

A Consumer Perspective on Warning Labels:

Misperception and Confusion as Unintended Consequences of Warning Labels

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Study: Misperception & Confusion From the Warning Label

- 309 pregnant California women: consumed cola/coffee in last 2 years
- Randomly assigned to one of two conditions:

Control Condition (N= 155)
 (Proposition 65 warning label absent on cola)

Experimental Condition (N= 154)
 (Proposition 65 warning label present on cola)

Panel A
Back package of cola product

VERY LOW SODIUM, 35 mg OR LESS PER 240 mL (8 fl oz)

Nutrition Facts	Standard Serving		This Package	
	8 fl oz (240 mL)		20 fl oz (591 mL)	
Serving Size	8 fl oz (240 mL)		20 fl oz (591 mL)	
Servings Per Container	2.5		1	
Amount Per Serving	%DV*		%DV*	
Calories	0	0	0	0
Total Fat 0g	0g	0%	0g	0%
Sodium	30mg	1%	80mg	3%
Total Carbohydrate	0g	0%	0g	0%
Sugars	0g	0%	0g	0%
Protein	0g	0%	0g	0%

* Percent Daily Values (DV) are based on a 2,000 calorie diet.

CARBONATED WATER, CARAMEL COLOR, ASPARTAME, PHOSPHORIC ACID, POTASSIUM BENZOATE (TO PROTECT TASTE), NATURAL FLAVORINGS, CITRIC ACID, CAFFEINE.

PHENYLETHANOLAMINE: CONTAINS PHENYLETHANOLAMINE.

CAFFEINE CONTENT: 34mg/8oz, 85mg/20 fl oz.

Panel B
Back package of coffee product

Brew the Best Every Time

USE FRESH BEANS.
For the freshest cup, buy coffee frequently, weekly if possible. Store in an airtight container.

USE GOOD WATER
Bottled or filtered water is recommended. Avoid using water from the hot tap or water that has already boiled.

USE THE CORRECT GRIND
Each brewing method requires its own grind- medium for automatic drip, coarse for French press, fine for espresso.

MEASURE CAREFULLY
We recommend using two level tablespoons (10g) of ground coffee for each six ounces (180 ml) of water.

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CAFFEINE CONTENT: 34mg/8oz, 85mg/20 fl oz.

WARNING: THIS PRODUCT CONTAINS CAFFEINE, A PRODUCT KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

Panel B
Back package of coffee product

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Placement, wording, and font- consistent with proposed warning

Results: Misperception & Confusion

□ *Misperception:*

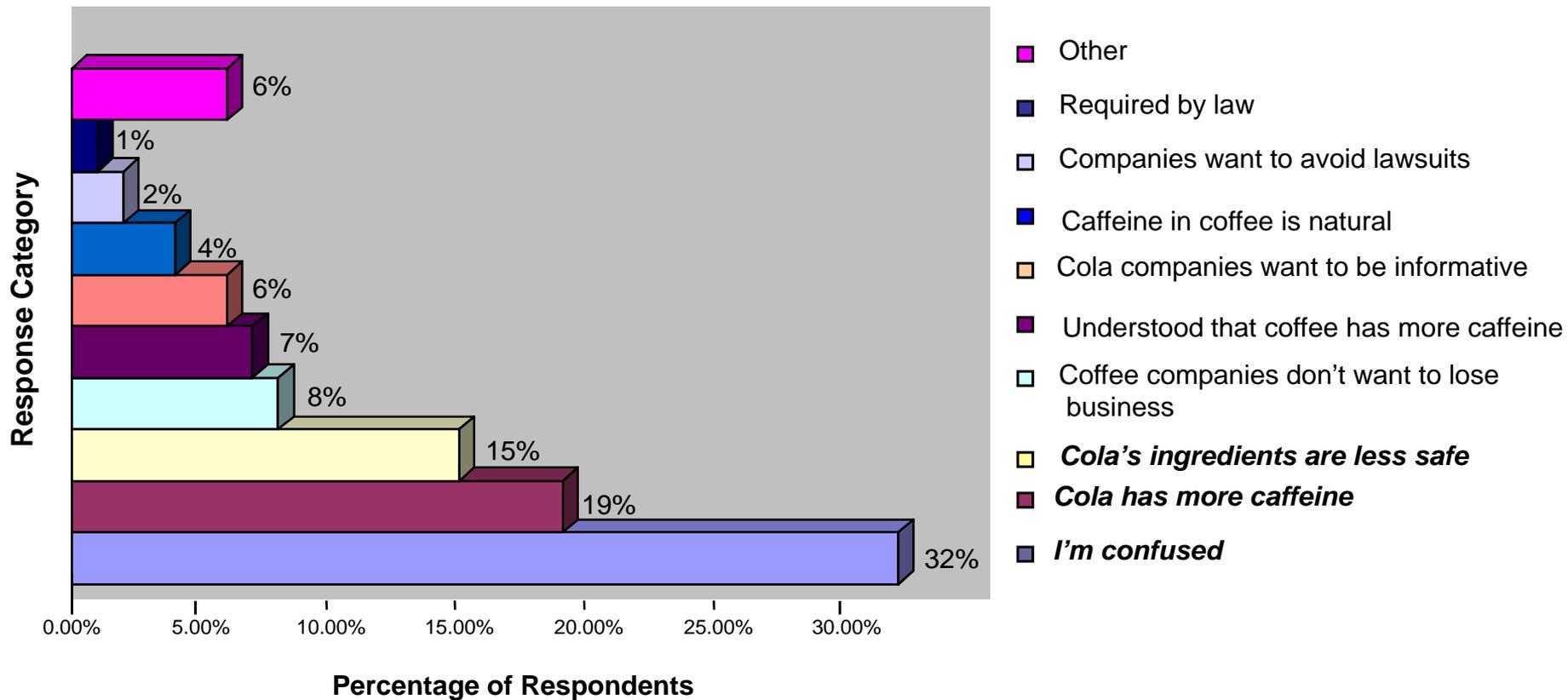
- Consumers who were (vs. were not) exposed to the Proposition 65 warning label on cola were significantly more likely to falsely believe that caffeine in cola is...
 - Stronger than the caffeine in coffee ($p = .01$)
 - Different from the caffeine in coffee ($p = .008$)
 - More of a safety concern than the caffeine in coffee ($p = .003$)

□ *Confusion:*

- Significantly more consumers were confused about which is safer— cola or an equivalent amount of coffee-- when they were (vs. were not) exposed to the Proposition 65 warning label ($p = .04$).

Results: Misperception & Confusion

- **Experimental respondents asked “Why is there a caffeine warning label on cola but not on coffee?”**



Conclusion

- Results should be interpreted in context of study's limitations:
 - 309 respondents
 - Sample slightly under-represents certain demographic segments (extremely high and low in education, extremely high income, Asian) and over-represents others (African American)
- Proposition 65 warning label on cola but not on coffee produces confusion and misperception