality, and salience. ** $p<.01$

Discussion

- Repeating risky statements did not increase risk perception (inconsistent with Lu et al., 2015)
- Frequency of risk exposure increased risk salience
- As the credibility of risk statements goes up, risk perception increases
- A follow up study is currently running that involves an unavoidable risk since few participants reported drinking Red Bull.

Reference

Lu, X., Xie, X., & Liu, L. (2015). Inverted U-shaped model: How frequent repetition affects perceived risk. *Judgment and Decision Making*, 10(3), 219.

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