



Proposition 65 Clear and Reasonable Warning Regulations Study

**Survey results assessing the effectiveness of existing
and proposed Proposition 65 warnings**

Submitted by
UC Davis Extension Collaboration Center
October 27, 2015

ACKNOWLEDGEMENTS

The staff of the Office of Environmental Health Hazard Assessment and the UC Davis Extension Collaboration Center wish to thank the Department of Motor Vehicles (DMV) for their cooperation and permission to conduct the surveys in DMV waiting areas. Each office graciously welcomed the survey team and extended them every courtesy as the team surveyed willing DMV customers.

This report was prepared by the UC Davis Extension Collaboration Center.

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EXECUTIVE SUMMARY

The Office of Environmental Health Hazard Assessment (OEHHA) is the Agency tasked with implementing and carrying out the objectives of the Safe Drinking Water and Toxic Enforcement Act of 1986 (“the Act”), also commonly referred to as “Prop 65.” On January 16, 2015, OEHHA gave Notice proposing to repeal the current Article 6 regulations and adopt new regulations in Article 6 in Title 27 of the California Code of Regulations. Article 6 provides guidelines when clear and reasonable warnings are required. The publication of the notice opened a public comment period. A significant number of comments challenged the efficacy of the proposed new warnings and the benefit of replacing existing warnings to meet proposed new guidelines. There was only anecdotal evidence regarding the effectiveness of the current warnings to inform the public of health risks.

OEHHA contracted with the UC Davis Extension Collaboration Center to conduct a study to assess the effectiveness of the existing and proposed warnings. The purpose of the study was to assess whether the existing or proposed warning content more clearly communicates that the chemical in question is known to the State of California to cause cancer, birth defects or other reproductive harm.

A survey was designed to solicit the general public’s opinion regarding the existing and proposed warnings. To obtain a broad sample of the general public that represents the demographics of the State of California, data was collected from 19 Departments of Motor Vehicle (DMV) offices. Willing participants completed the survey as they waited.

The survey was available in both English and Spanish. Two members of the survey team were fluent Spanish speakers, able to engage Spanish-speakers. Demographic information was collected to ensure the survey results represented the diversity of the State of California. A total of 1,527 responses were collected between August 6, 2015, and August 25, 2015. The result was that the population sampled is similar to the population of California.

More effective warning

One primary goal of the survey was to identify the more effective warning (between the existing and proposed warnings). The primary question was “Which warning is more helpful?” Effectiveness was defined as helpfulness. The old and new warnings, representing 8 topic areas, were presented side-by-side in random order to the participants. **The results showed that over 75% of the participants selected the proposed warning as being more helpful than the existing warning.**

Inclusion of chemical names helpful

The survey also aimed to study if the inclusion of chemical names on the warning were effective. To do this, two warnings were displayed side-by-side: one warning included the specific chemical names; and the other warning referred generally to chemicals. The goal was to assess whether people find it helpful to see the names of the chemicals they are being

exposed to. **The results showed that 66% of the people selected the warning with the specific chemical names as being more helpful than the warning that generally referred to chemicals.**


The survey also asked for respondents' reactions to inclusion of the specific chemical/s in the warning. **The most frequent reaction was that the inclusion of the chemical names made people feel better able to make an informed choice.**

In addition, participants' familiarity with specific chemicals (such as lead, mercury, and carbon monoxide) did not relate to their preference for the inclusion of chemical names in the warnings.

Arrangement of chemical names on warning

Those who preferred the inclusion of the specific chemical names were then asked whether they preferred the specific chemical names on a separate line or the specific chemical names embedded in the paragraph. **The results showed that almost 75% of the people who selected the warning with the specific chemical names also selected the warning with the chemical names on their own line as being more helpful than the one paragraph warning.**

Warning Symbol

The survey also tested participant's reaction to the proposed  warning symbol (both the yellow symbol and the black & white symbol). **The most frequent reaction was that the symbol meant "warning"**. Few people reported the symbol confused or scared them.

Website

The survey asked participants how likely they would be to visit the Prop 65 website if they wanted additional information. **Over half of the respondents said they are very likely or somewhat likely to visit the website.**

QR Code

Last, the survey asked if participants would find it helpful to have a QR code on the warning. **A little over a third of the respondents said they would find it helpful to have a QR code on the warning.**

Analyses

The analyses included in this report look at differences across warning topics (such as enclosed parking garages, petroleum products, furniture, etc.) and demographics (such as gender, age, pregnant status, race, survey language, home language, and education).

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INTRODUCTION

The purpose of Proposition 65 warnings is to clearly communicate the risk of exposure to chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm. The Office of Environmental Health Hazard Assessment (OEHHA) is the Agency tasked with implementing and carrying out the objectives of the Safe Drinking Water and Toxic Enforcement Act of 1986 (“the Act”), also commonly referred to as “Prop 65”.¹ The Act prohibits a person in the course of doing business from exposing any individual to a chemical known to the state of California to cause cancer or reproductive toxicity without first providing a clear and reasonable warning.

On January 16, 2015, OEHHA gave Notice proposing to repeal the current Article 6 regulations and adopt new regulations in Article 6 in Title 27 of the California Code of Regulations. Article 6 provides guidelines when clear and reasonable warnings are required. The new regulations would further the “right-to-know” purposes of the statute and provide more specific guidance on the content of safe harbor warnings for a variety of exposure situations, and corresponding methods for providing those warnings. It also would add a specific section to the regulations addressing the relative responsibilities for providing warnings for businesses in the chain of commerce versus retail sellers of a given product.

Written comments were solicited and sixty-one (61) comments were received. A significant number of comments challenged the efficacy of the proposed new warnings and the benefit of replacing existing warnings to meet proposed new guidelines. There was only anecdotal evidence regarding the effectiveness of the current warnings to inform the public of health risks.

OEHHA contracted with the UC Davis Extension Collaboration Center to conduct a study to assess the effectiveness of the existing and proposed warnings. The purpose of the study was to assess whether the existing or proposed warning content more clearly communicates that the chemical in question is known to the State of California to cause cancer, birth defects or other reproductive harm.

BACKGROUND

Title 27, Article 6 of the California Code of Regulations sets forth the warning methods and content that OEHHA has determined to be “clear and reasonable” for purposes of the Act. This Article thus establishes a “safe harbor” for warning methods and content that a business may rely on as being “clear and reasonable” in compliance with the Act.

Under the existing regulations, a warning is “clear” if it clearly communicates that the chemical in question is known to the State of California to cause cancer, birth defects or other reproductive harm. It is “reasonable” if the method employed to transmit the message is

¹ Health and Safety Code Section 25249.5 *et seq.*

reasonably calculated to make the warning message available to the individual prior to exposure.

The regulatory action OEHHA is proposing would repeal the current Article 6 regulations and replace the regulations in Article 6. The regulations in proposed Sub article 2 provide specific guidance on methods and content for safe harbor warnings that will provide more detailed information for the public, including a clear statement that a person “can be exposed” to a listed chemical, the names of those chemicals, and a link to a website maintained by OEHHA containing supplemental information.

One purpose of the regulatory proposal was to address concerns that the existing safe harbor warnings lack the specificity necessary to ensure that the public receives useful information about potential exposures. Additionally, communication technology currently in widespread use by the general public was not available when the regulations were adopted over 25 years ago.

RESEARCH DESIGN / METHODOLOGY

The survey was designed to solicit California’s general public opinion of whether the existing or proposed warnings are more helpful as a clear warning of chemical exposure. Respondents were also asked about their reaction to specific elements of the proposed warnings.

The fundamental research question was: Does the proposed warning language more clearly communicate the warning than the existing warning? Additional questions asked about the public’s reaction to specific elements of the warning (e.g., is the inclusion of the warning symbol helpful?).



Location	# Participants
Manteca/Modesto/Turlock/Merced	318
San Mateo/Redwood City	159
Santa Clara/San Jose	210
Pasadena	110
Los Angeles/Bell Gardens	197
San Diego	219
El Cajon	105
Oroville/Chico	63
Redding/Red Bluff	146
Total	1527

OEHHA elected to survey a broad sample of the general public that represented the demographics of the State of California. For that reason, Department of Motor Vehicle (DMV) locations were selected for survey locations. The DMVs providing a “captured” audience where people typically have time to complete a survey while waiting for their turn. In total, data were collected from 19 DMV offices across urban and rural areas in the Central Valley, Southern California, San Francisco Bay Area, and Northern California. A list can be found in Appendix A.

Willing participants completed the survey as they waited. The survey was available in both English and Spanish. The survey questionnaire can be found in Appendix B. To prevent unintentional bias, questions comparing existing and proposed warnings were randomly displayed representing the following sectors: enclosed parking garages, petroleum products, furniture, designated smoking areas, fast food restaurants, passenger vehicles, and service stations – in addition to a generic warning. A copy of the warning used in the survey can be found in Appendix C.

A total of 1,527 responses were collected between August 6, 2015, and August 25, 2015. A team of four UC Davis personnel (3 students and 1 staff) conducted the surveys. Jodie Monaghan led the survey team. The student survey team members were Leigh Hiura, Rebecca Belloso, and Yadira Chavez.

The survey analysis was led by Kali Trzesniewski, Ph.D., Associate Specialist in Cooperative Extension, UC Agriculture and Natural Resources. And the study director was Tara Zagofsky, Ph.D., Director of the UC Davis Extension Collaboration Center.

POPULATION OF DEMOGRAPHICS

Selected demographic information was collected from participants in order to understand whether warning effectiveness ratings were influenced by factors such as age, race, and education level. Questions maintained the anonymity of participants and allowed for participants to decline to answer if they wished.

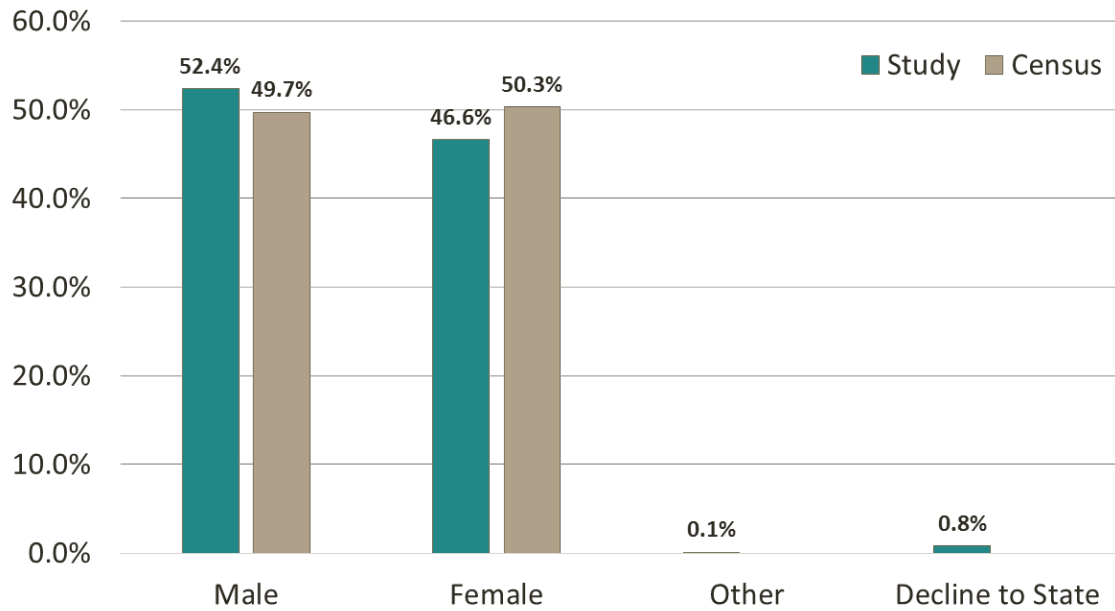
Note: This section of the survey was prefaced with a statement that explained the purpose of the question to participants. This statement read: “In order to ensure we are surveying a representative group of Californians, please provide some information about yourself.”

Analysis: Counts were calculated for each demographic. When available, comparable statistics are provided for the 2014 California census data.

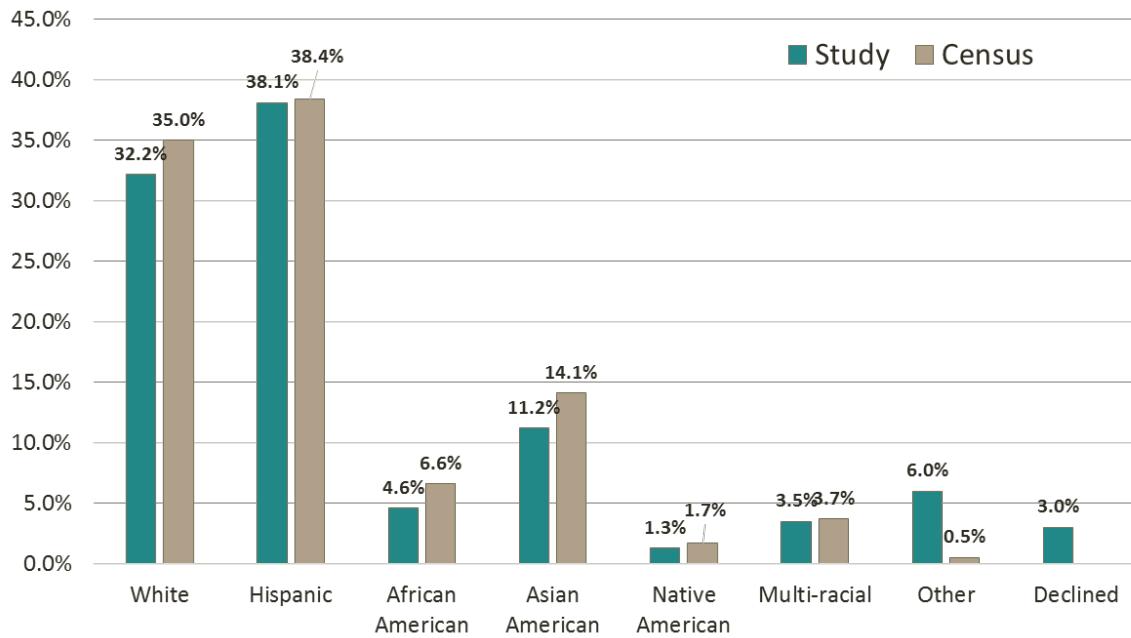
Result: the population sampled is diverse and similar to the population of California.

DEMOGRAPHIC RESULTS

GENDER

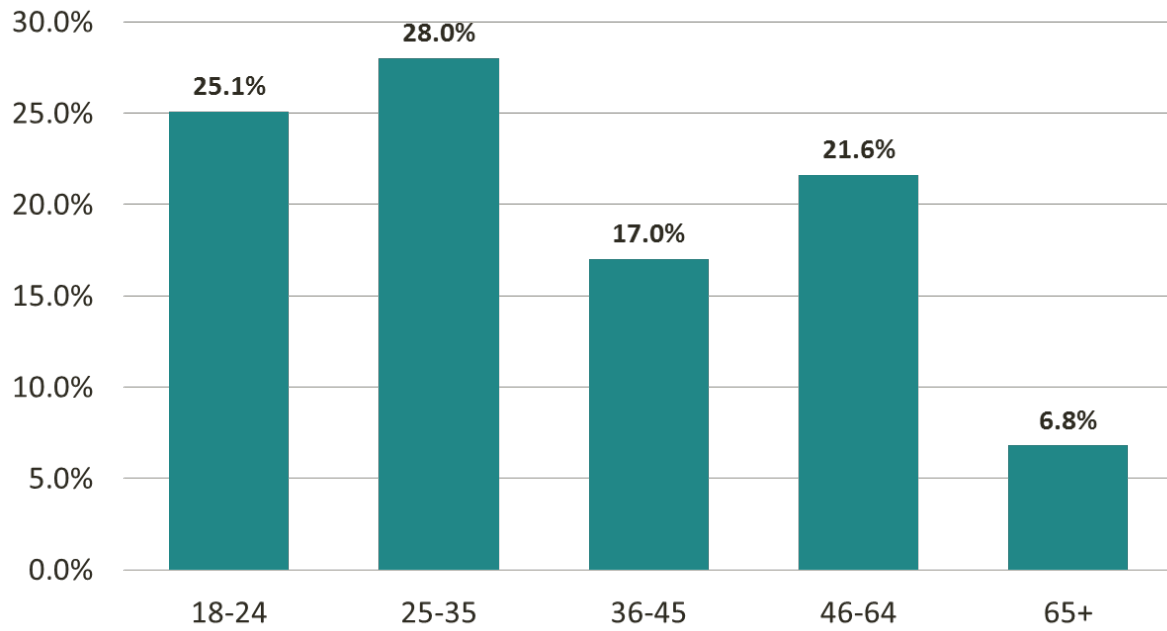


RACE/ETHNICITY



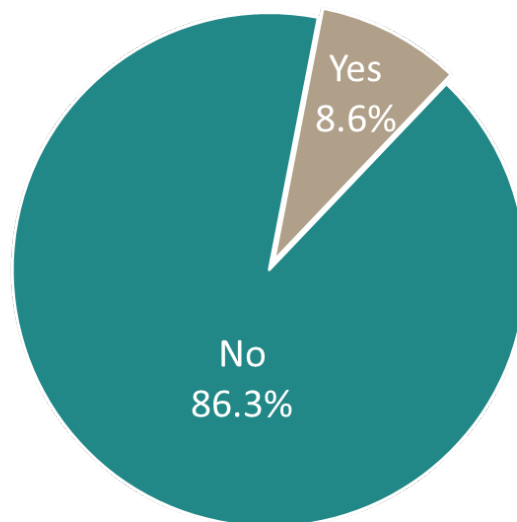
Due to limited sample size, analyses will be based on White, Hispanic, and all other races (except decline) grouped together.

AGE



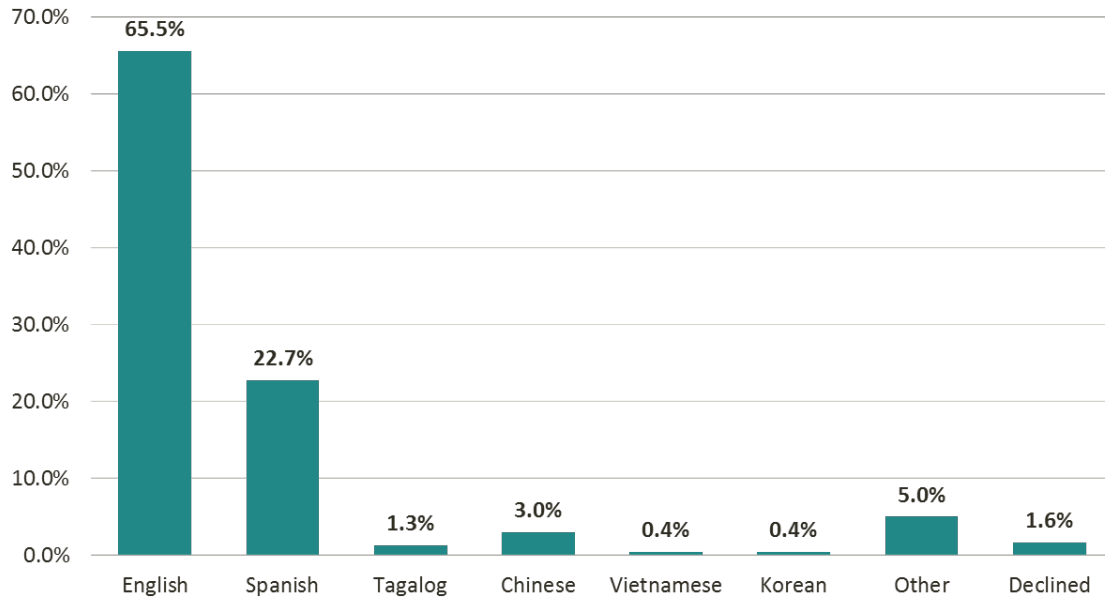
INTENT TO BECOME PREGNANT

Question: Are you or your partner pregnant or trying to become pregnant?



LANGUAGES SPOKEN AT HOME

Question: Primary language spoken at home

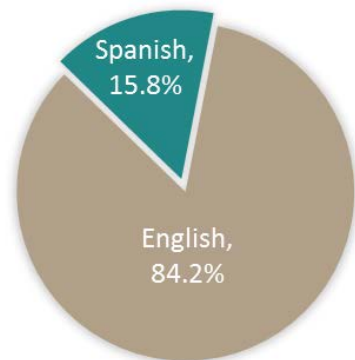


Due to limited sample size, analyses will be based on English, Spanish, and all other languages (except decline) grouped together.

SURVEY TAKEN IN SPANISH OR ENGLISH

Question: When approached, people were asked if they preferred to take the survey in English or Spanish.

TOOK SURVEY IN...



SURVEY RESULTS

IS THE OLD OR NEW MORE HELPFUL?

Question: Which warning is more helpful?

Note: The old and new warnings were presented side-by-side in random order to the participants.

Goal: To identify the more effective warning – effectiveness was defined as helpfulness.

Analysis: Count of the number of people who chose the old versus new warning

Result: Across all warning, the results showed that **OVER THREE-FOURTHS** of the people **SELECTED THE NEW WARNING** as being more helpful than the old warning ($\chi^2 = 364.57, p < .001$; Figure 1).

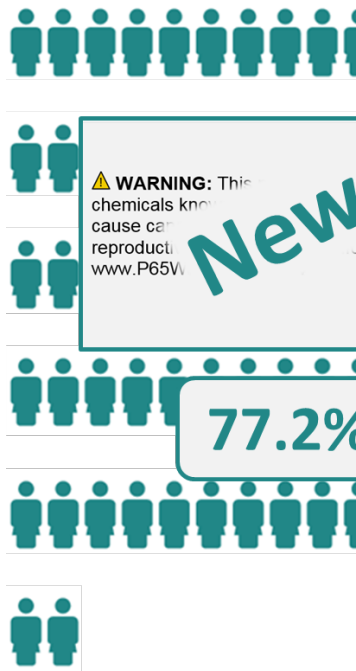


Figure 1: More helpful warning.

ARE THERE DIFFERENCES ACROSS WARNING TOPICS?

Result: (Warning topic)²

- **For each warning topic, people preferred the new warning over the old warning** (χ^2 s = 12.50 – 90.92, $ps < .001$; Figure 2).
- People's preference for the new warning is greater than would be expected by chance ($ts = 3.71 – 15.30$, $ps < .001$).
- *Differences across warning topics:* The preference for the new warning was statistically significantly stronger for:
 - Generic compared to
 - Designated smoking area ($p = .001$), furniture ($p = .002$), parking garage ($p = .019$), passenger vehicle ($p = .012$), petroleum products ($p < .001$), service station ($p < .001$)
 - Fast food compared to
 - Designated smoking area ($p = .016$), petroleum products ($p < .001$), service station ($p = .011$)
 - Petroleum products compared to
 - Parking garage ($p = .004$) and passenger vehicle ($p = .032$)

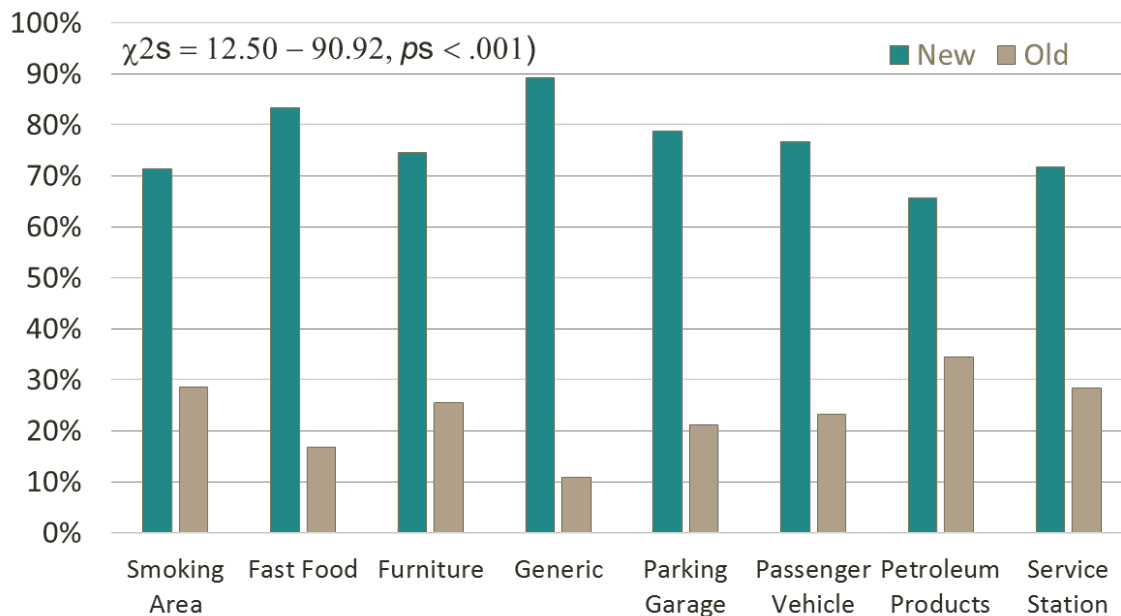


Figure 2: Helpfulness of warning by warning content.

² Analysis: (1) A one-way ANOVA (analysis of variance) with warning topic or demographic factor as a random factor predicting selection of new versus old warning. (2) Preference for new warning was compared to chance (50%) using a one-sample t-test.

ARE THERE DIFFERENCES ACROSS DEMOGRAPHICS?

Results (demographics):

- There were no differences in helpfulness of the new warning across:
 - Gender (Figure 3),
 - Race (Figure 4),
 - Pregnant status (Figure 5),
 - Survey language (Figure 6),
 - Home language (Figure 7), or
 - Education (Figure 8).
- The only difference across demographic groups was for age: younger people preferred the new warning more than older people ($r = -.16, p < .05$; Figure 9).

GENDER

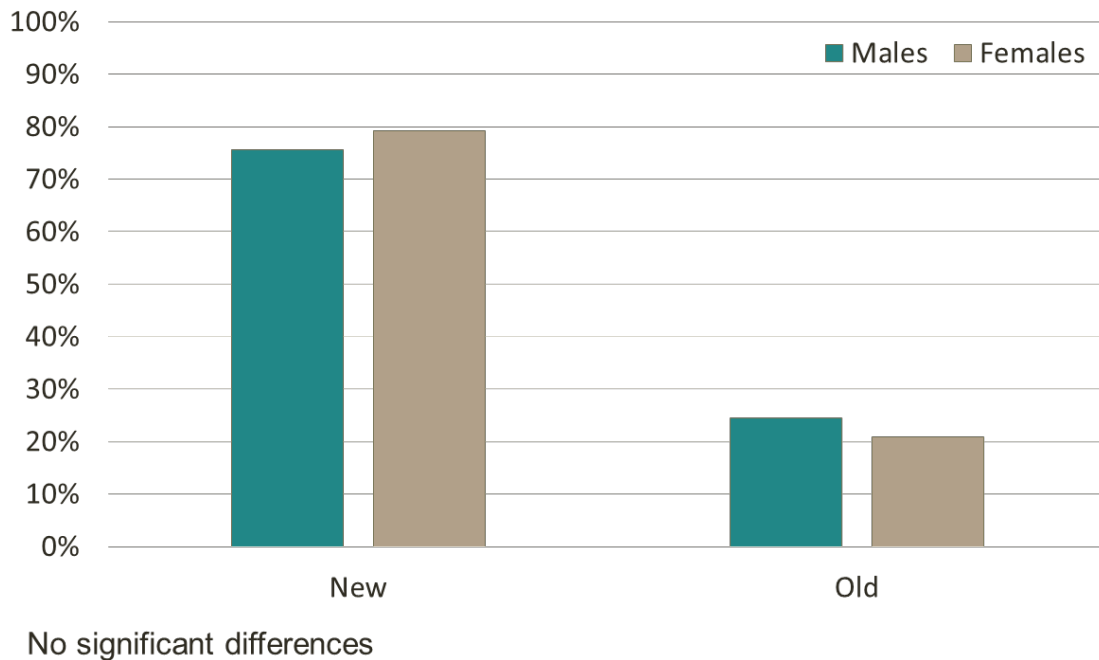


Figure 3: Helpfulness of warning by gender.

RACE

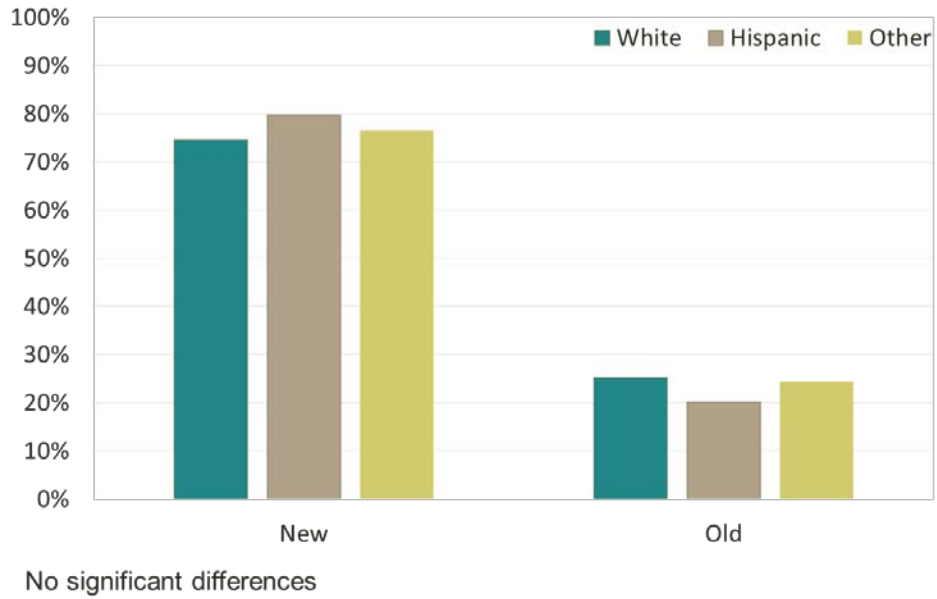


Figure 4: Helpfulness of warning by race.

PREGNANT STATUS

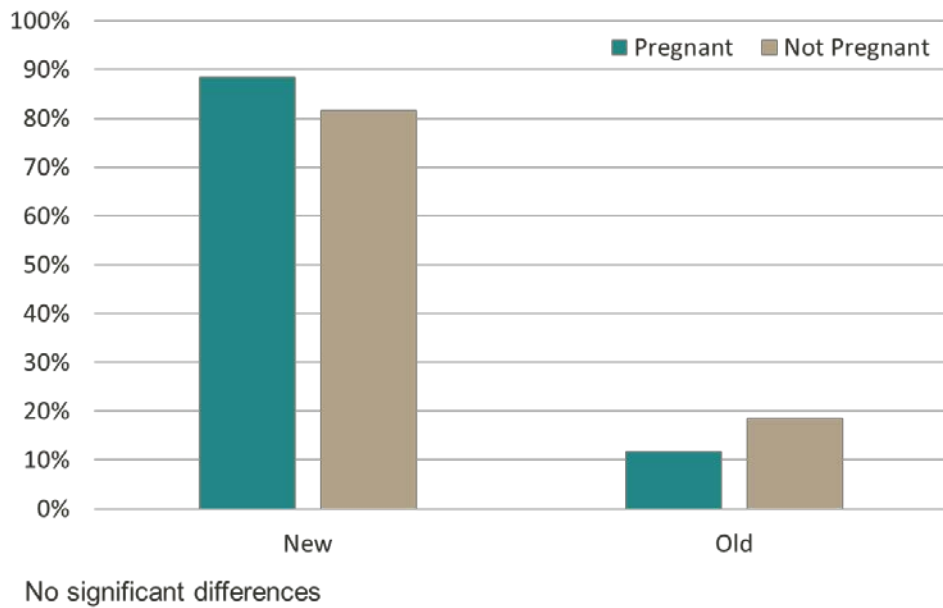


Figure 5: Helpfulness of warning by pregnant status.

SURVEY LANGUAGE

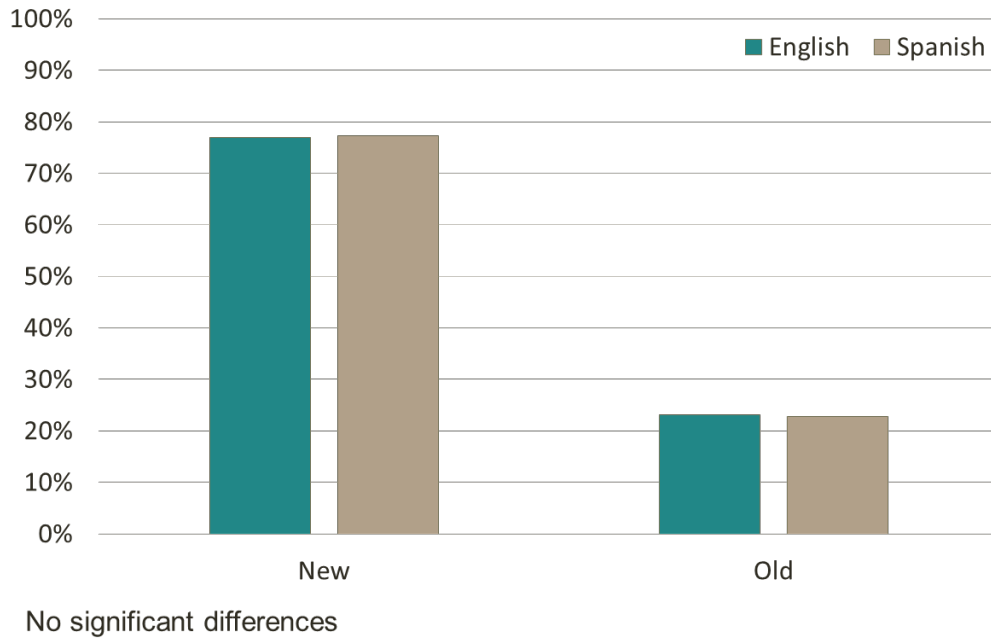


Figure 6: Helpfulness of warning by survey language.

HOME LANGUAGE

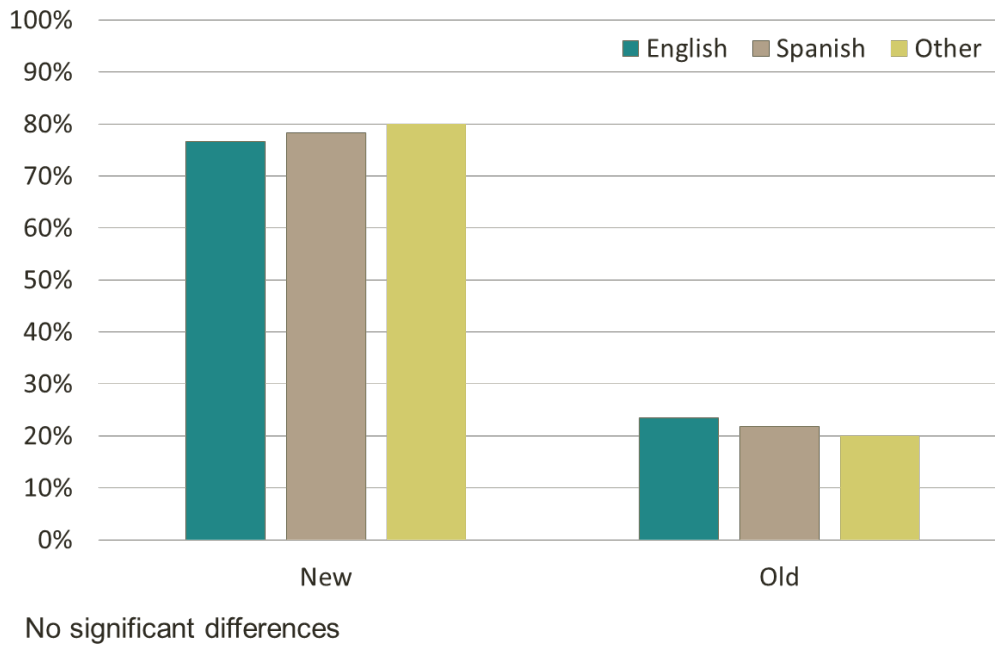


Figure 7: Helpfulness of warning by home language.

EDUCATION

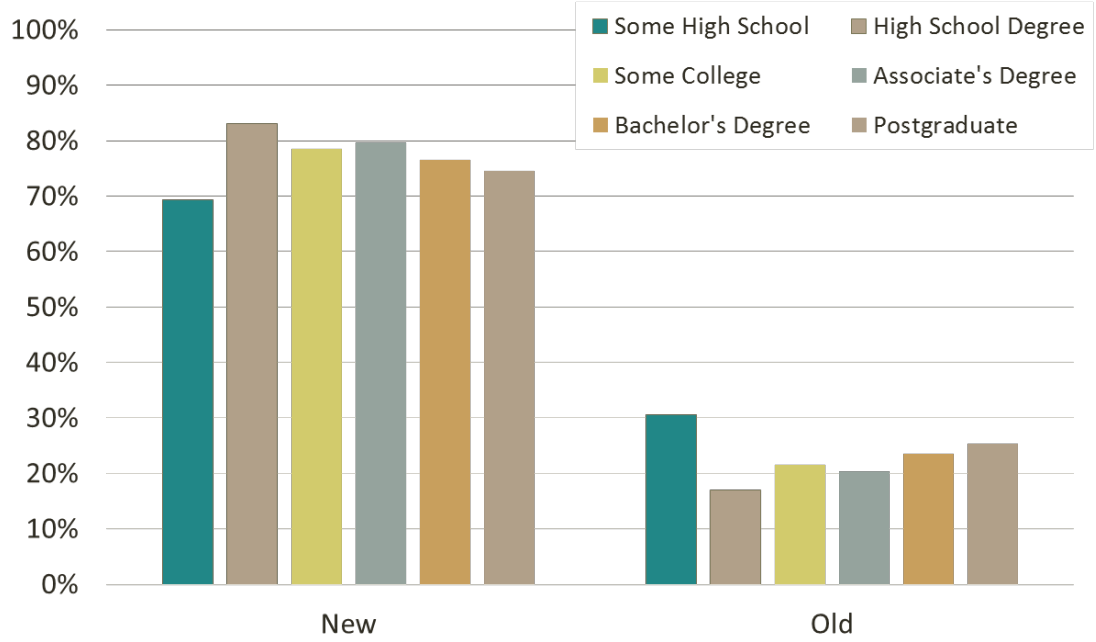


Figure 8: Helpfulness of warning by education.

AGE

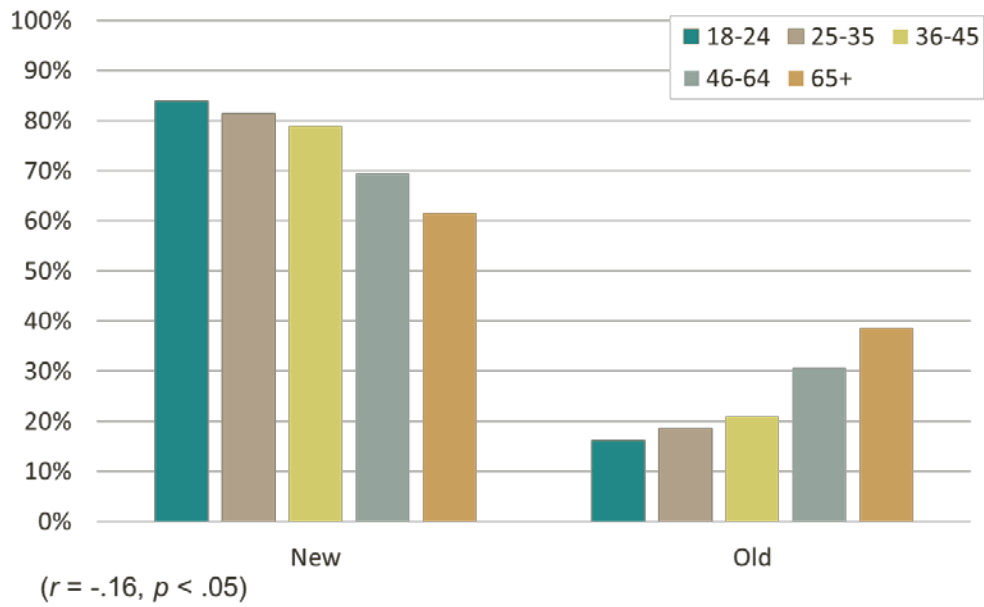


Figure 9: Helpfulness of warning by age.

IS THE INCLUSION OF SPECIFIC CHEMICAL NAMES HELPFUL?

Question: One warning includes the chemical names and the other warning refers generally to chemicals. Which warning is more helpful?

Note. The warning with the specific chemical names and the general warning were presented side-by-side in random order to the participants.

Goal: To assess whether people find it helpful to know the names of the chemicals they are being exposed to.

Analysis: Count of the number of people who chose the warning with the specific chemical name versus the warning that refers generally to chemicals.

Result: Across all warnings, the results showed that **TWO-THIRDS** of the people **SELECTED THE SPECIFIC CHEMICAL NAMES WARNING** as being more helpful than the general warning ($\chi^2 = 154.35, p < .001$; Figure 10).

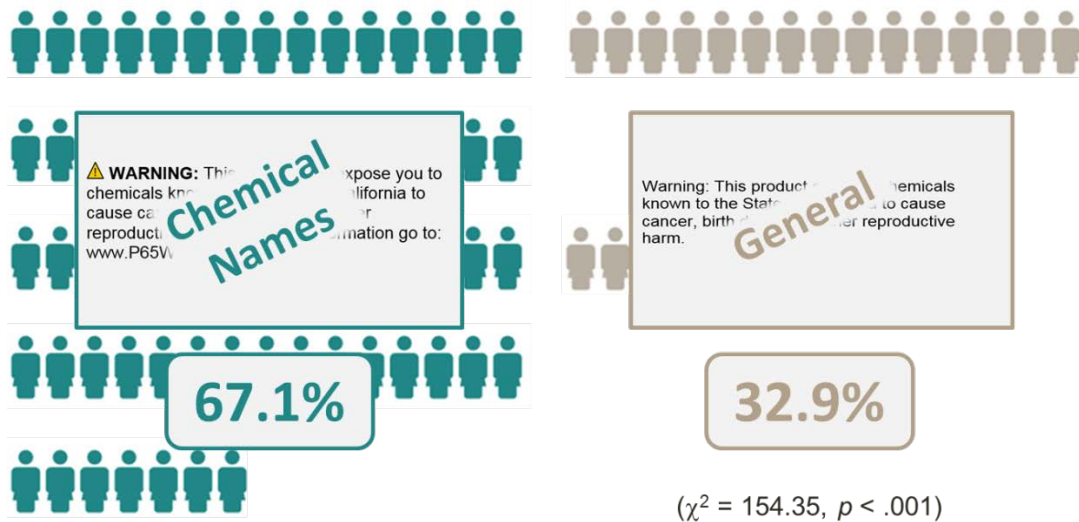


Figure 10: Preference for the inclusion of specific chemical names.

ARE THERE DIFFERENCES ACROSS WARNING TOPICS OR DEMOGRAPHIC GROUPS?

Results (warning topic)³:

- For each warning topic, people preferred the warning with the inclusion of chemical names over the general warning (χ^2 s = 9.23 – 48.08, p s < .01; Figure 11).
- People's preference for the new warning is greater than would be expected by chance for all warnings (t s = 4.13 – 7.45, p s < .001) except petroleum products ($t = 1.32$, $p < .189$).
- This preference was lower for petroleum products compared to the other warnings ($F = 2.43$, $p = .024$).

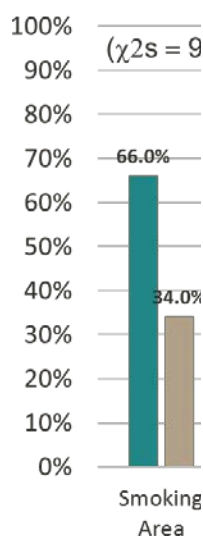


Figure 11: Inclusion of specific chemical names by warning

Results demographics):

- There were no differences in preference for specific chemical names across gender (Figure 12), age (Figure 13), or pregnant status (Figure 14).
- There were differences for four demographic groups
 - Race ($F = 6.51$, $p = .002$; Figure 15), survey language ($F = 5.04$, $p = .025$; Figure 16), home language ($F = 8.96$, $p < .001$; Figure 17), and education ($r = -.11$, $p < .001$; Figure 18).
 - These are all related to each other; thus, a follow-up analysis was conducted (multiple logistic regression) to identify primary effects.
 - When controlling for each demographic, only the preference difference for education remained significant.
 - Thus, **the main demographic effect is that less educated people prefer the inclusion of the specific chemical names** (odds ratio = .91, $p = .04$).

³ Analysis: (1) A one-way ANOVA (analysis of variance) with warning topic or demographic factor as a random factor predicting selection of the inclusion of specific chemical names versus the general warning. (2) Preference for new warning was compared to chance (50%) using a one-sample t-test.

GENDER

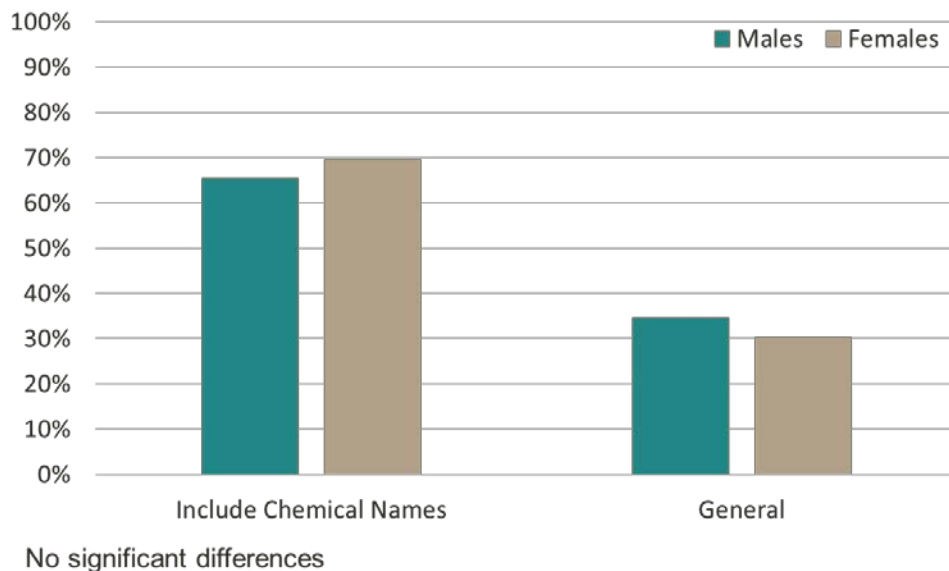


Figure 12: Inclusion of specific chemical names by gender.

AGE

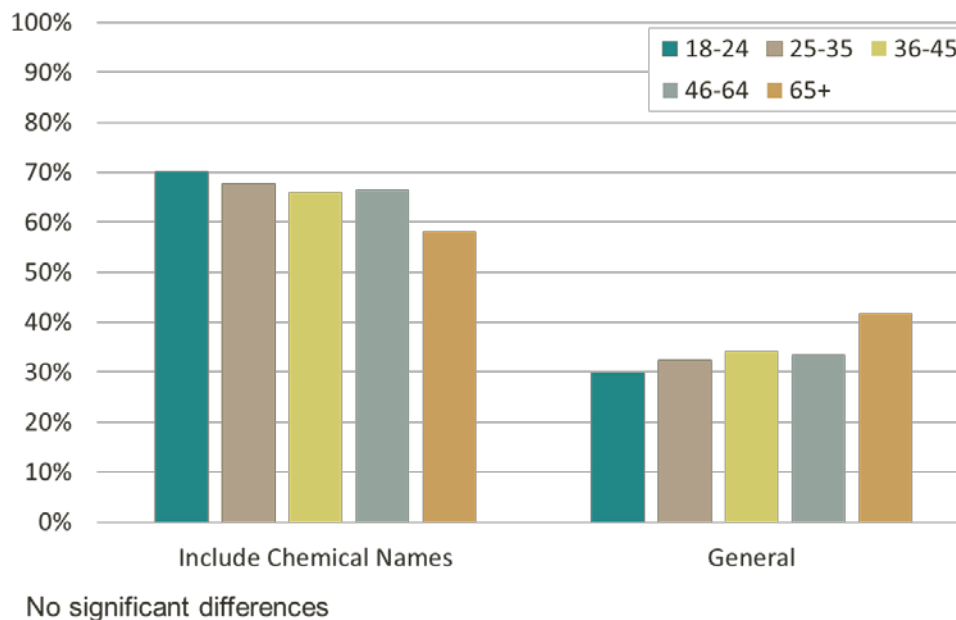


Figure 13: Inclusion of specific chemical names by age.

PREGNANT STATUS

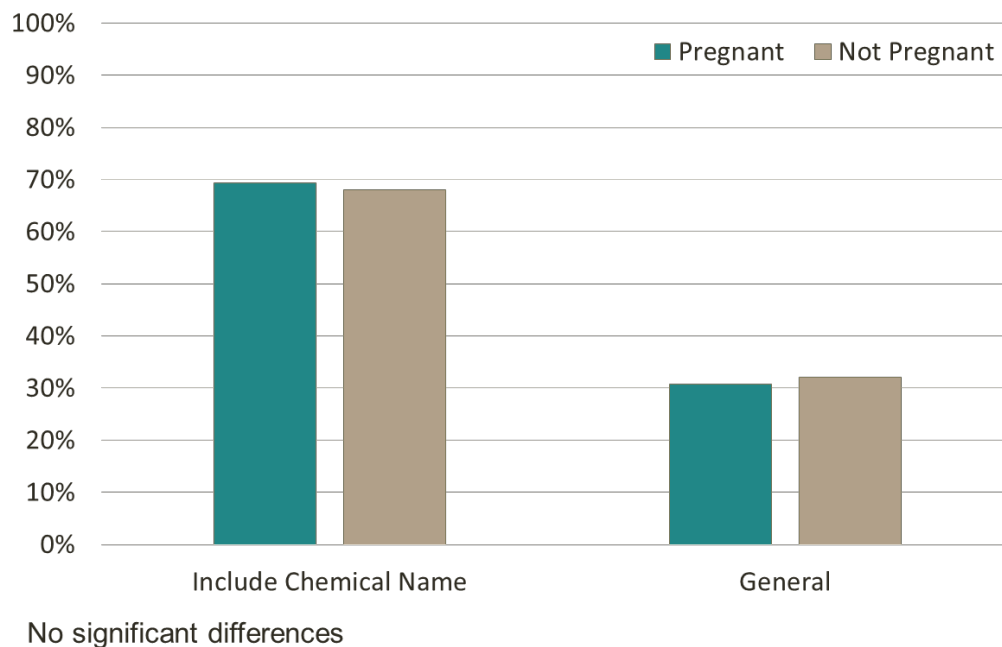


Figure 14: Inclusion of specific chemical names by pregnant status.

RACE

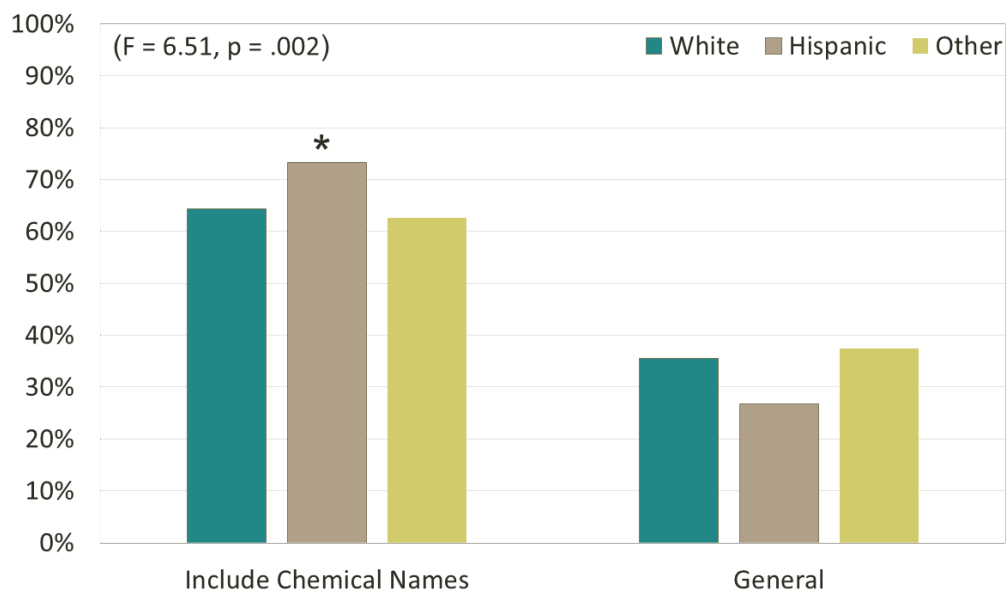


Figure 15: Inclusion of specific chemical names by race.

SURVEY LANGUAGE

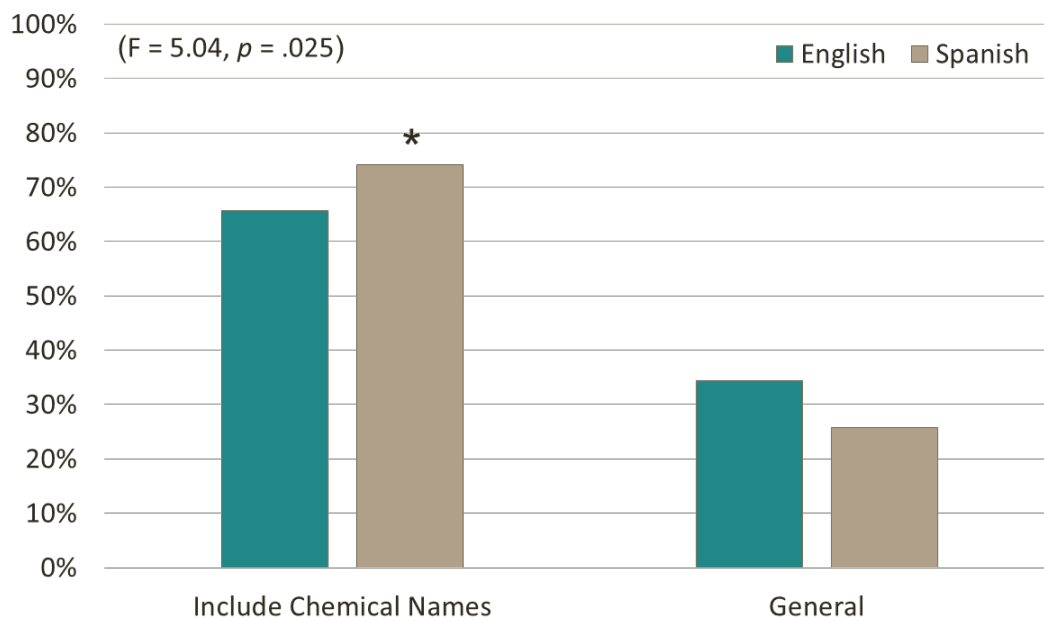


Figure 16: Inclusion of specific chemical names by survey

HOME LANGUAGE

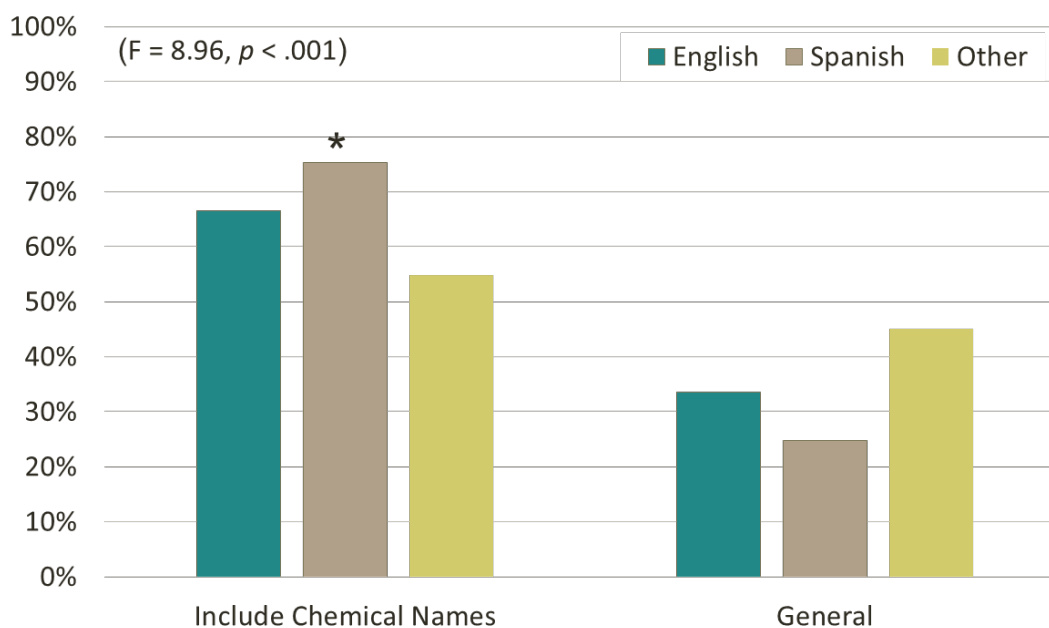


Figure 17: Inclusion of specific chemical names by home language.

EDUCATION

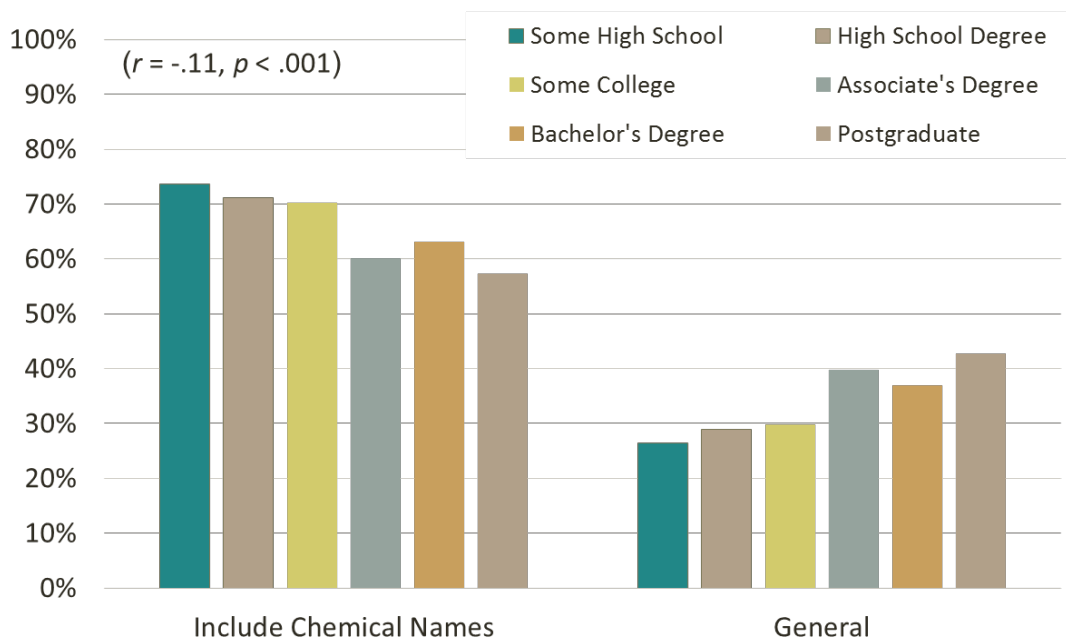


Figure 18: Inclusion of specific chemical names by education.

IS IT EASIER TO READ WHEN THE CHEMICAL NAMES ARE ON THEIR OWN LINE?

Question: These 2 signs are identical in content, but are arranged differently. Which sign is easier to read?

Note: This question was asked only if the respondent answered the previous question by preferring the inclusion of specific chemical names. The warning with the specific chemical names on a separate line and the warning with the specific chemical names as part of one paragraph were presented side-by-side in random order to the participants.

Goal: To assess whether, for the people who prefer the specific chemical names, it is better to have the chemical names on their own line.

Analysis: Count of the number of people who chose the warning with the chemical names separated on their own line versus written as a single paragraph, or whether the two warnings are equally easy to read

Result: Across all warnings, the results showed that almost **THREE-FOURTHS** of the people **SELECTED THE WARNING WITH THE CHEMICAL NAMES ON THEIR OWN LINE** as being more helpful than the one paragraph warning ($\chi^2 = 663.49, p < .001$; Figure 18).

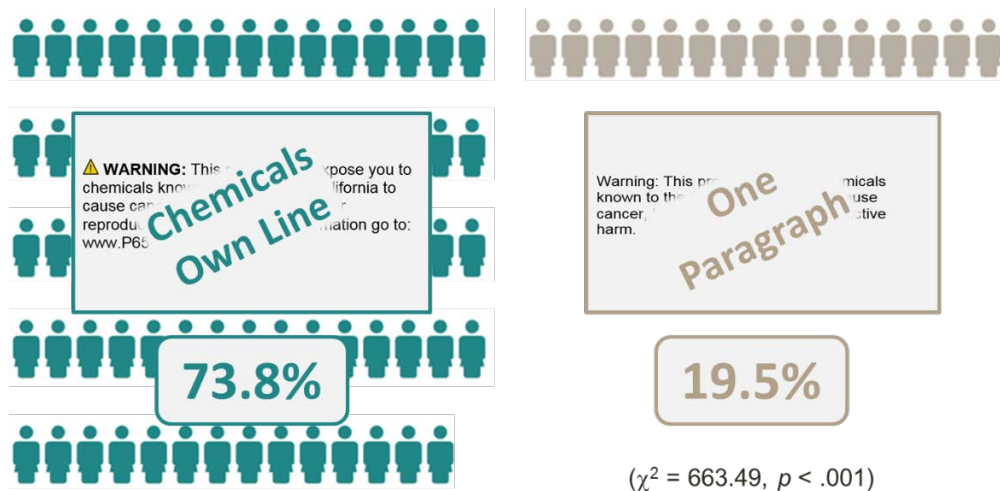


Figure 19: Preference for chemical names on their own line.

Note: The warnings were presented side-by-side in random order to the participants. In addition, a third choice in which the participant could say the two warnings were equally easy to read was provided; 6.8% of the people selected this choice.

ARE THERE DIFFERENCES ACROSS WARNING TOPICS OR DEMOGRAPHIC GROUPS?

Results (warning topic)⁴:

- For each warning topic, people preferred the warning with the chemical names on their own line over the one paragraph warning ($\chi^2_s = 55.76 - 159.97, ps < .001$; Figure 20).
- People's preference for the chemical names on their own warning is greater than would be expected by chance ($ts = 8.96 - 15.99, ps < .001$).
- Preference for: (a) passenger was higher than smoking ($p < .001$), fast food ($p = .041$), and furniture ($p = .001$) and (b) parking and service station were higher than smoking ($ps < .01$) and furniture ($ps < .03$).

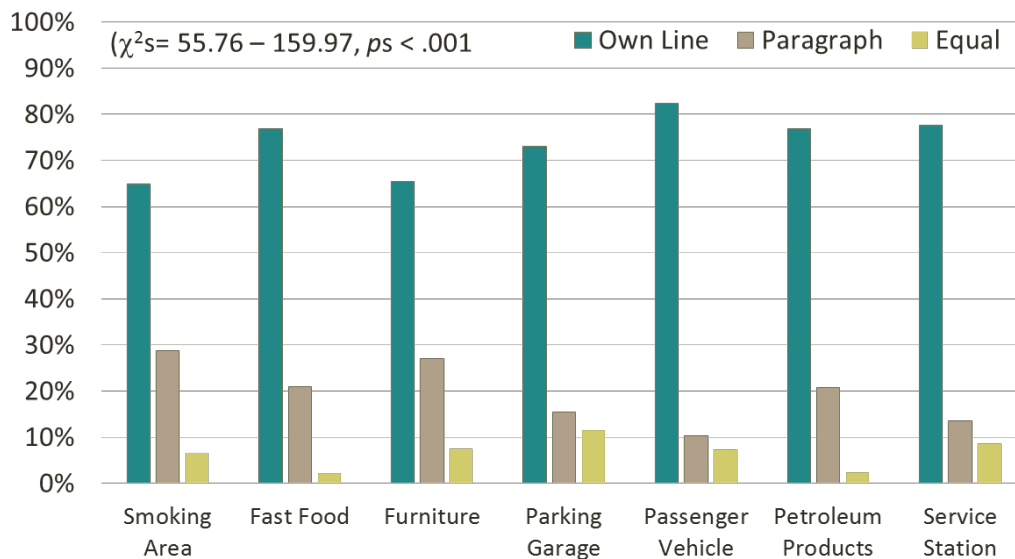


Figure 20: Inclusion of specific chemical names on own line by warning

Results (demographics):

- There were no differences in preference for chemical names on their own line across gender (Figure 21), race (Figure 22), age (Figure 23), pregnant status (Figure 24), survey language (Figure 25) or education (Figure 28).
- The only difference across demographic groups was for home language, which shows that people who speak a language other than English or Spanish at home prefer the chemical names on their own line ($F = 3.54, p = .03$; Figure 27).

⁴ Analysis: (1) A one-way ANOVA (analysis of variance) with warning topic or demographic factor as a random factor predicting selection of chemicals on own line versus the one paragraph warning (*note*: (a) significance tests were based on comparing chemicals on own line with one paragraph only; i.e., the equally easy to read option was not included) (b) only people who said they preferred the specific chemical names were given this question ($N = 881$). (2) Preference for new warning was compared to chance (33%) using a one-sample t-test.

GENDER

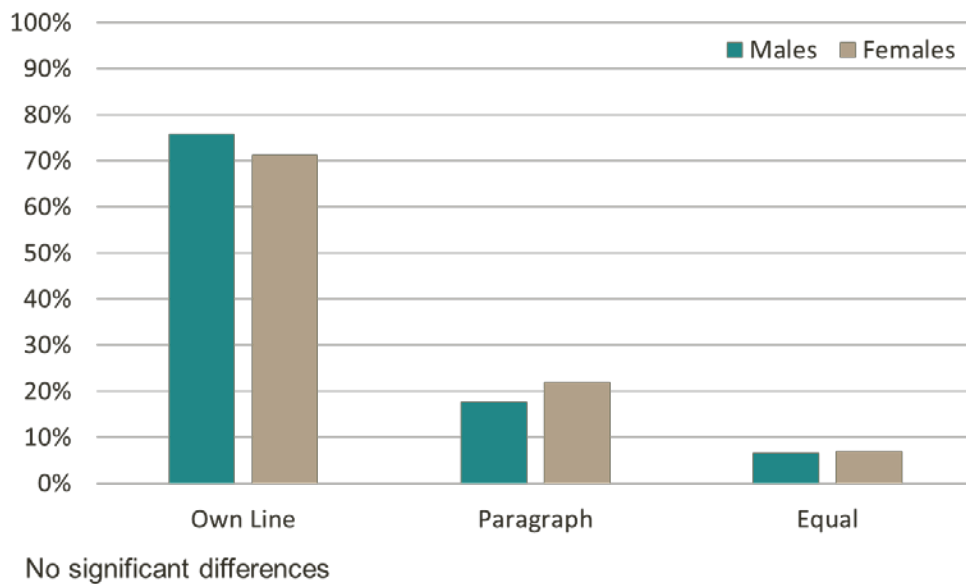


Figure 21: Inclusion of specific chemical names by gender.

AGE

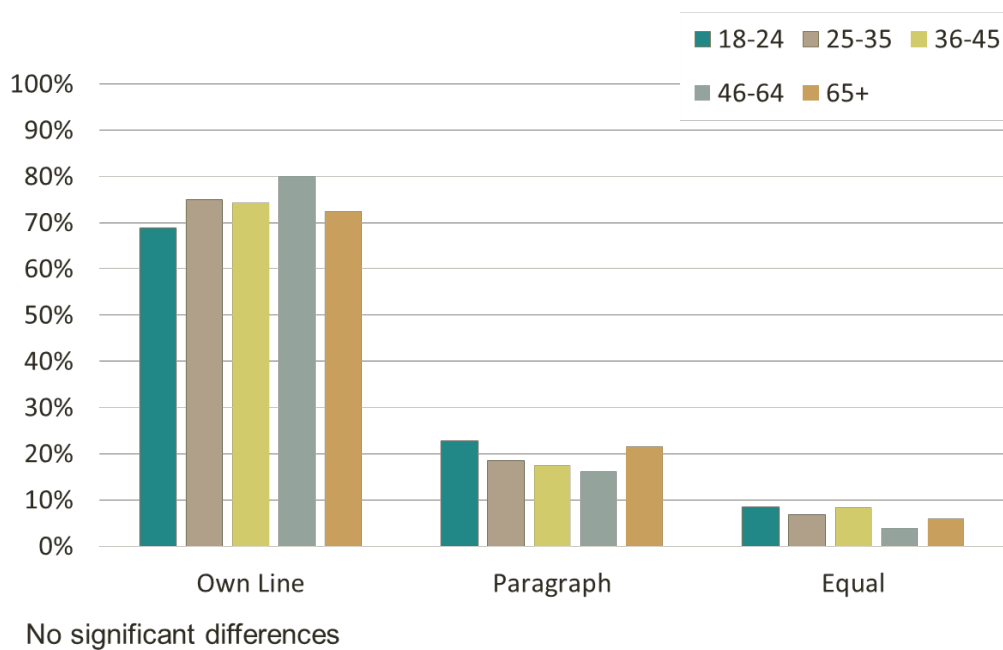
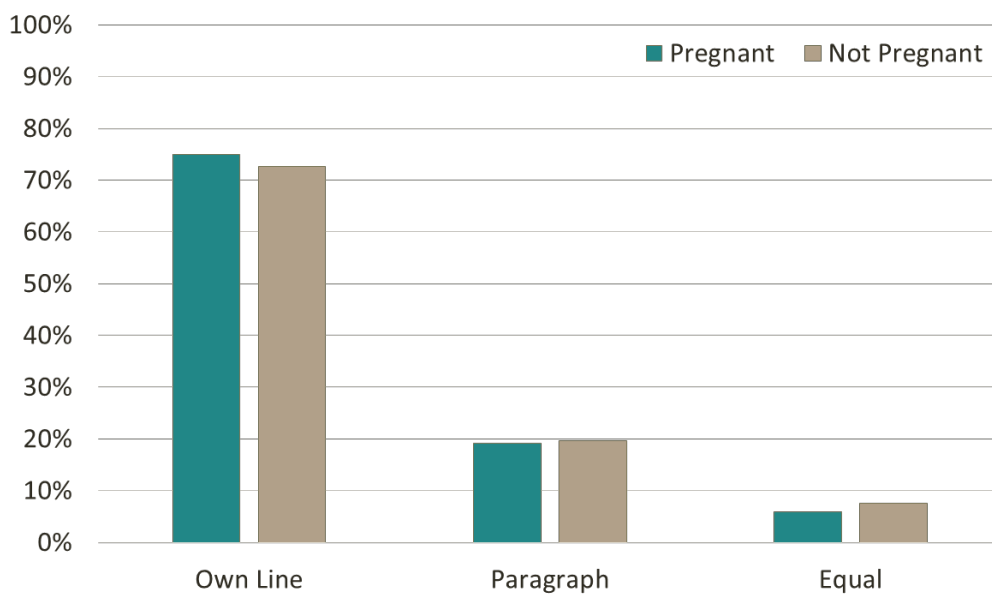


Figure 22: Inclusion of specific chemical names on own line by age.

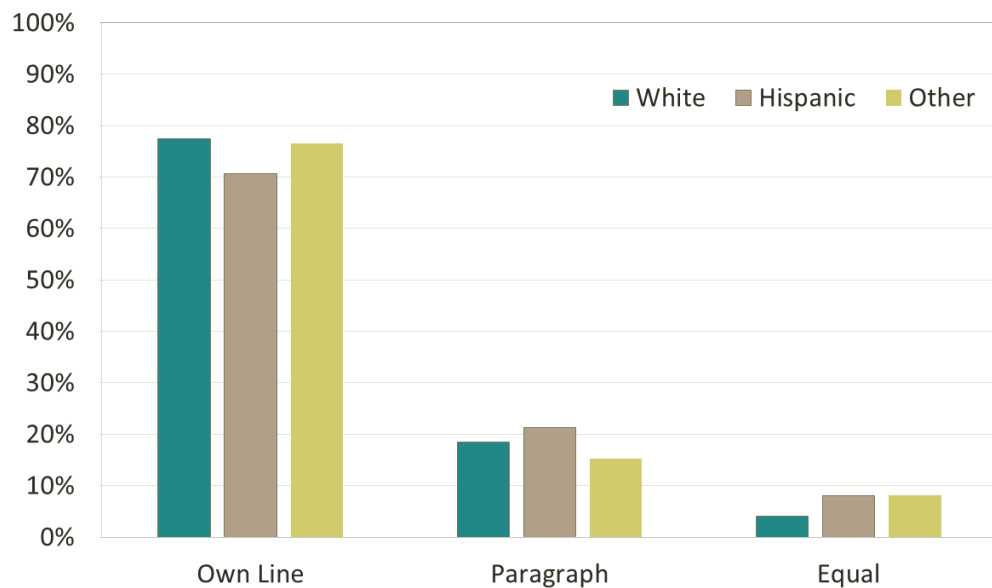
PREGNANT STATUS



No significant differences

Figure 23: Inclusion of specific chemical names on own line by pregnant status.

RACE



No significant differences

Figure 24: Inclusion of specific chemical names on own line by race.

SURVEY LANGUAGE

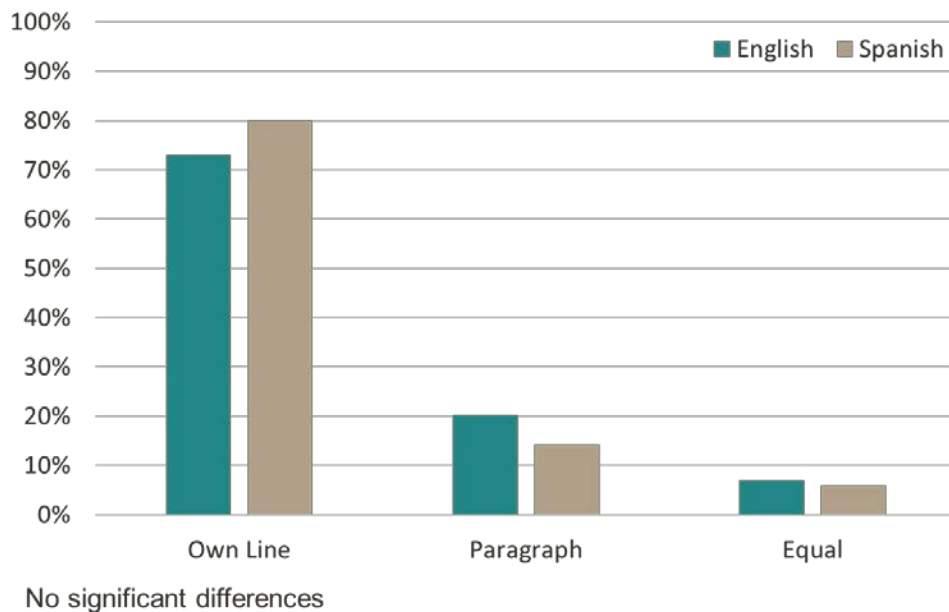


Figure 25: Inclusion of specific chemical names on own line by survey

EDUCATION

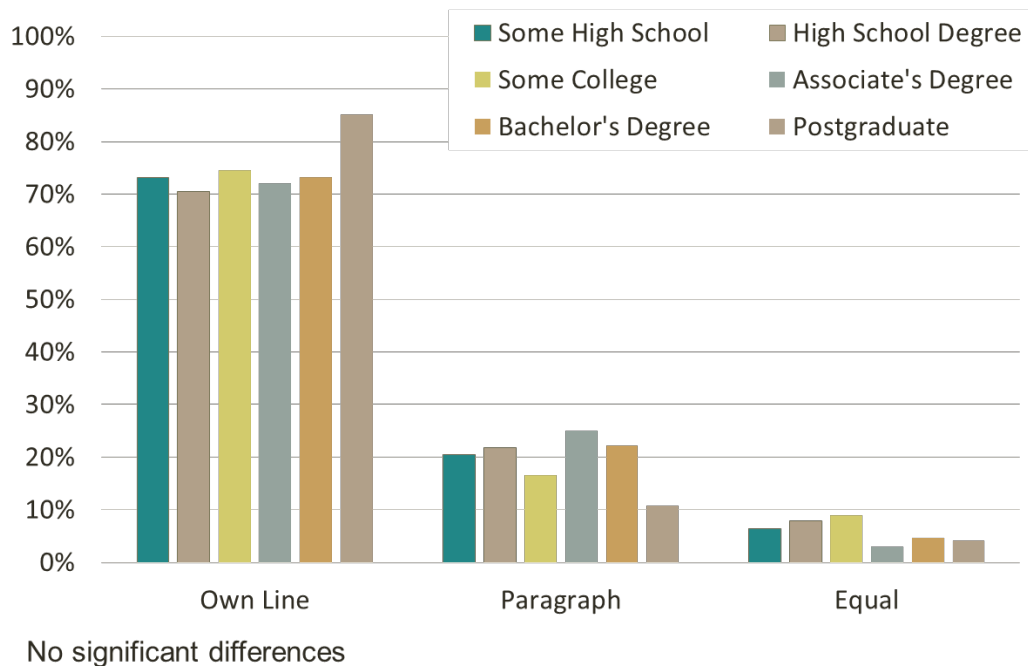


Figure 26: Inclusion of specific chemical names on own line by education.

HOME LANGUAGE

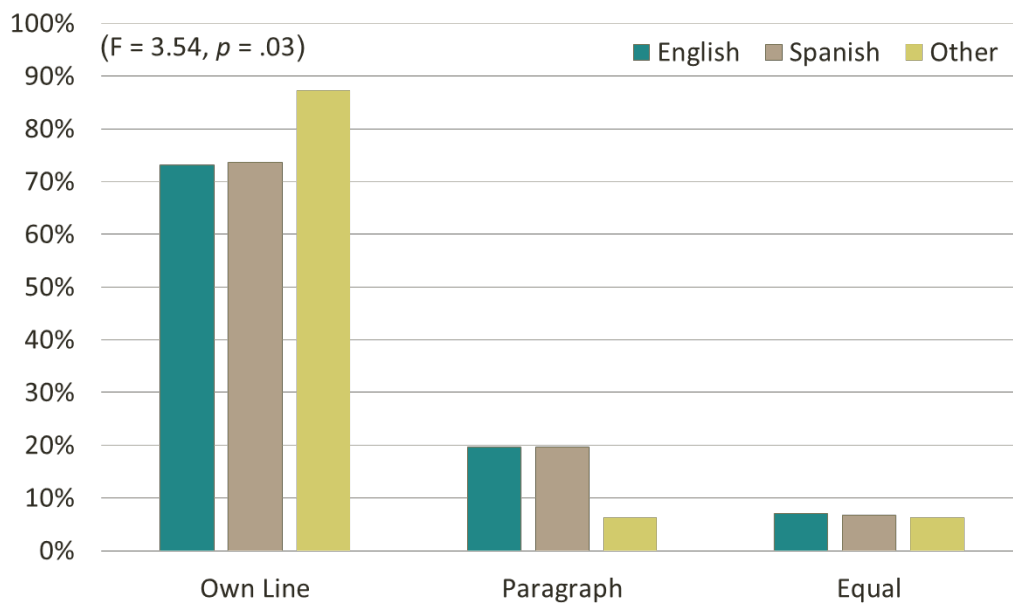


Figure 27: Inclusion of specific chemical names on own line by home language.

REACTIONS TO THE INCLUSION OF SPECIFIC CHEMICAL NAMES

Question: Does the inclusion of the specific chemical/s in the sign:

- Make the sign more helpful
- Help me feel better able to make an informed choice
- Make me want to seek more information
- Confuse me
- Scare me
- Other (please specify) _____

Note. The options were presented in a random order. People were able to select more than one reaction.

Goal: To assess whether inclusion of specific chemical names creates alarm.

Analysis: Count of the number of people who chose each option (*note:* (a) people could select more than one reaction, (b) the “other” option was not included in the statistical analyses).

Result: The most frequent reaction was that the inclusion of the chemical names made people feel better able to make an informed choice (Figure 28). Few people reported that the inclusion of the chemical names confused or scared them.

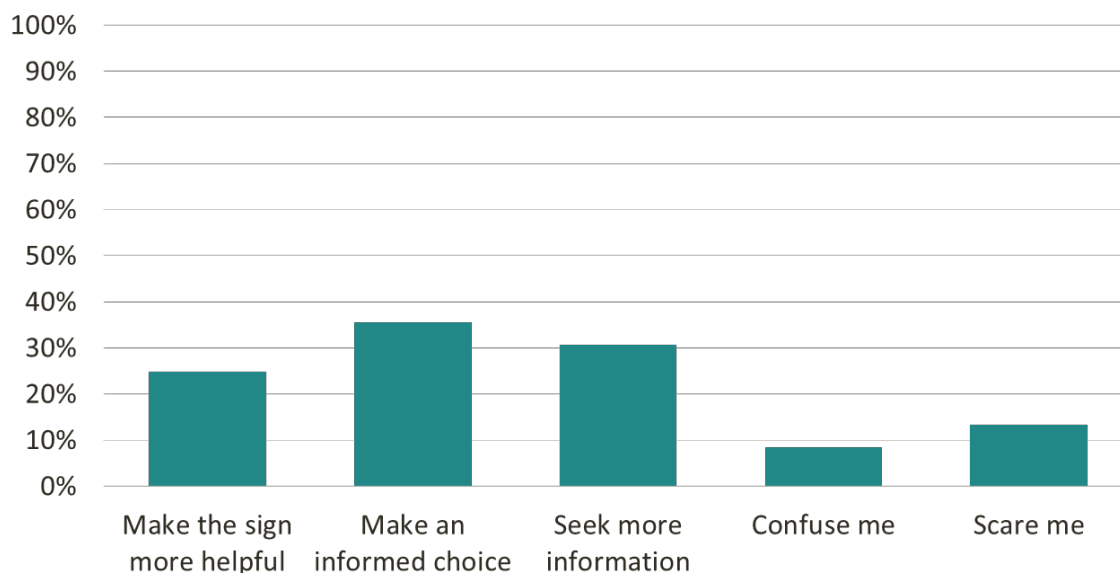


Figure 28: Reactions to inclusion of specific chemical names.

ARE THERE DIFFERENCES ACROSS WARNING TOPICS OR DEMOGRAPHIC GROUPS?

Results (warning topic):⁵

- **Despite differences across warnings, in no case was scare me or confuse me selected more than the more than helpful, informed choice, or seek more information.**
- There were no difference in making warning more helpful (Figure 29), confuse me (Figure 32), or scare me (Figure 33)
- Make better informed choice ($F = 2.65, p = .015$; Figure 30): (a) petroleum lower than smoking ($p = .021$), parking ($p = .002$), passenger ($p = .006$), and service station ($p = .046$), (b) furniture is lower than parking ($p = .008$) and passenger ($p = .023$)
- Seek more information ($F = 7.67, p < .001$; Figure 31): (a) smoking lower than fast food ($p < .001$), furniture ($p < .001$), service station ($p = .028$), (b) fast food higher than parking ($p = .001$), passenger ($p < .001$), petroleum ($p = .001$), service ($p = .009$), (c) furniture higher than parking ($p < .001$), passenger ($p < .001$), petroleum ($p < .001$), service station ($p = .002$)

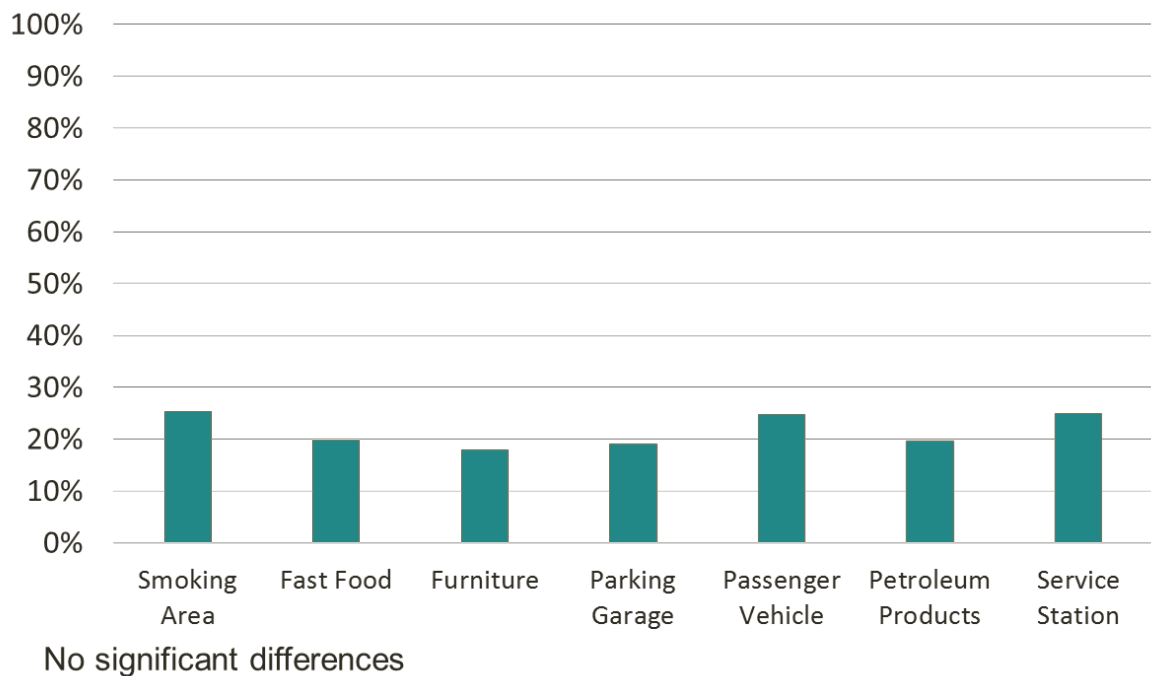


Figure 29: Reactions to inclusion of specific chemical names by warning content for make warning more helpful.

⁵ Analysis: Separate one-way ANOVAs with warning topic or demographic factor as a random factor predicting the selection of each reaction

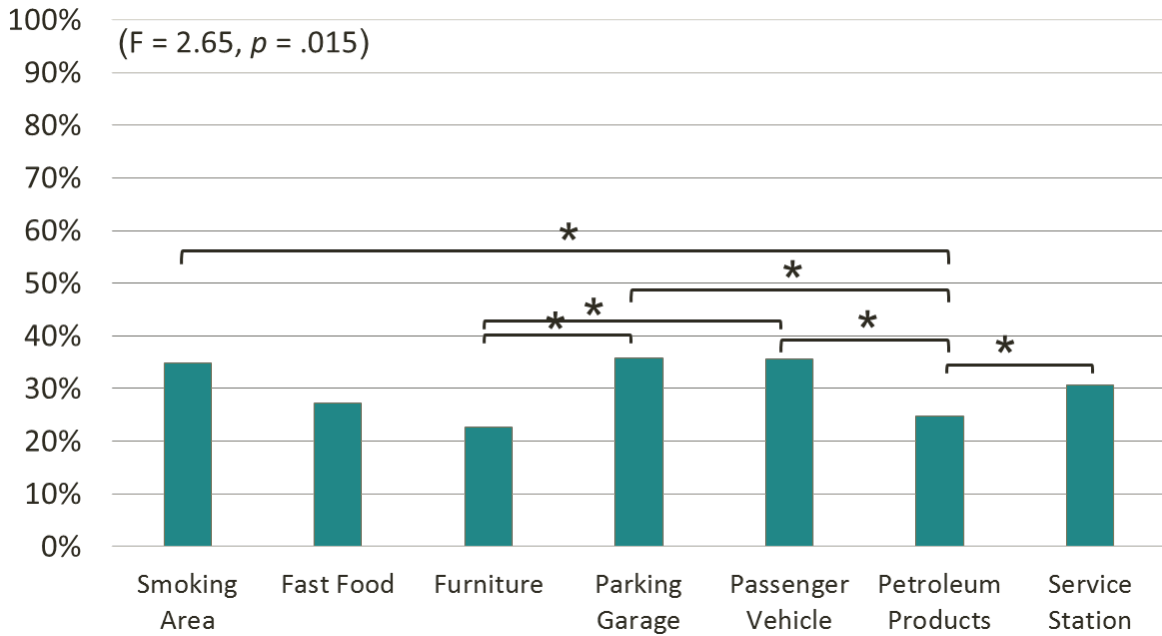


Figure 30: Reactions to inclusion of specific chemical names by warning content for make informed choice.

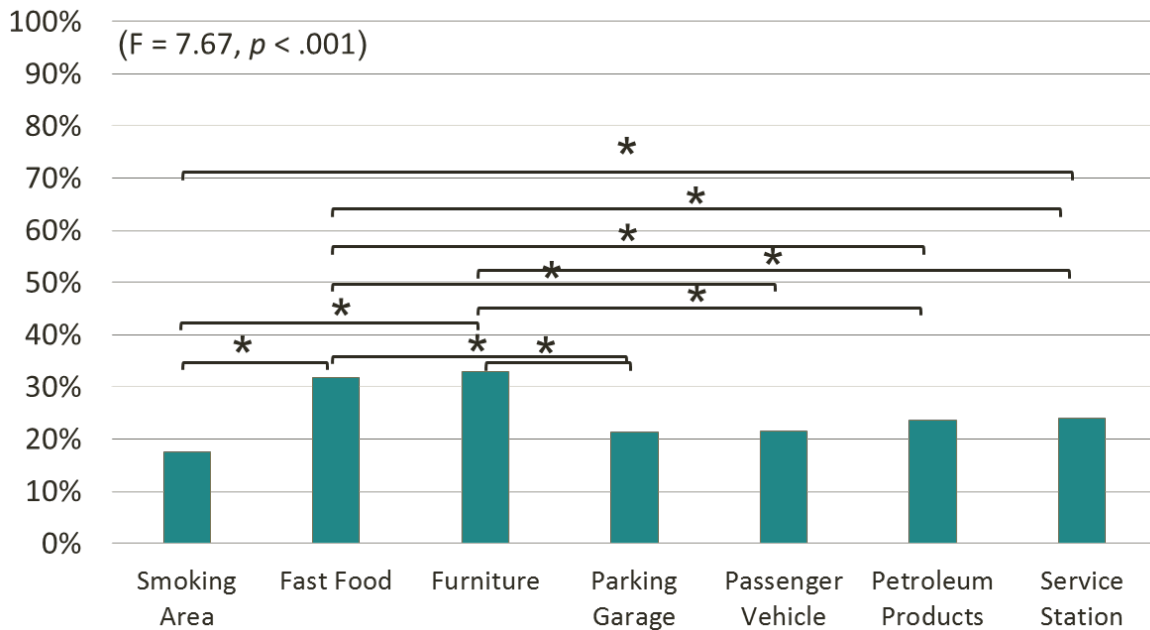


Figure 31: Reactions to inclusion of specific chemical names by warning content for seek more information.

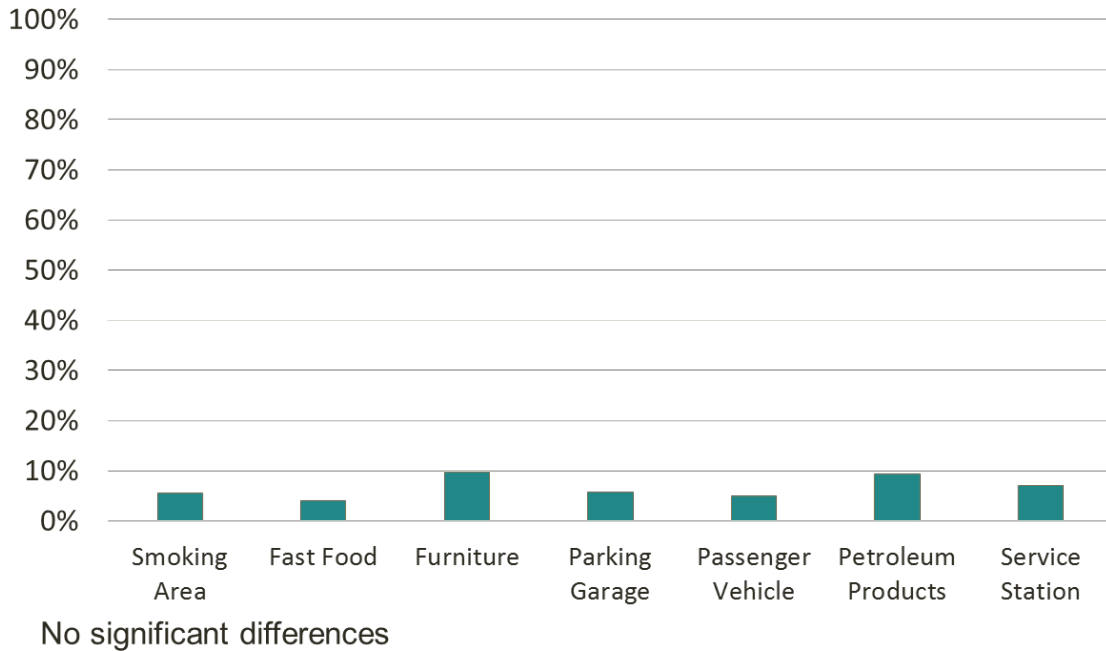


Figure 32: Reactions to inclusion of specific chemical names by warning content for confuse me.

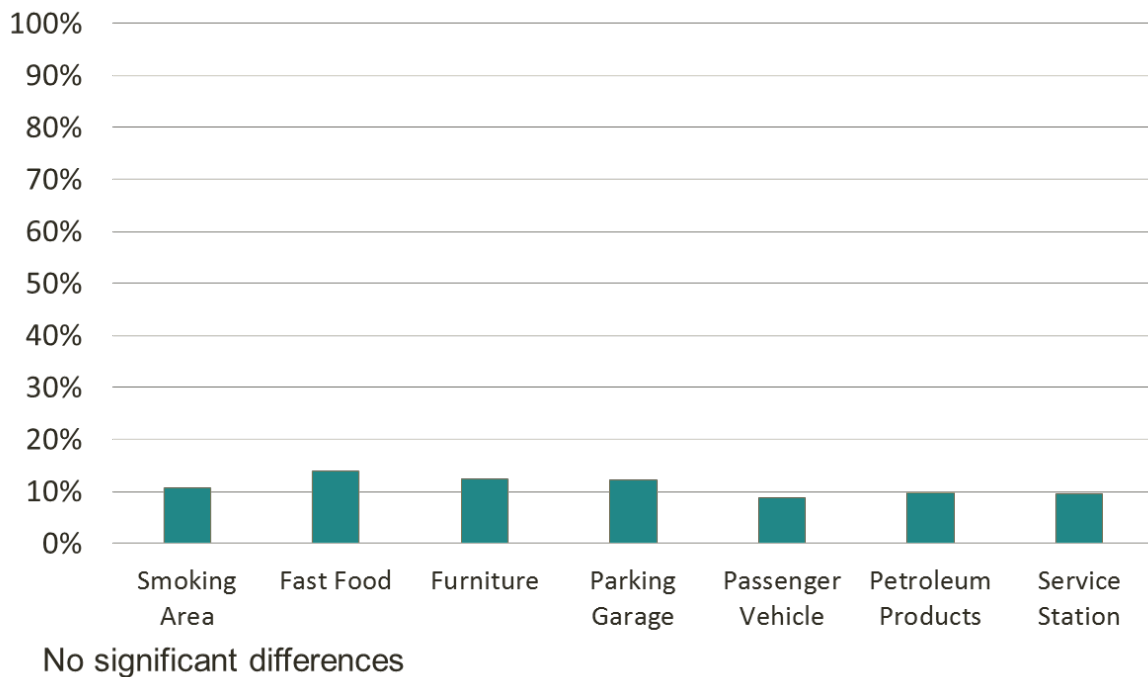
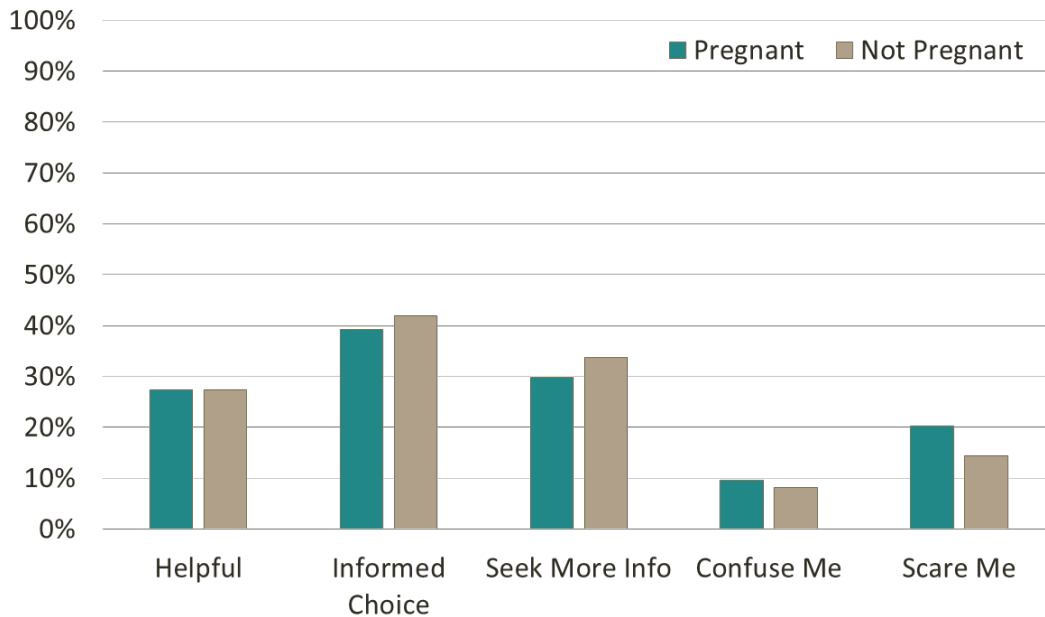


Figure 33: Reactions to inclusion of specific chemical names by warning content for scare me.

Results (demographics):

- **Despite demographic differences, in no case was scare me or confuse me selected more than the more than helpful, informed choice, or seek more information.**
- There were no differences in reactions to specific chemical names across pregnant status (Figure 34).
- For other reactions, the following demographic differences emerged (Figures 34-39)
 - Make warning more helpful: (a) Other races are higher than Whites and Hispanics ($F = 5.51, p = .004$), (b) English higher than Spanish survey language ($F = 8.92, p = .003$), (c) English higher than Spanish home language ($F = 4.37, p = .013$), (d) 18-25 higher than others; 65+ higher than 36-64 ($F = 3.43, p = .008$)
 - Make better informed choice: English higher than Spanish survey language ($F = 4.23, p = .040$)
 - Seek more information: (a) females higher than males ($F = 5.72, p = .017$), (b) Hispanics are higher than Other races ($F = 12.15, p < .001$), (c) Spanish higher than English and Other home languages ($F = 4.92, p = .007$), (d) less educated higher than more educated ($r = -.06, p = .041$), (e) 18-25 higher than 25-35 and 65+; 25 lower than 36-45; 36-45 higher than 45+ ($F = 3.48, p = .008$)
 - Confuse me: (a) males higher than females ($F = 4.96, p = .026$), (b) Other home languages higher than English and Spanish ($F = 6.49, p = .002$)
 - Scare me: Whites are lower than Other races ($F = 5.41, p = .005$)

PREGNANT STATUS



No significant differences

Figure 34: Reactions to inclusion of specific chemical names by pregnant

GENDER

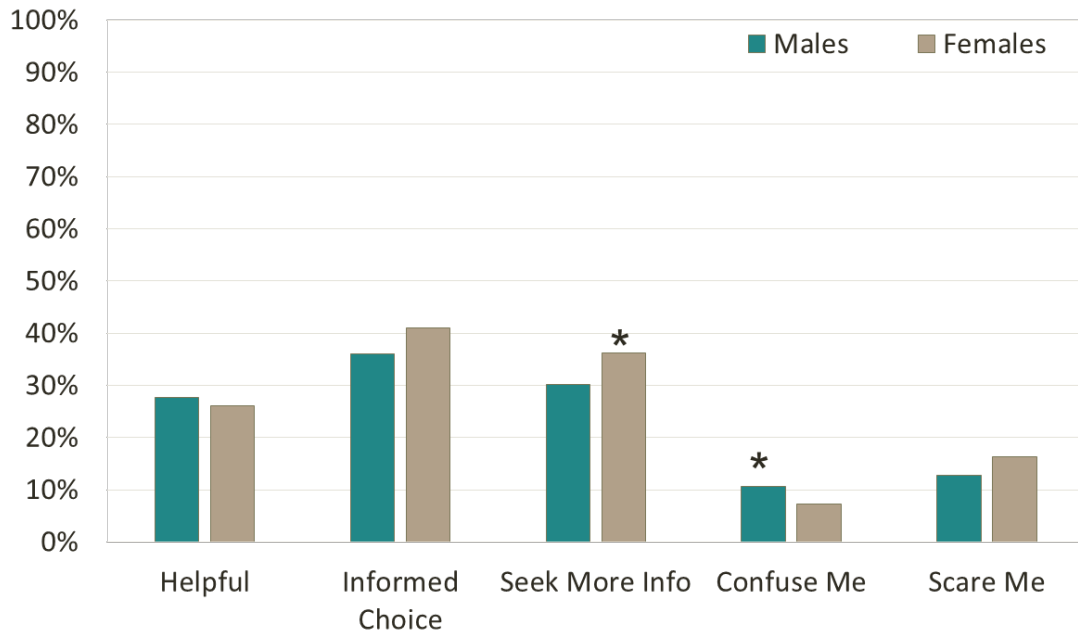


Figure 35: Reactions to inclusion of specific chemical names by gender.

AGE

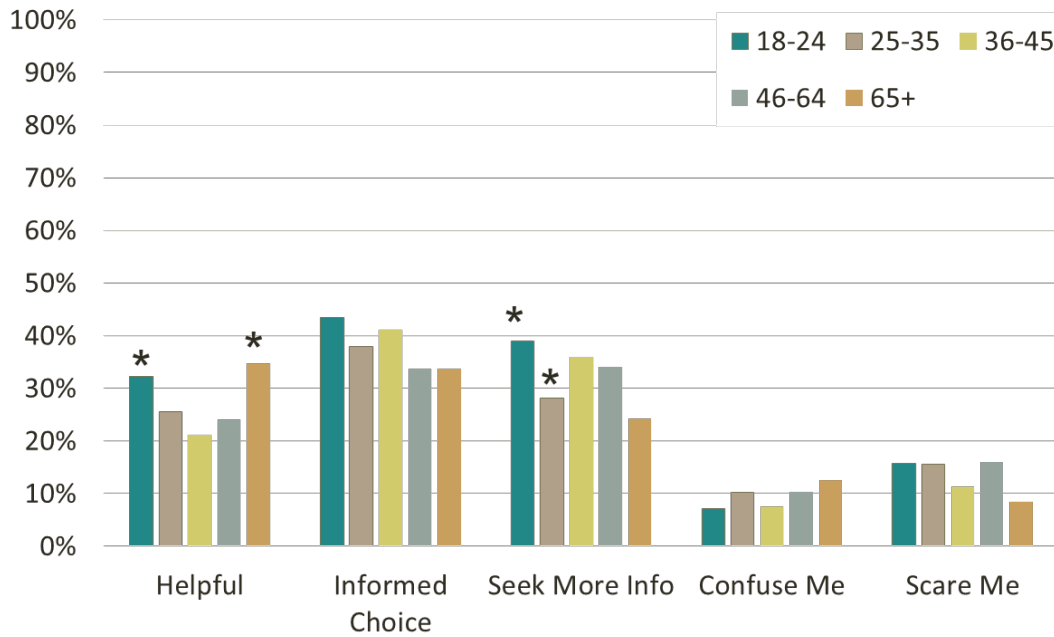


Figure 36: Reactions to inclusion of specific chemical names by age.

RACE

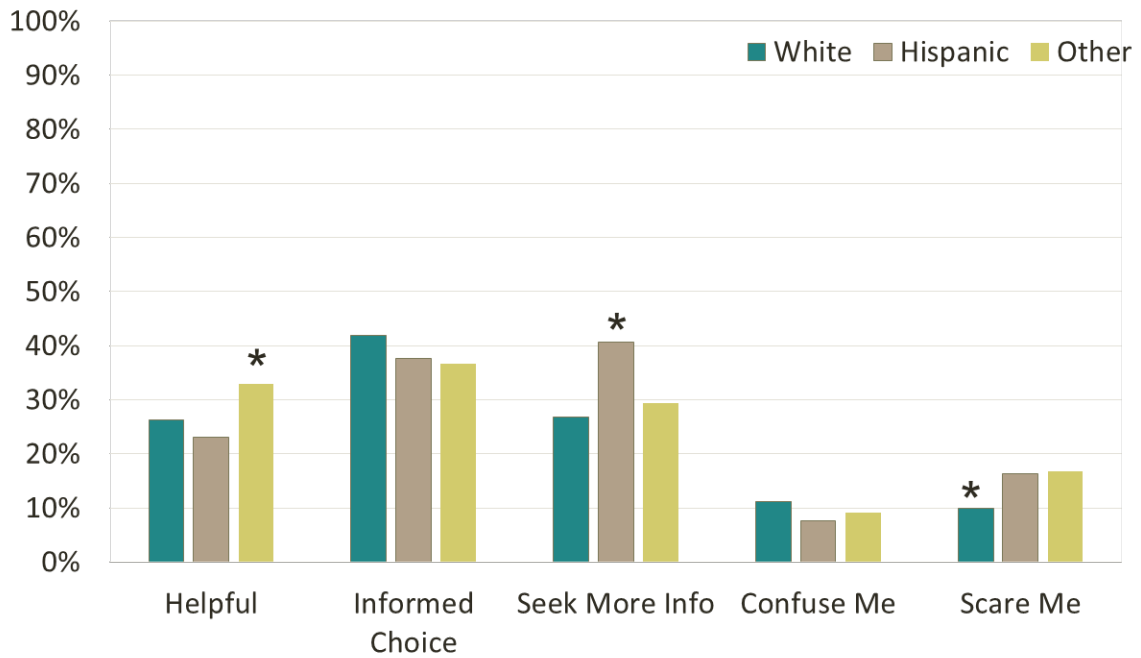


Figure 37: Reactions to inclusion of specific chemical names by race.

SURVEY LANGUAGE

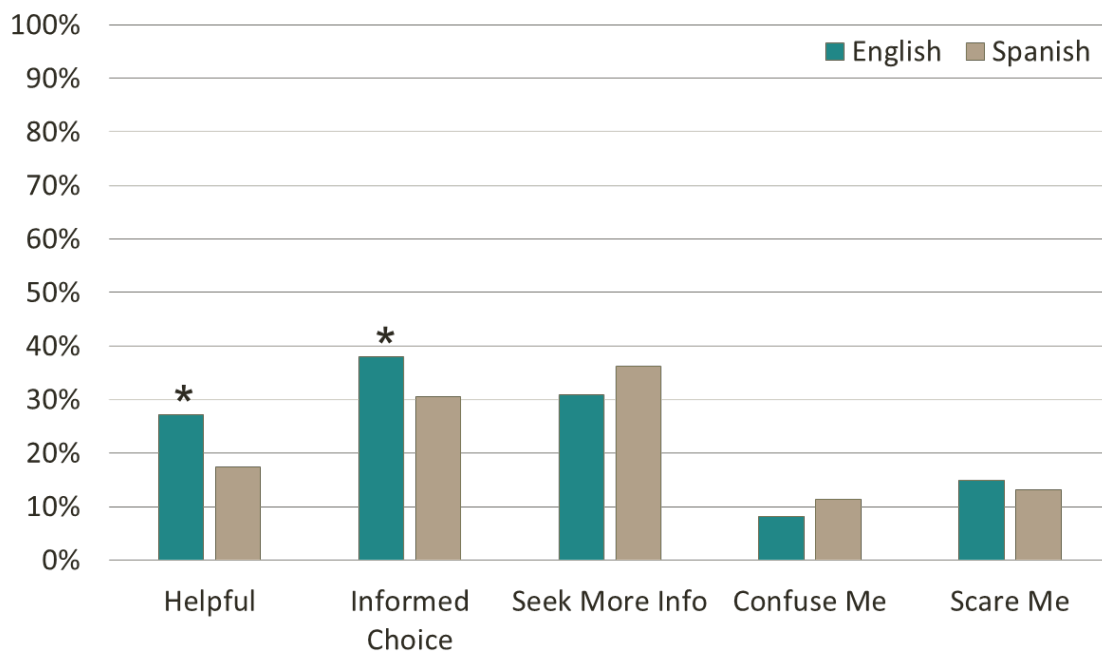


Figure 38: Reactions to inclusion of specific chemical names by survey

EDUCATION

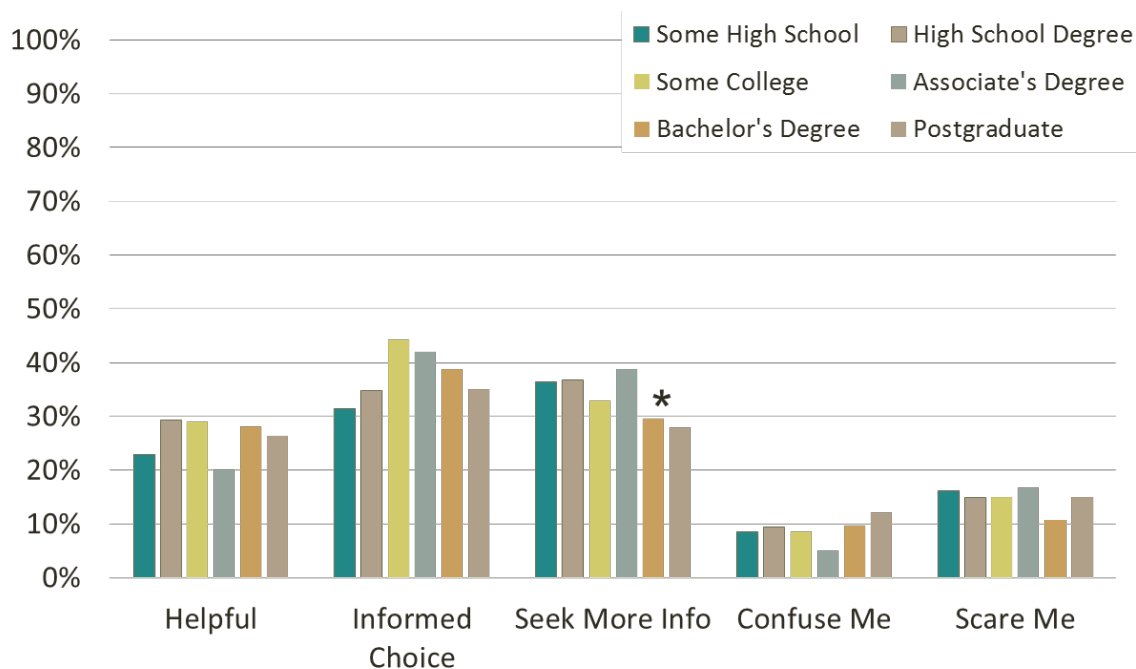


Figure 39: Reactions to inclusion of specific chemical names by education.

HOME LANGUAGE

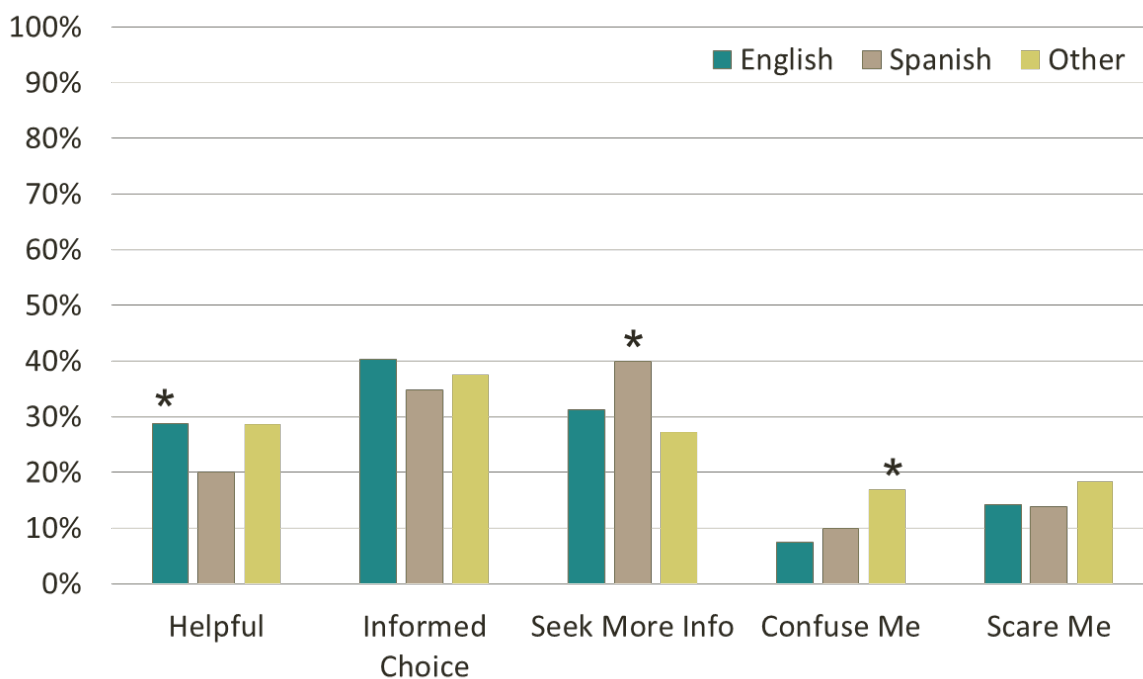


Figure 40: Reactions to inclusion of specific chemical names by home language.

REACTIONS TO THE TRIANGULAR SYMBOL

Question: What does the triangular yellow/B&W symbol mean to you?

- Warning
- Danger
- Caution
- Nothing
- It confuses me
- It scares me
- It gets my attention
- Other (please specify) _____

Note. The options were presented in a random order. People were able to select more than one reaction.

Analysis: Count of the number of people who chose each option (*note:* (a) people could select more than one reaction, (b) the other option was not included in the statistical analyses)

Goal: To assess whether inclusion of the triangular symbol creates alarm.

Result: The most frequent reaction was warning (Figure 41). Few people reported that the inclusion of the symbol confused or scared them.

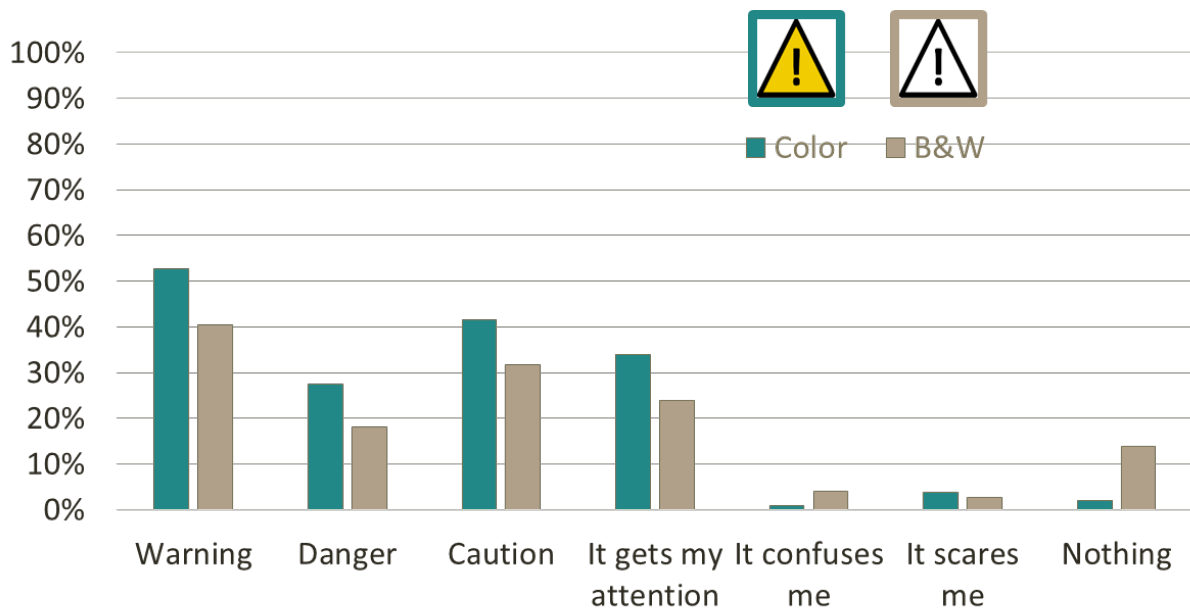


Figure 41: Reactions to inclusion of a triangular symbol.

Results (demographics):⁶

- **Despite demographic differences, in no case was scare me or confuse me selected more than the more than the more positive responses (e.g., warning, caution)**
- The following differences emerged by warning topic (Figures 49-62):
 - **Warning:** (a) color younger higher than older ($F = 2.47, p = .043$)
 - **Danger:** (a) color females higher than males ($F = 10.60, p = .001$), (b) black & white Hispanics higher than other races ($F = 7.58, p = .001$), (c) color younger higher than older ($F = 6.36, p < .001$), (d) black & white Spanish higher than English survey language ($F = 7.97, p = .005$), (e) black & white Spanish higher than English and Other home language ($F = 6.83, p = .001$), (f) color Hispanic higher than White and Other races ($F = 9.83, p < .001$), (g) color Spanish home language higher than Spanish and Other ($F = 5.85, p = .003$)
 - **Caution:** (a) color younger higher than older ($F = 6.02, p < .001$), (b) black & white younger higher than older ($F = 5.98, p < .001$), (c) black & white English higher than Spanish survey language ($F = 3.83, p = .051$), (d) black & white English higher than Spanish home language ($F = 3.05, p = .048$), (e) color English home language higher than Other ($F = 3.93, p = .020$)
 - **Gets my attention:** (a) color females higher than males ($F = 7.10, p = .008$), (b) color younger higher than older ($F = 5.67, p < .001$), (c) black & white younger higher than older ($F = 3.39, p = .009$), (d) black & white English higher than Spanish survey language ($F = 15.54, p < .001$), (e) black & white English higher than Spanish home language ($F = 4.97, p = .007$), (f) color English higher than Spanish survey language ($F = 21.84, p < .001$), (g) color Spanish home language lower than English and Other ($F = 4.26, p = .014$)
 - **Confuse me:** (a) color Spanish higher than English survey language ($F = 6.69, p = .010$), (b) color Spanish home language higher than English ($F = 2.90, p = .055$)
 - **Scare me:** (a) black & white females higher than males ($F = 6.43, p = .011$), (b) color Other race higher than White and Hispanic ($F = 5.08, p = .006$), (c) color English higher than Spanish survey language ($F = 6.03, p = .014$)
 - **Nothing:** no differences

⁶ Analysis: Separate one-way ANOVAs with warning topic or demographic factor as a random factor predicting the selection of each reaction

GENDER



Figure 49: Reactions to inclusion of the black & white triangular symbol by gender.

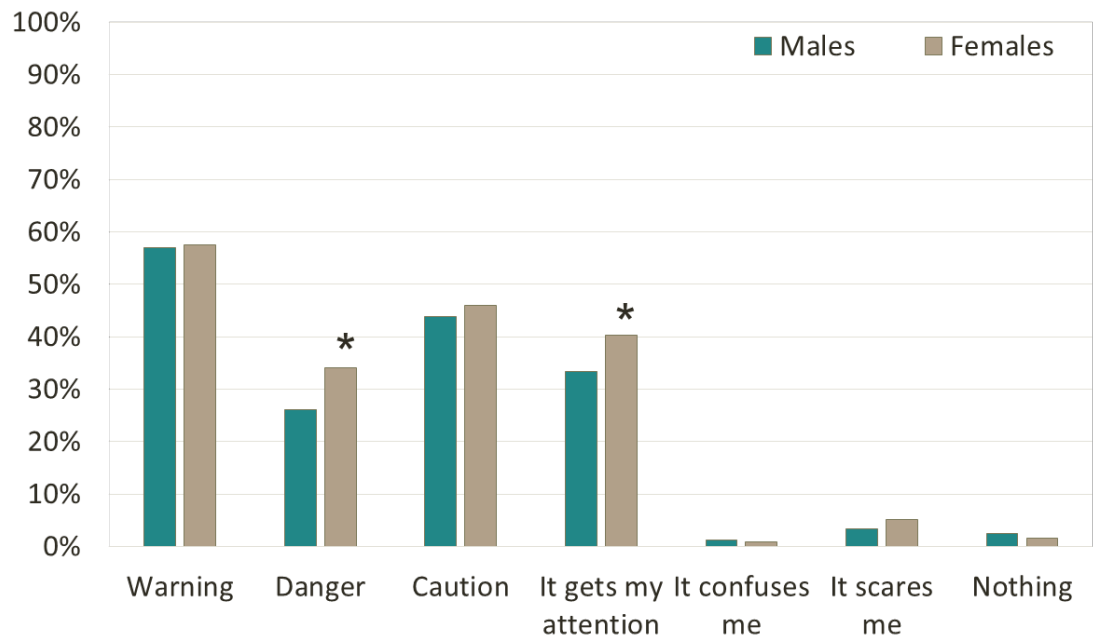


Figure 50: Reactions to inclusion of the color triangular symbol by gender.

AGE

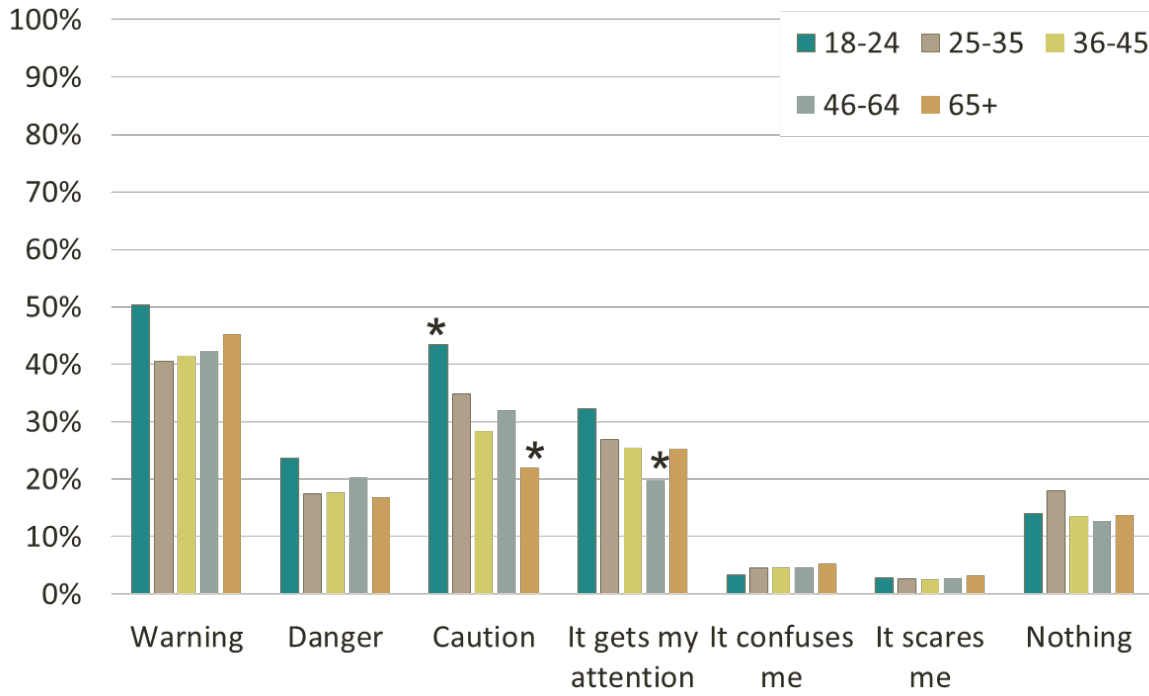


Figure 51: Reactions to inclusion of the black & white triangular symbol by age.

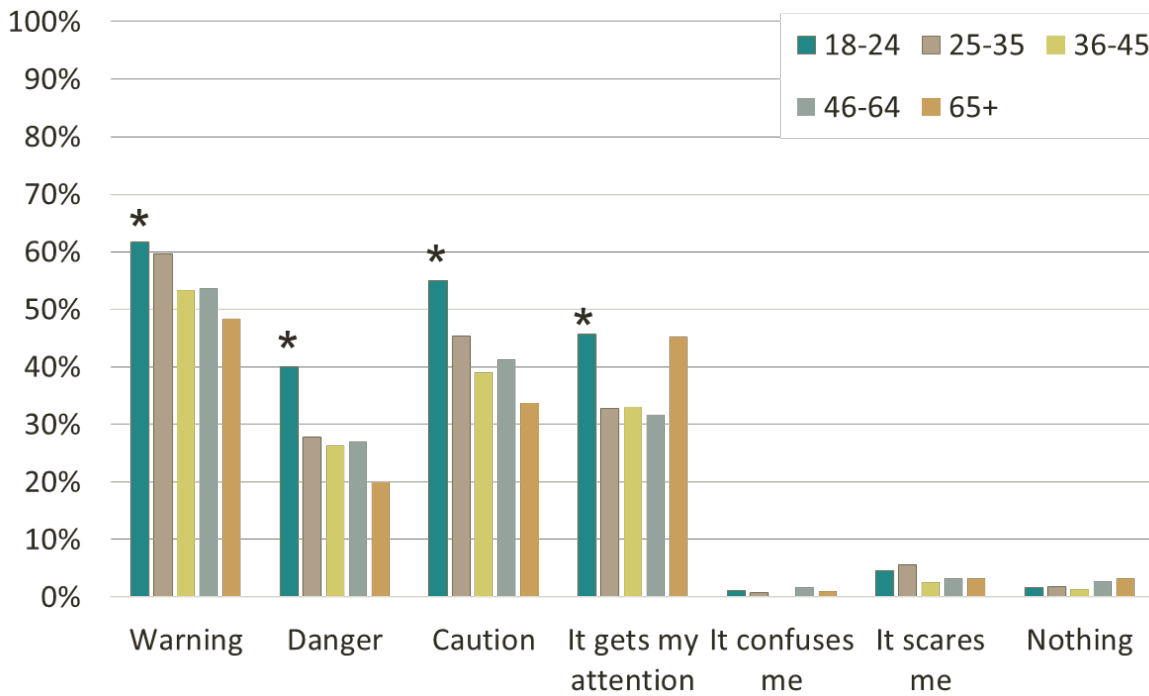
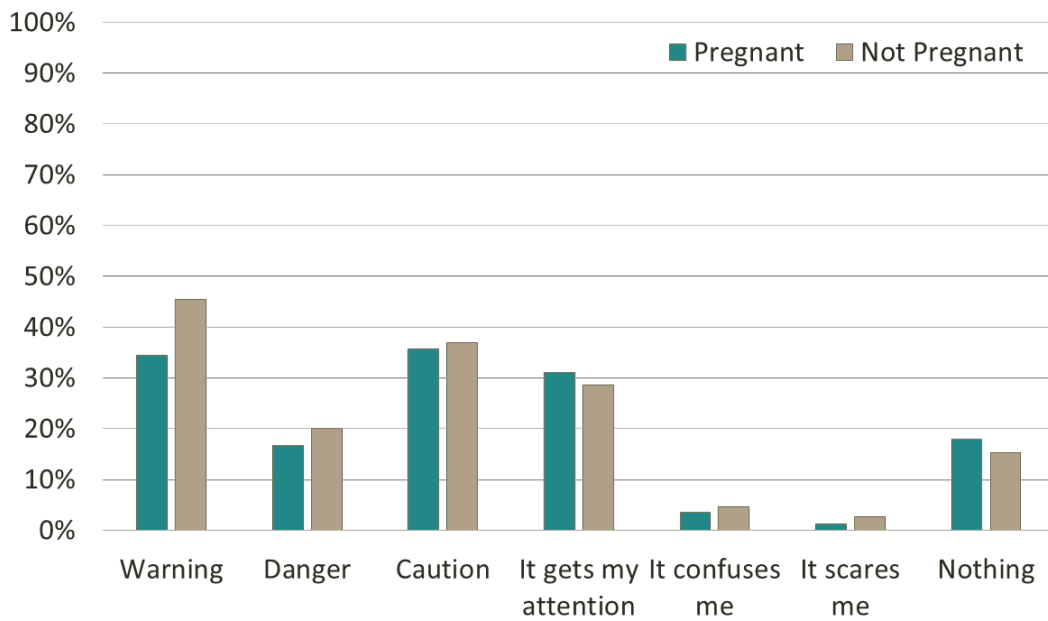


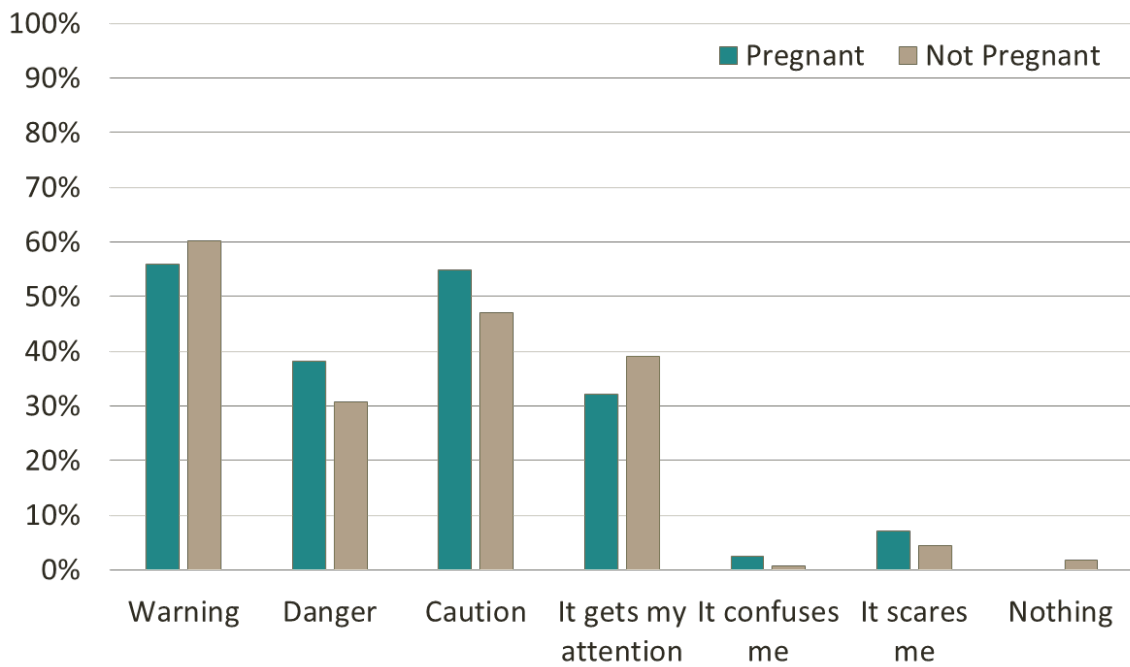
Figure 52: Reactions to inclusion of the color triangular symbol by age.

PREGNANT STATUS



No significant differences

Figure 53: Reactions to inclusion of the black & white triangular symbol by pregnant status.



No significant differences

Figure 54: Reactions to inclusion of the color triangular symbol by pregnant status.

RACE

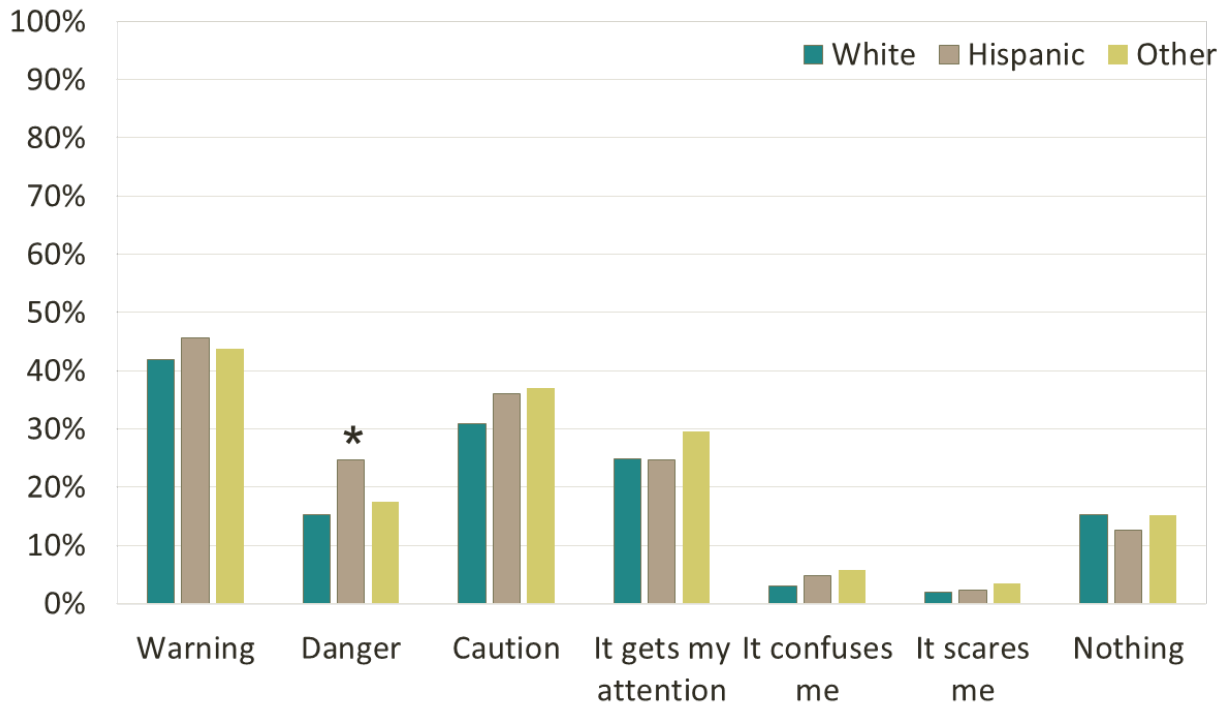


Figure 55: Reactions to inclusion of the black & white triangular symbol by race.

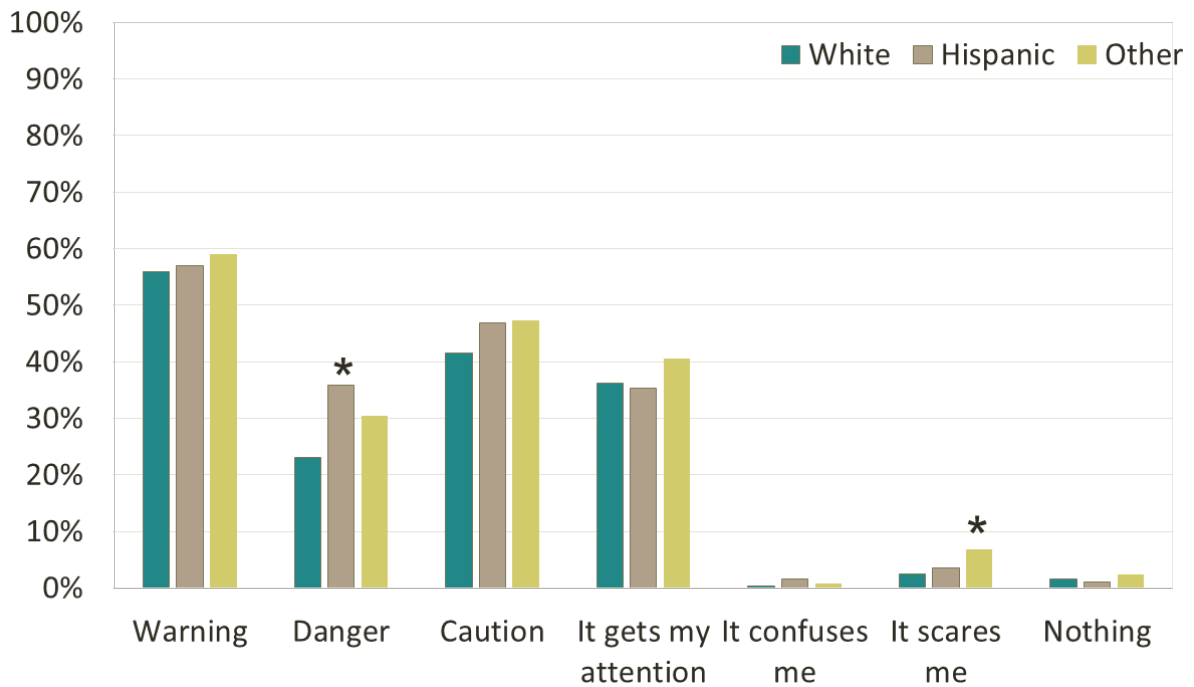


Figure 56: Reactions to inclusion of the color triangular symbol by race.

SURVEY LANGUAGE

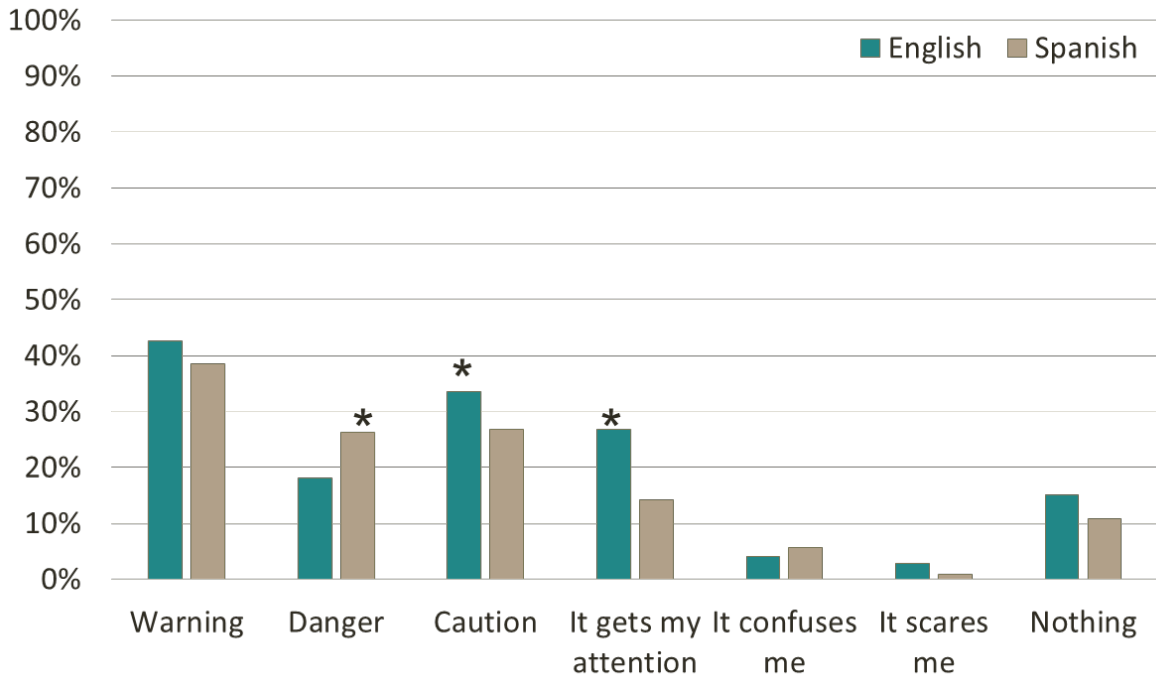


Figure 57: Reactions to inclusion of the black & white triangular symbol by survey language.

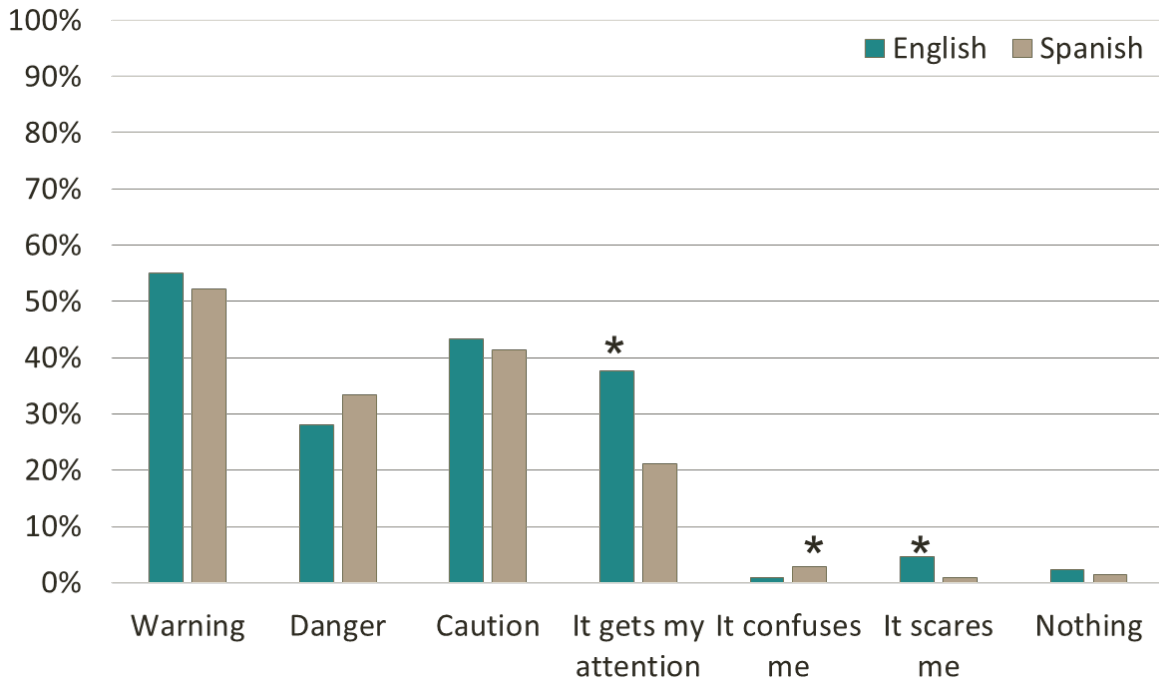


Figure 58: Reactions to inclusion of the color triangular symbol by survey language.

EDUCATION

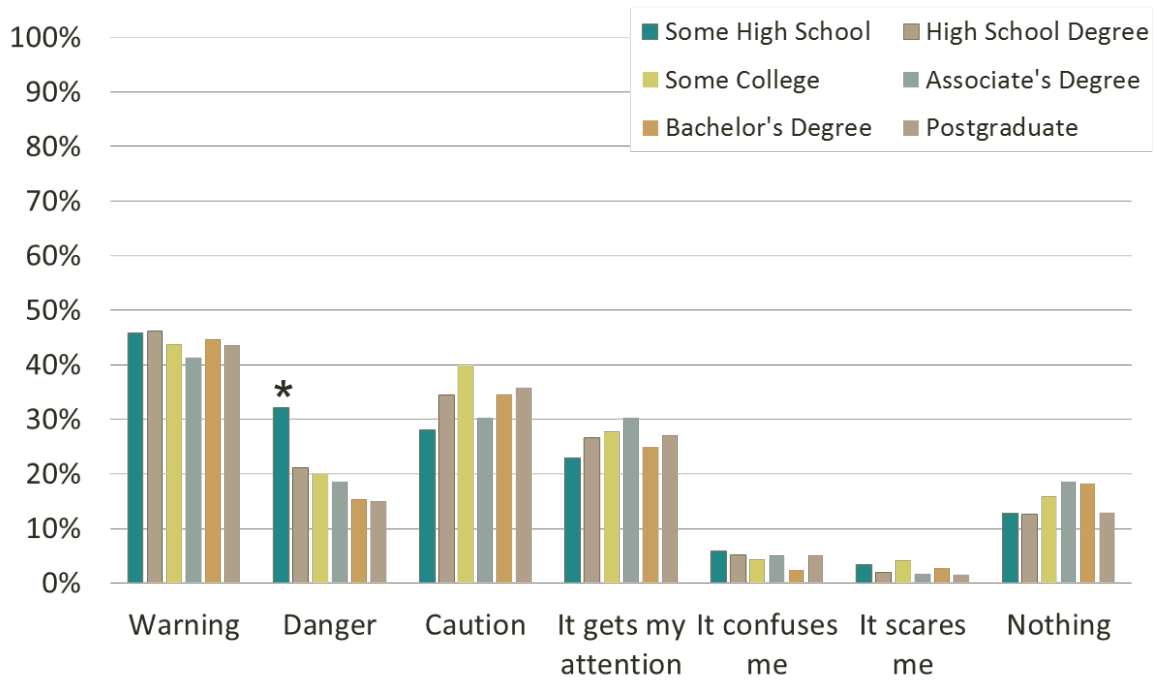
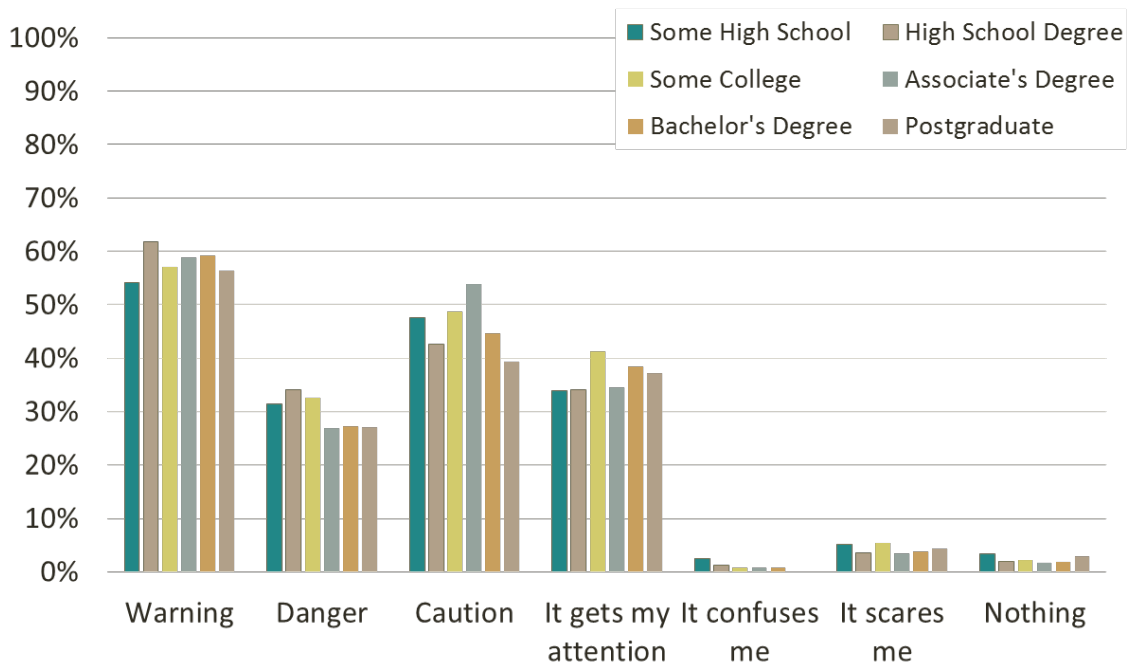


Figure 59: Reactions to inclusion of the black & white triangular symbol by education.



No significant differences

Figure 60: Reactions to inclusion of the color triangular symbol by education.

HOME LANGUAGE

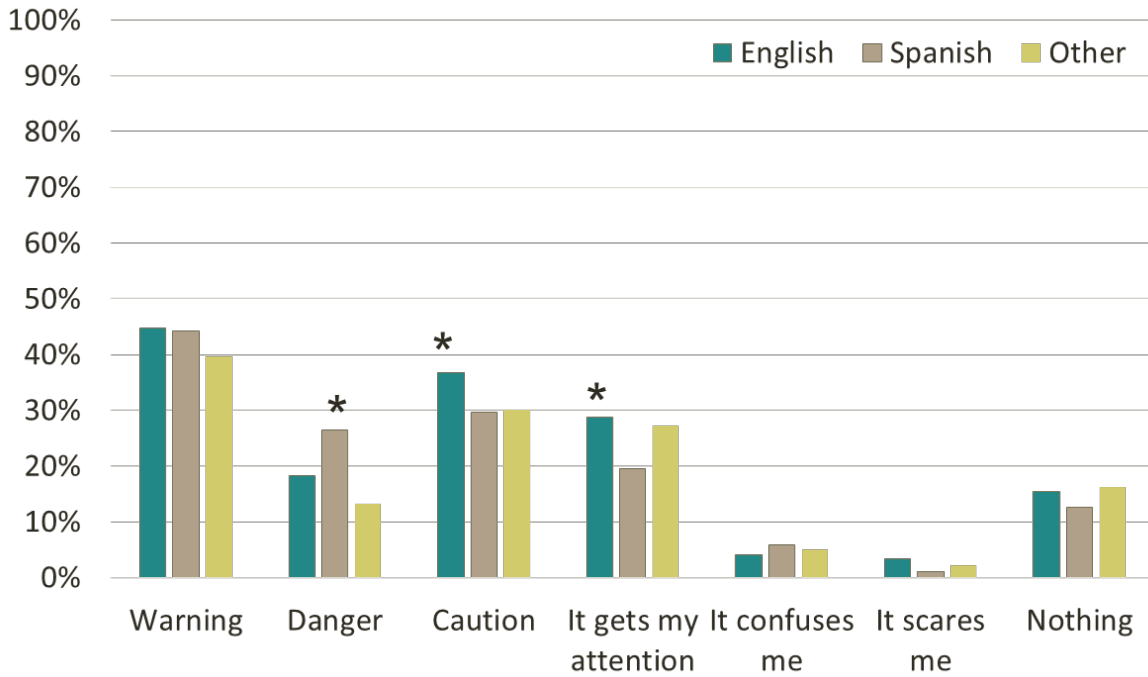


Figure 61: Reactions to inclusion of the black & white triangular symbol by home language.

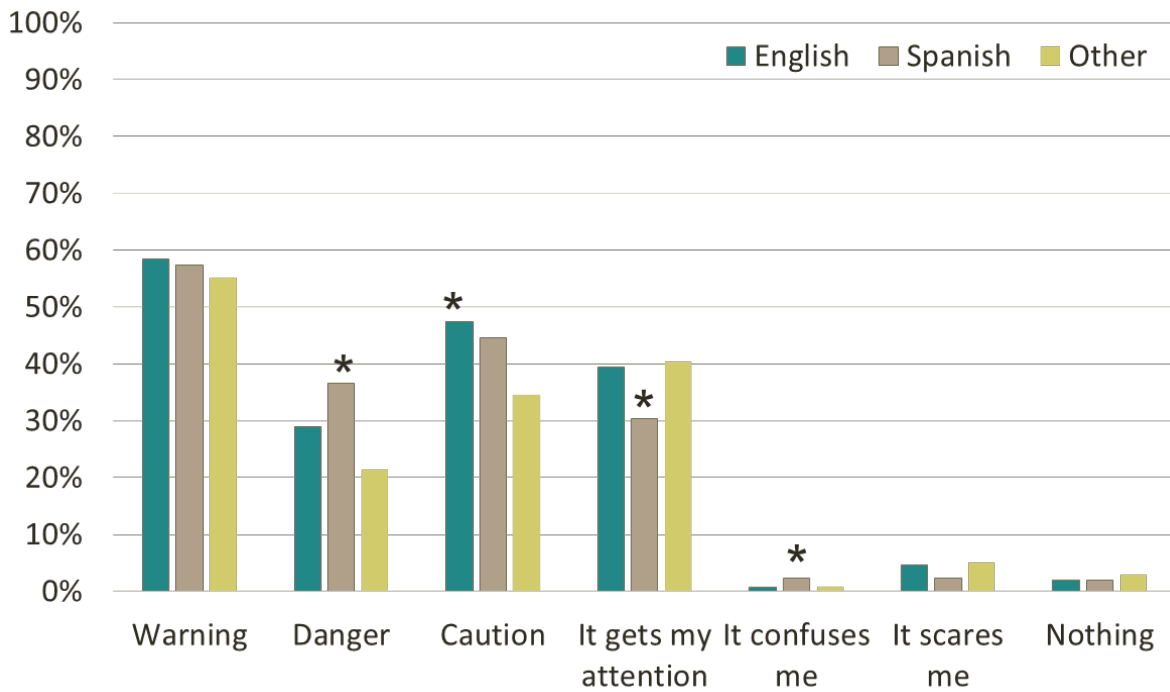


Figure 62: Reactions to inclusion of the color triangular symbol by home language.

WILL PEOPLE GO TO THE WEBSITE?

Question: If you wanted additional information, how likely are you to visit the website listed below?

Goal: To identify whether people would be likely to go to the website listed in the new warning.

Analysis: Frequency of responses

Result: Over half of the participants said they are very likely or somewhat likely to visit the website (Figure 63).

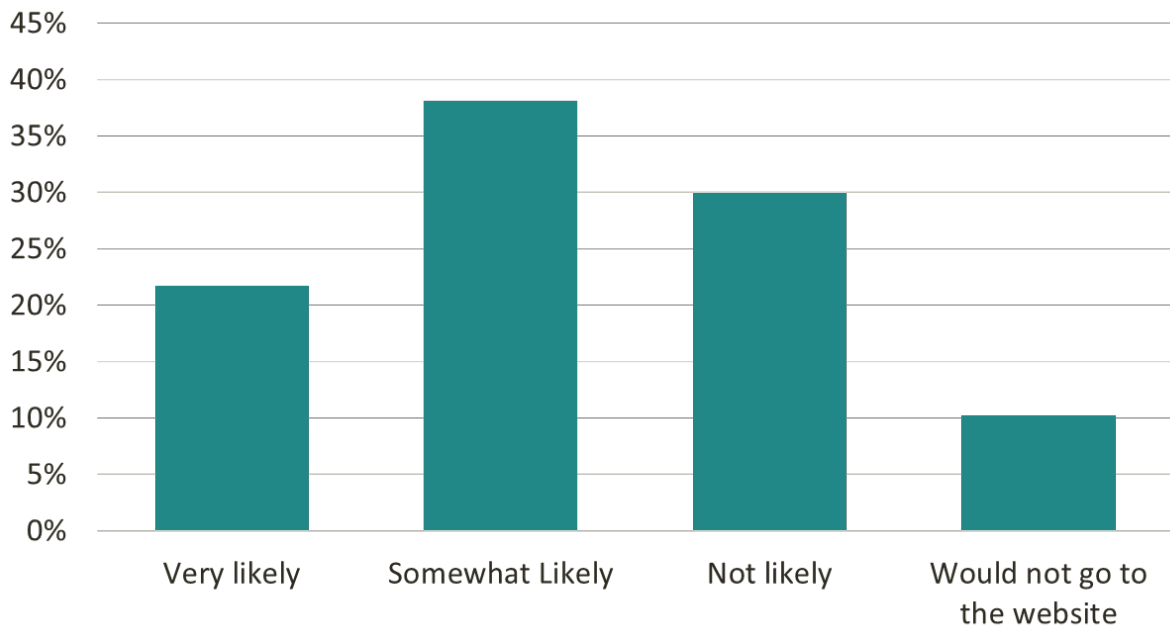


Figure 63: Likelihood of visiting

ARE THERE DIFFERENCES ACROSS WARNING TOPICS?

Results (warning topic): ⁷

- There were no differences across warning topics (Figure 64).

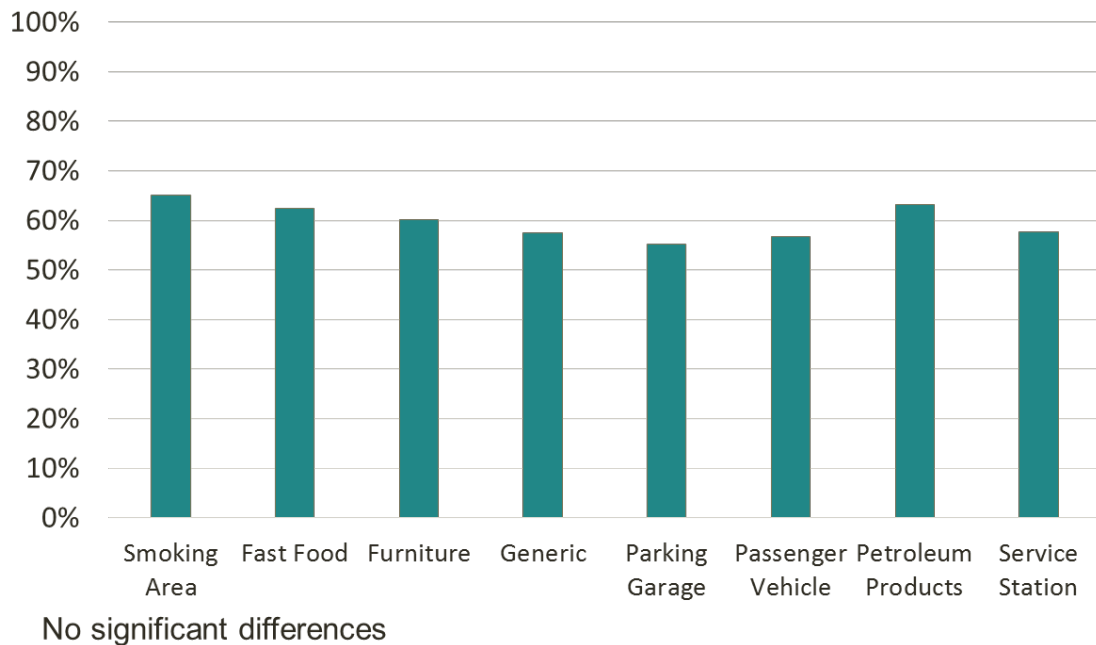


Figure 64: Likelihood of visiting website by warning

Results (demographics):

- There were no differences in likelihood of visiting website across race (Figure 65), age (Figure 66), pregnant status (Figure 67), survey language (Figure 69), home language (Figure 70), or education (Figure 71).
- There were differences for three demographic groups
 - Females are more likely than males to visit the website ($F = 28.58$; $p < .001$; Figure 64).
 - Whites are less likely to visit the website than Hispanics & Other races ($F = 10.86$, $p < .001$; Figure 65).
 - Older people are less likely to visit the website ($F = 3.44$, $p = .008$; Figure 66).

⁷ Analysis: (1) Very likely and somewhat likely were grouped together and used as the outcome, (2) A one-way ANOVA with warning topic or demographic factor as a random factor predicting likelihood of visiting website.

GENDER

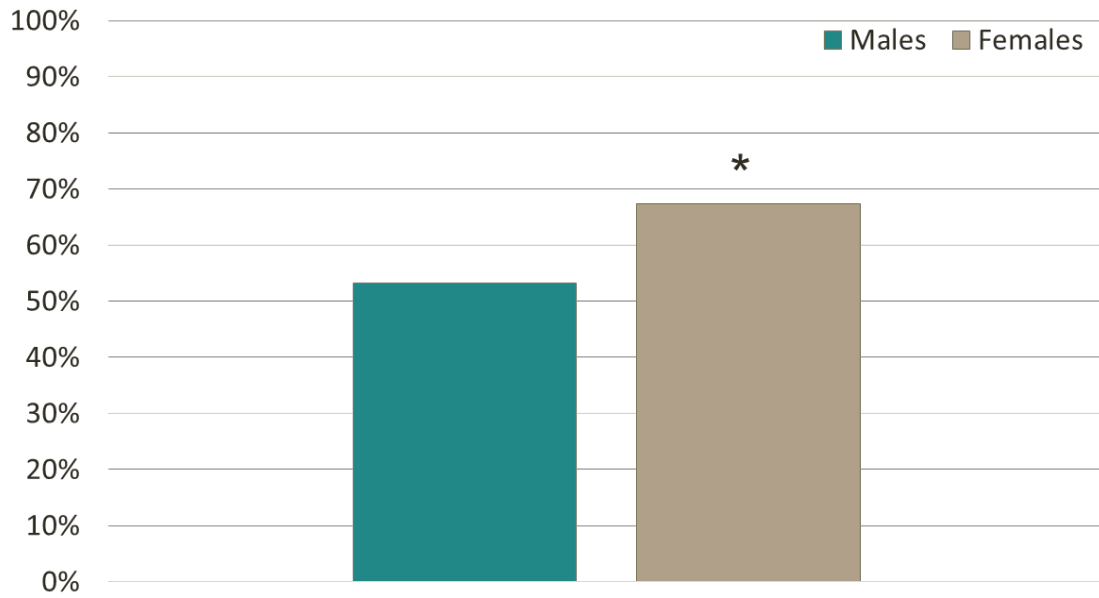


Figure 65: Likelihood of visiting website by gender.

RACE

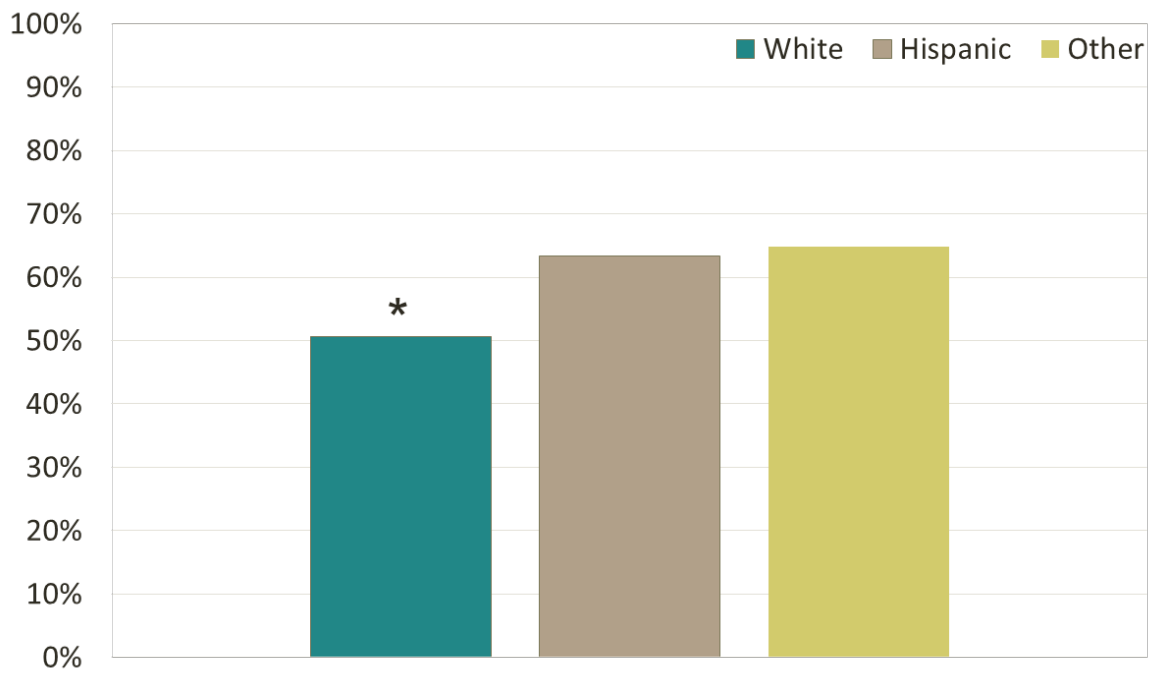


Figure 66: Likelihood of visiting website by race.

AGE

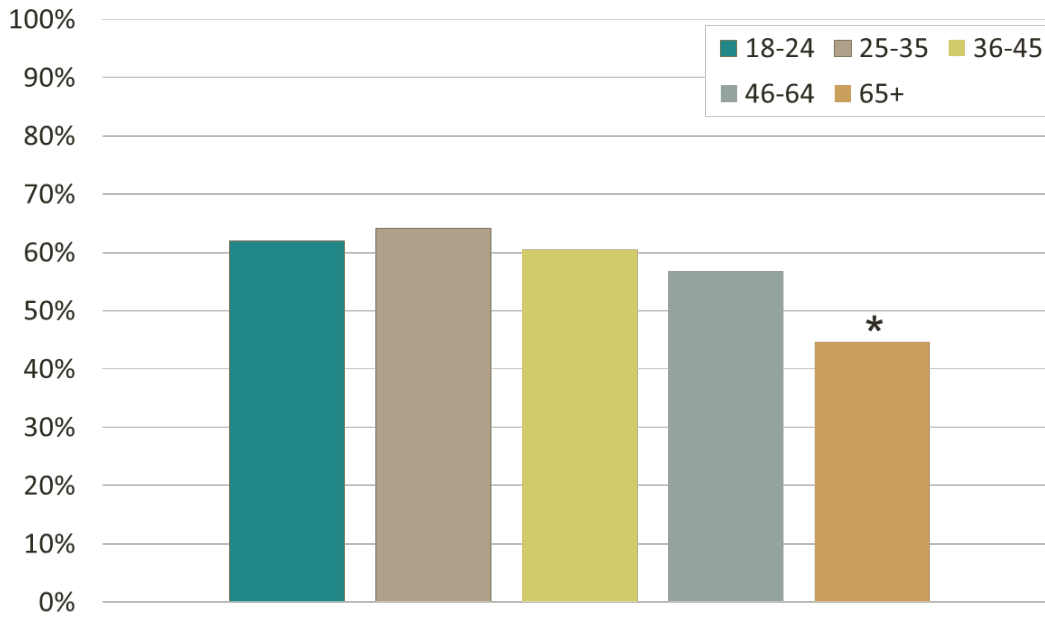
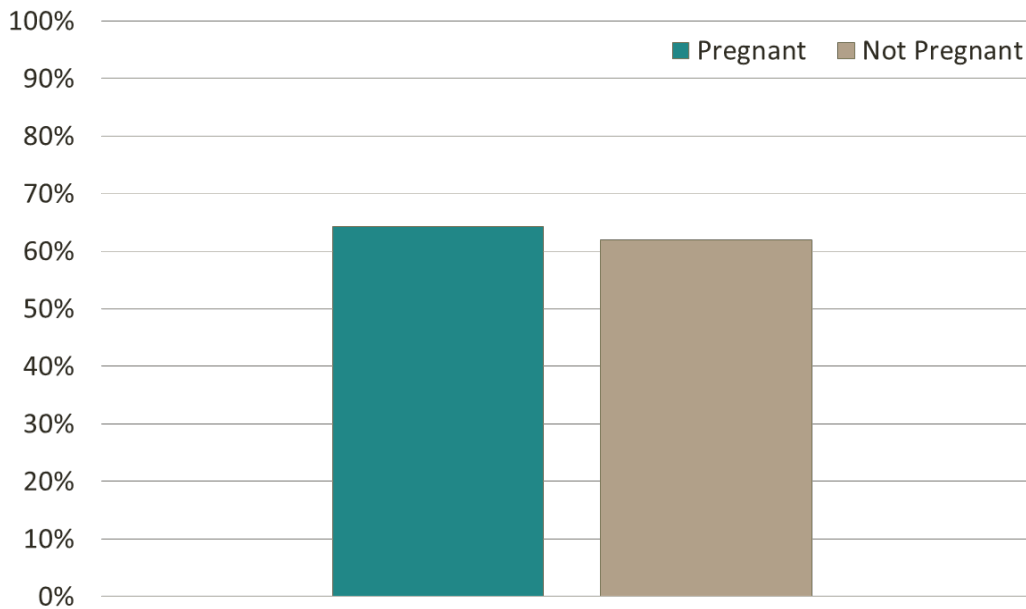


Figure 67: Likelihood of visiting website by age.

PREGNANT STATUS



No significant differences

Figure 68: Likelihood of visiting website by pregnant status.

SURVEY LANGUAGE

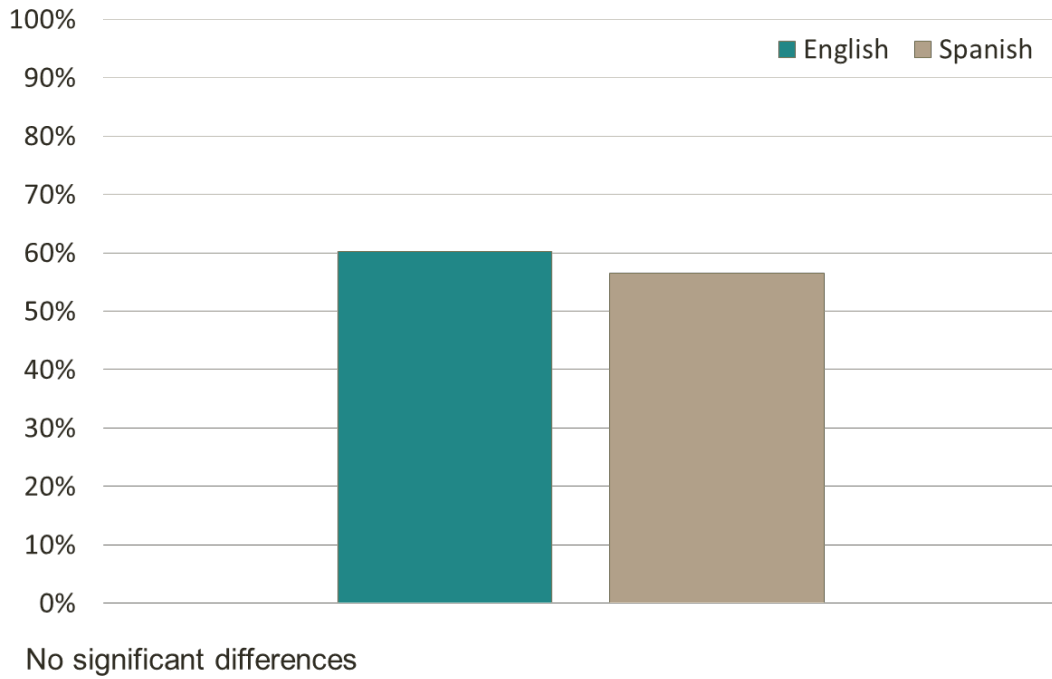


Figure 69: Likelihood of visiting website by survey

HOME LANGUAGE

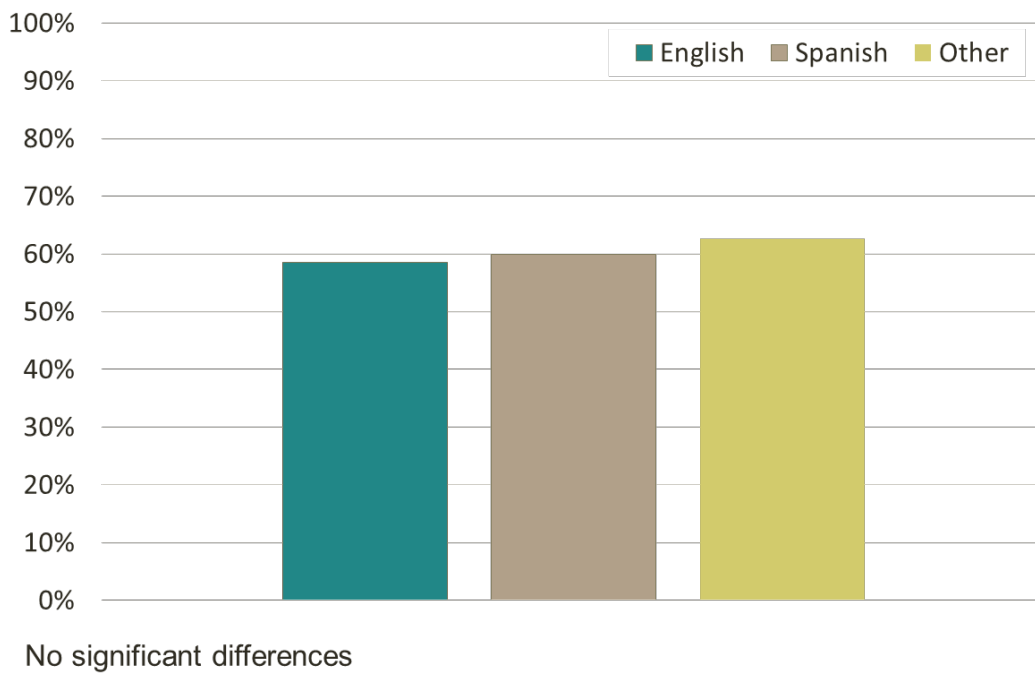
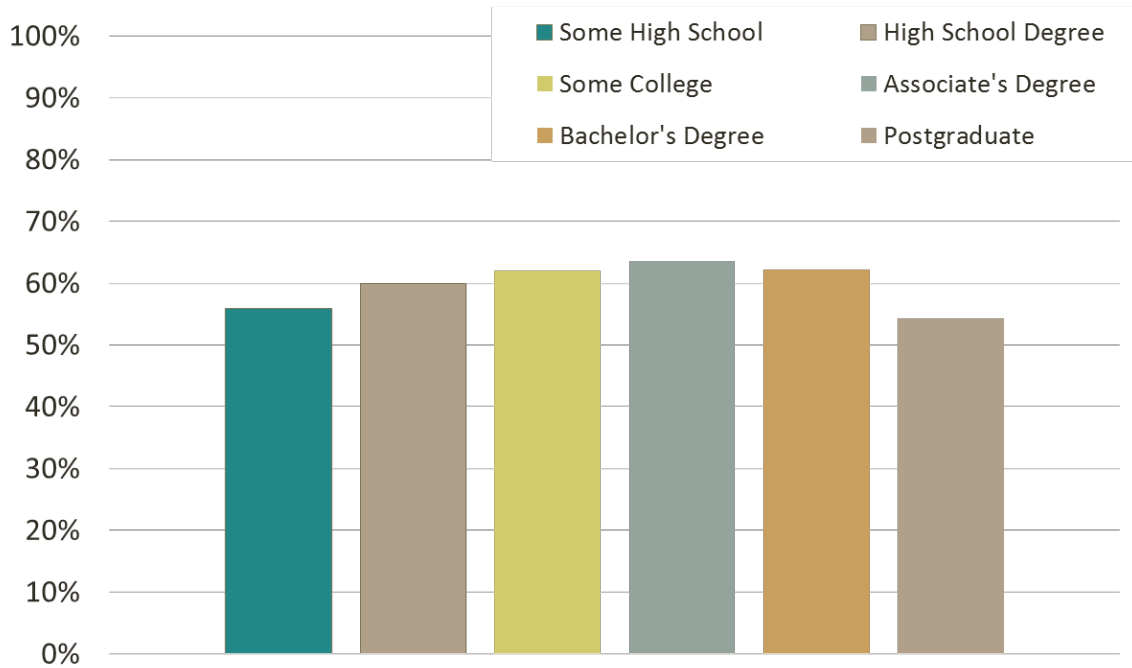


Figure 70: Likelihood of visiting website by home language.

EDUCATION



No significant differences

Figure 71: Likelihood of visiting website by education.

INCLUSION OF QR CODE

Question: Would you find it helpful to have a QR code on the warning sign?

Goal: To identify whether people would find a QR code helpful.

Analysis: Frequency of responses

Result: A little over a third of the participants said they would find it helpful to have a QR code on the warning (Figure 72).

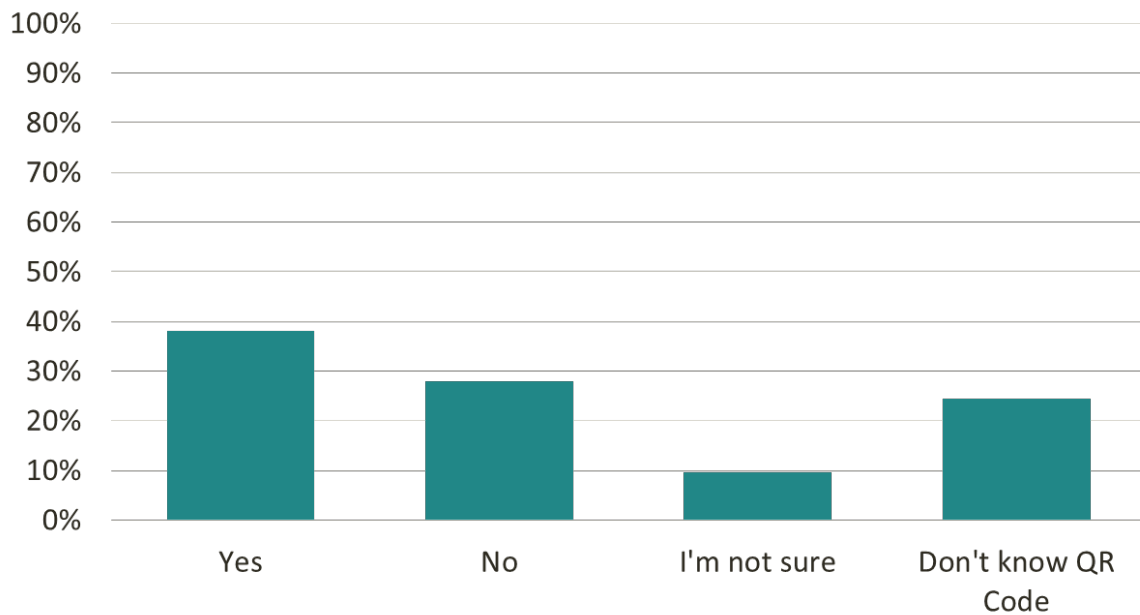


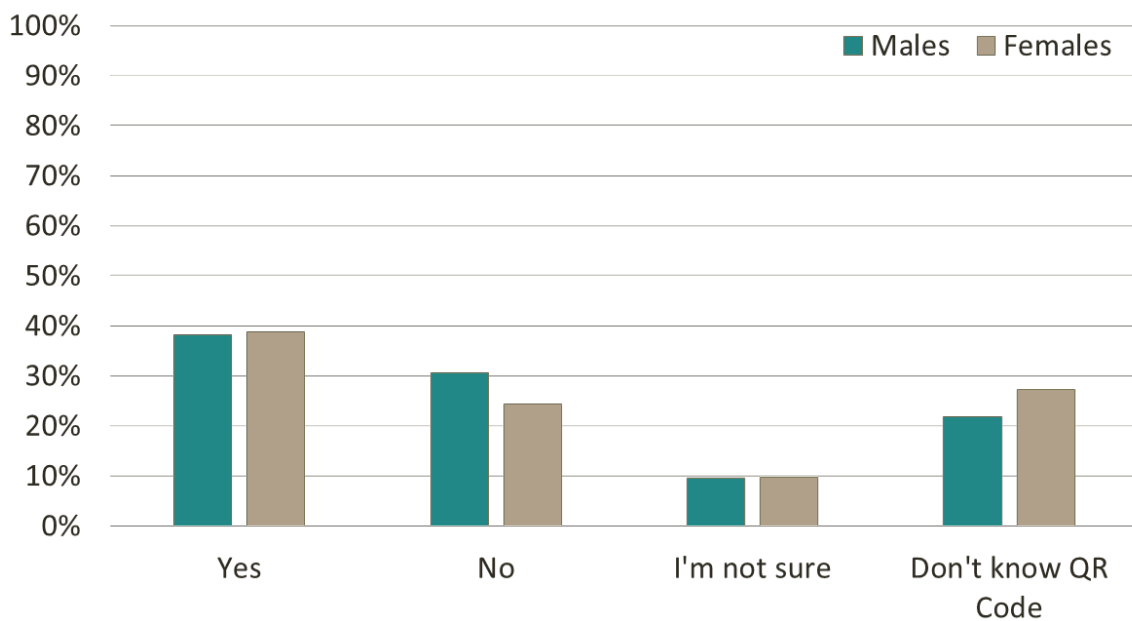
Figure 72: Helpfulness of QR code.

ARE THERE DIFFERENCES ACROSS DEMOGRAPHICS?

Results (demographics): ⁸

- There were no differences in helpfulness of the QR code across gender (Figure 73), age (Figure 74), pregnant status (Figure 75), race (Figure 76), or survey language (Figure 77).
- Two differences emerged across demographic groups
 - Spanish home language speakers were less likely to say no (Figure 78).
 - Lower educated more likely to say no (Figure 79).

GENDER

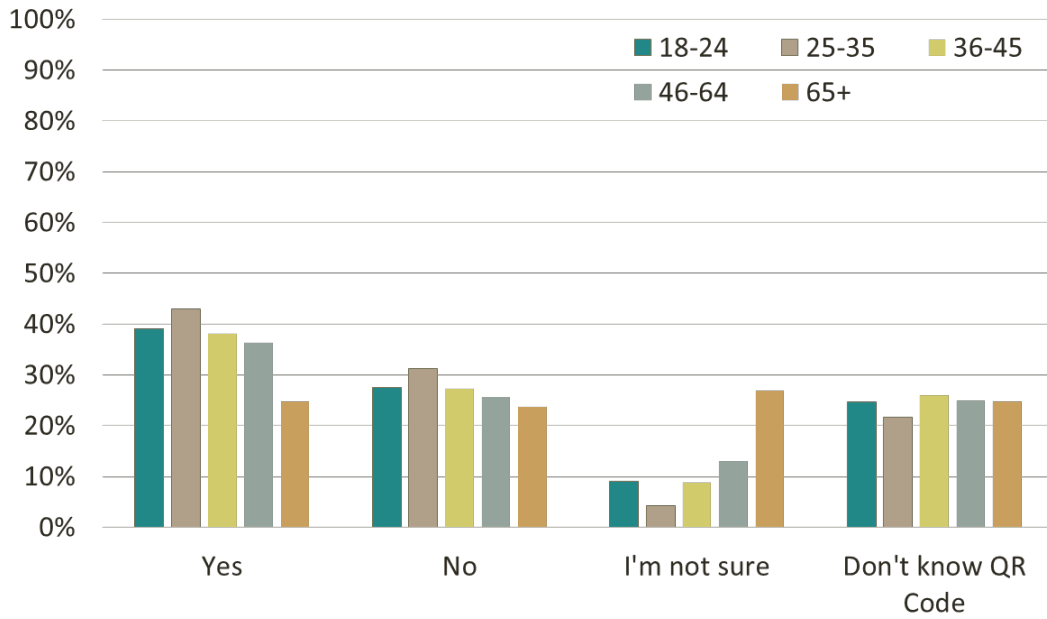


No significant differences

Figure 73: Helpfulness of QR code by gender.

⁸ Analysis: A one-way ANOVA with warning topic or demographic factor as a random factor **predicting a yes or no response.**

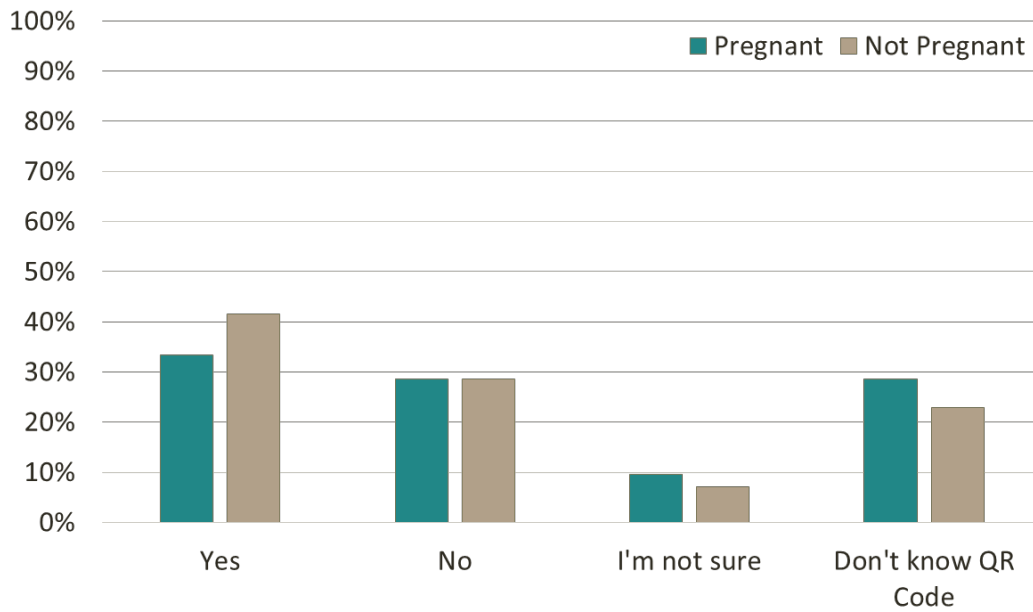
AGE



No significant differences

Figure 74: Helpfulness of QR code by age.

PREGNANT STATUS



No significant differences

Figure 75: Helpfulness of QR code by pregnant

RACE

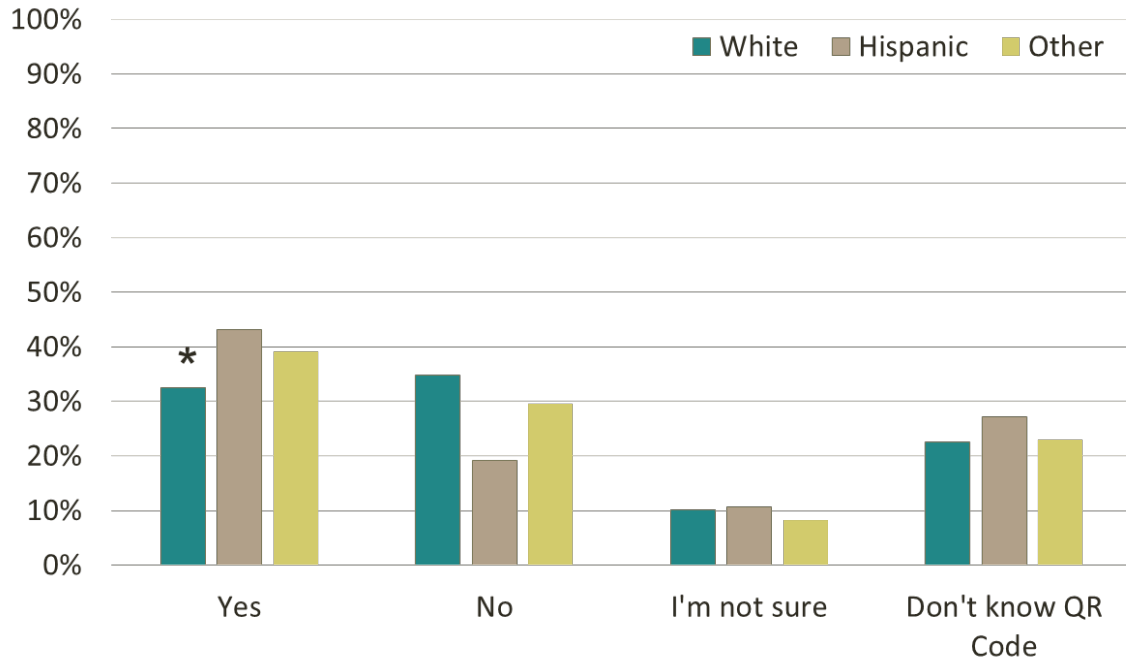


Figure 76: Helpfulness of QR code by race.

SURVEY LANGUAGE

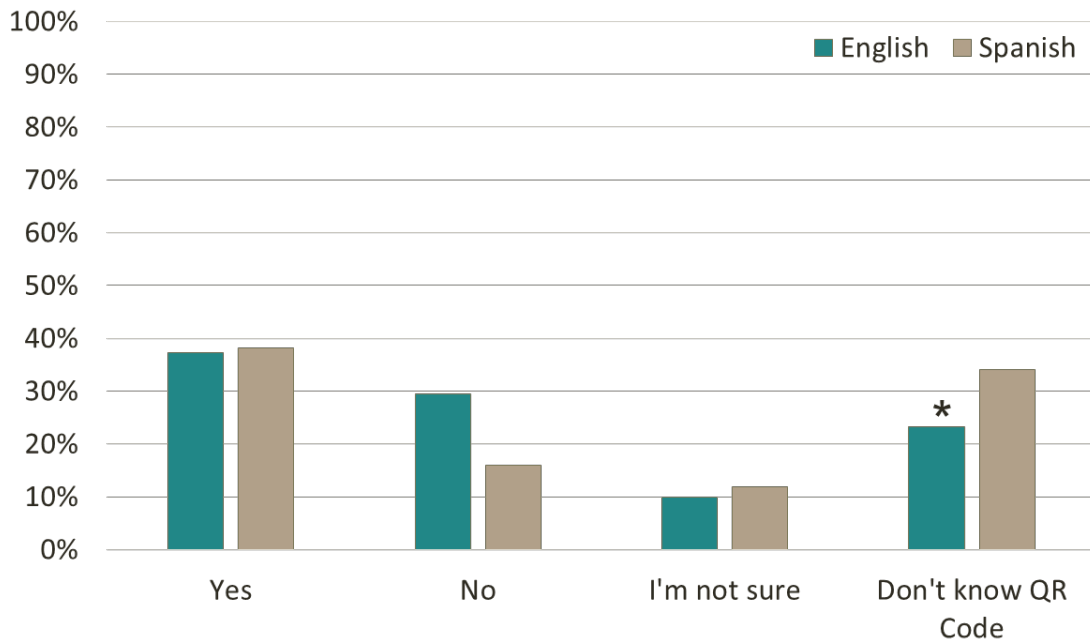


Figure 77: Helpfulness of QR code by survey language.

HOME LANGUAGE

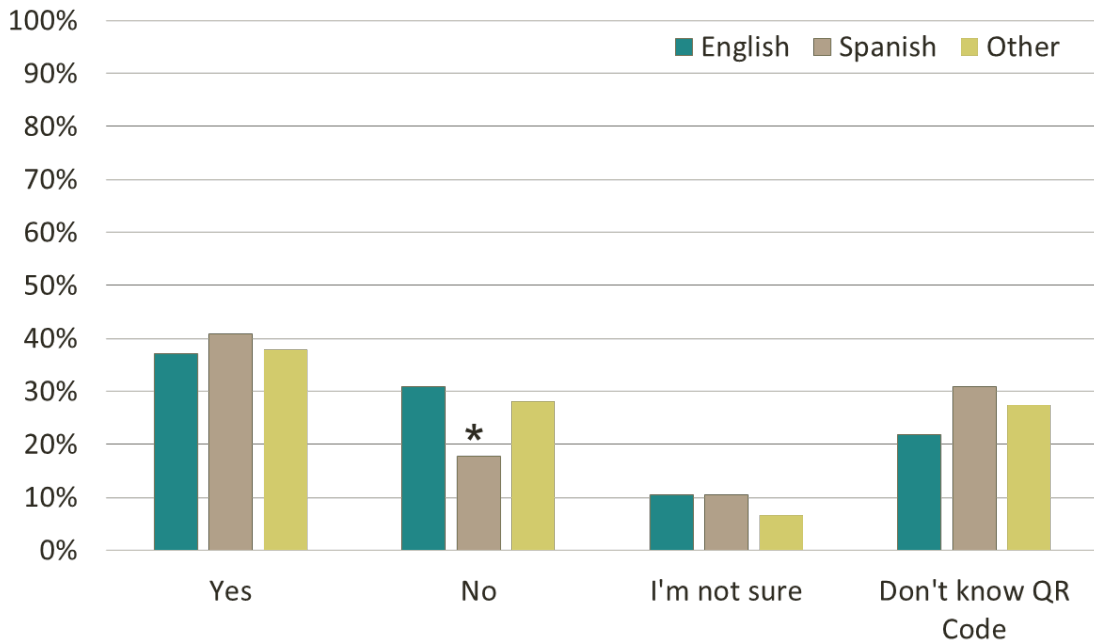
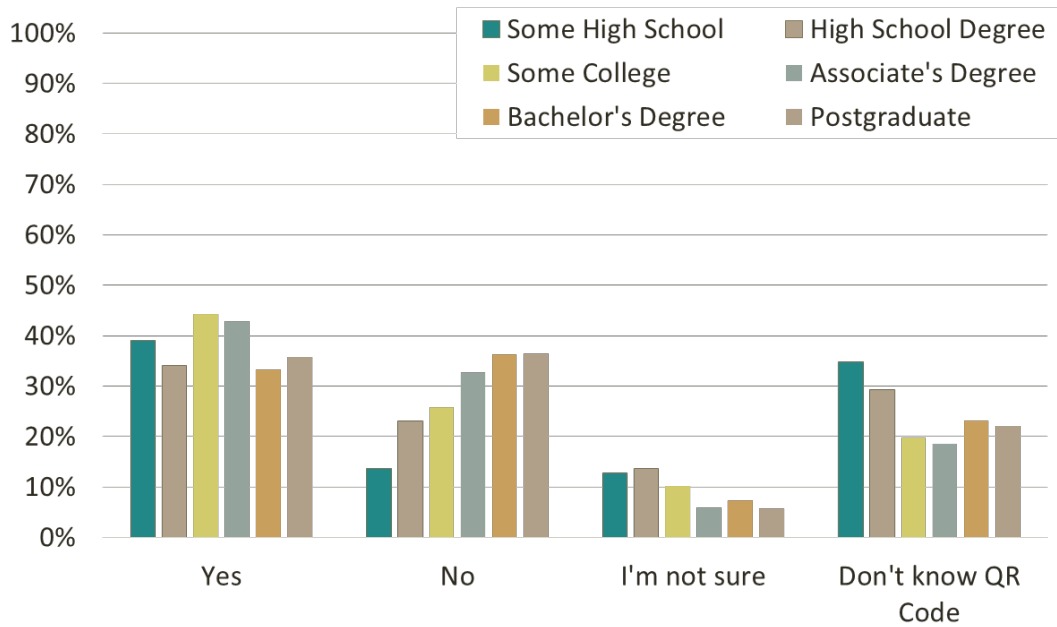


Figure 78: Helpfulness of QR code by home language.

EDUCATION



No significant differences

Figure 79: Helpfulness of QR code by education.

KNOWLEDGE OF CHEMICALS

Question: Are you familiar with these chemicals?

- Acrylamide
- Chlorinated Tris
- Phthalates
- Lead
- Mercury
- Carbon Monoxide

Goal: To identify which chemicals are known by the public.

Analysis: Frequency of responses

Result: (1) People were familiar with lead, mercury, and carbon monoxide (Figure 80). (2) Knowledge of specific chemicals mentioned in the warnings was not related to preference for chemical names ($F_s = .00 - 1.98, p_s > .160$).

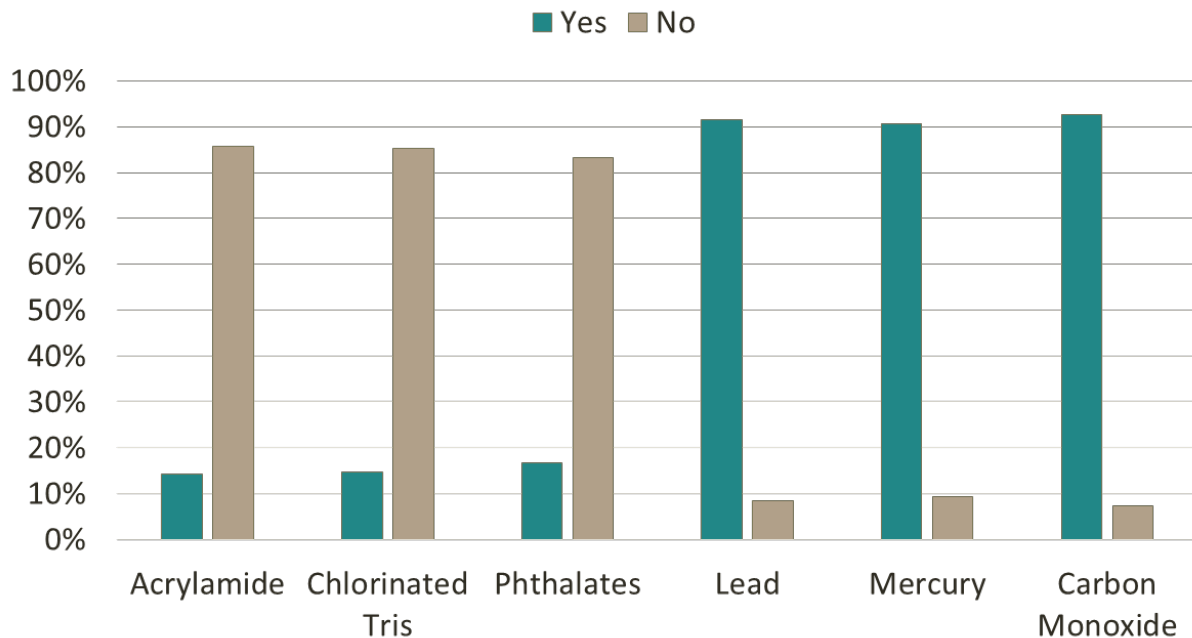


Figure 80: Knowledge of chemicals.

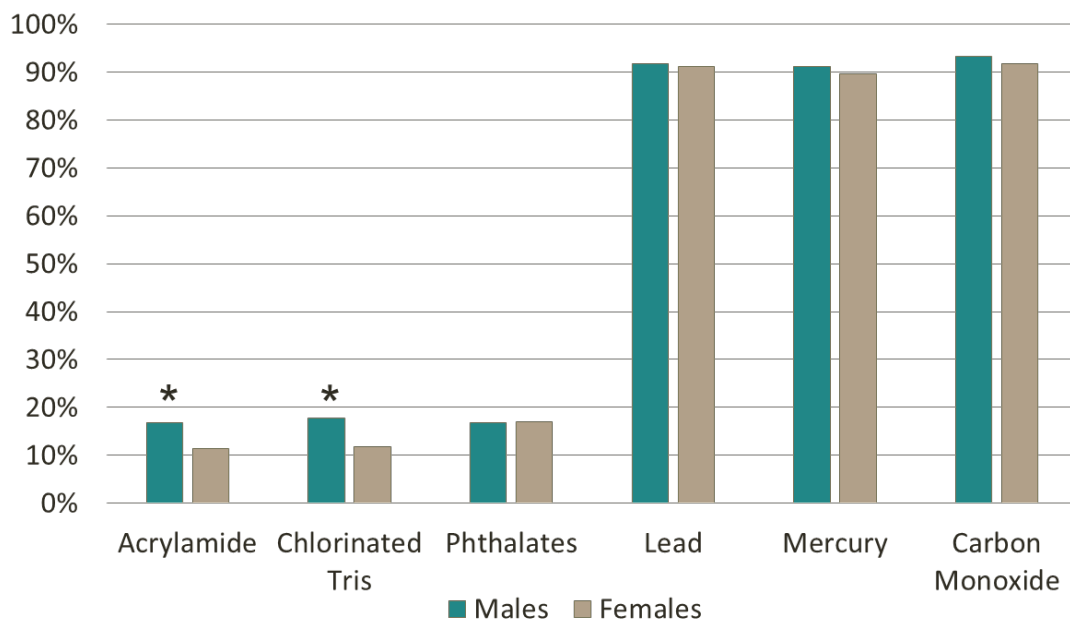
ARE THERE DIFFERENCES ACROSS DEMOGRAPHICS?

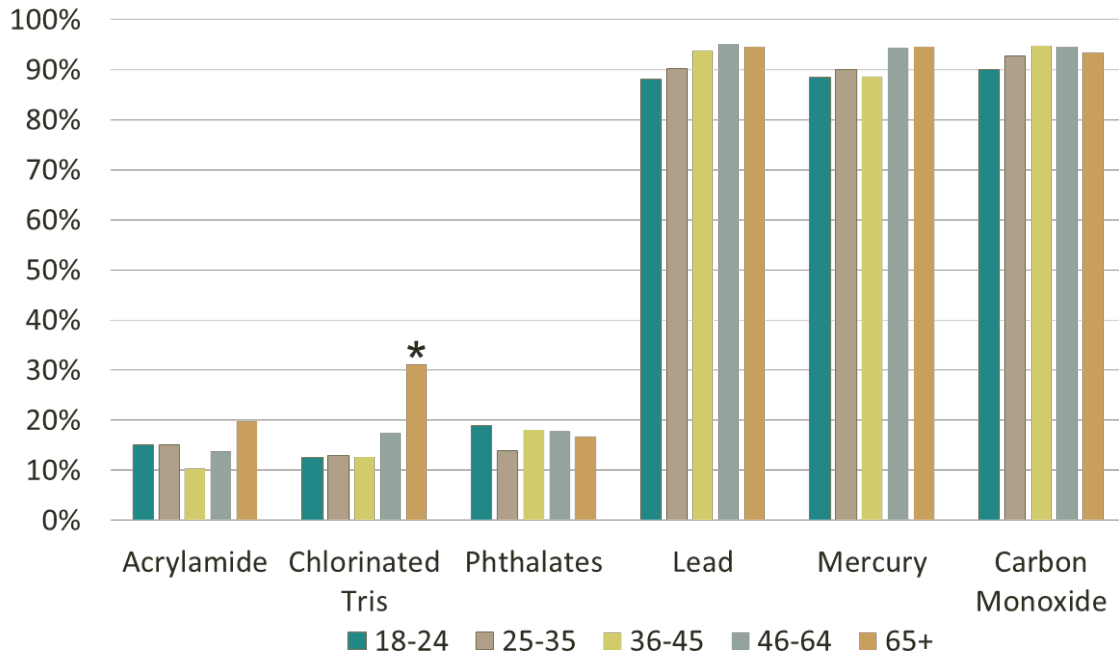
Results (demographics):⁹

- Differences emerged for
 - Acrylamide: Females higher than males ($F = 4.56, p = .033$); Whites higher than Hispanics ($F = 3.06, p = .047$); Spanish lower than English survey language ($F = 6.05, p = .014$); English higher than Spanish home language ($F = 4.76, p = .009$); higher knowledge with higher education ($r = .08, p = .021$)
 - Chlorinated Tris: Females higher than males ($F = 5.34, p = .021$); 65+ higher than other ages ($F = 4.94, p = .001$); English higher than Spanish home language ($F = 3.43, p = .033$); higher knowledge with higher education ($r = .07, p = .041$)
 - Phthalates: higher knowledge with higher education ($r = .09, p = .017$)
 - Lead: Whites higher than other races ($F = 9.61, p < .001$); English higher than Spanish higher than Other home language ($F = 28.77, p < .001$); higher knowledge with higher education ($r = .11, p = .001$)
 - Mercury: Whites higher than other races ($F = 11.71, p < .001$); Spanish lower than English survey language ($F = 20.05, p < .001$); English higher than Spanish and Other home language ($F = 23.93, p < .001$); higher knowledge with higher education ($r = .10, p = .006$)
 - Carbon Monoxide: Whites higher than other races ($F = 7.43, p = .001$); English higher than Spanish higher than Other home language ($F = 19.47, p < .001$); higher knowledge with higher education ($r = .08, p = .010$)

⁹ Analysis: A one-way ANOVA with sign topic or demographic factor as a random factor **predicting a yes or no response.**

Figure 81: Knowledge of chemicals by gender.





PREGNANT STATUS

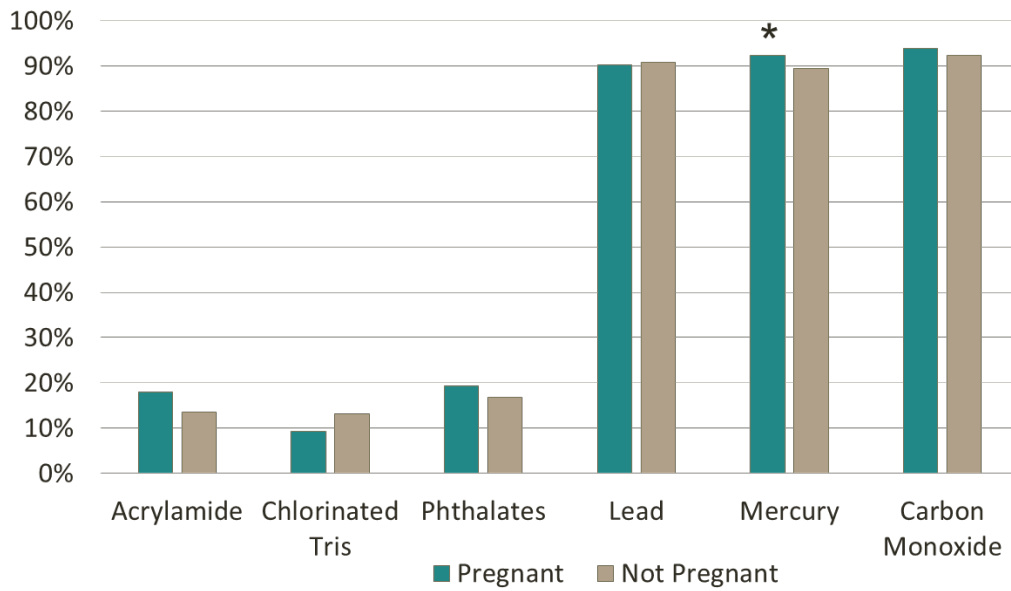
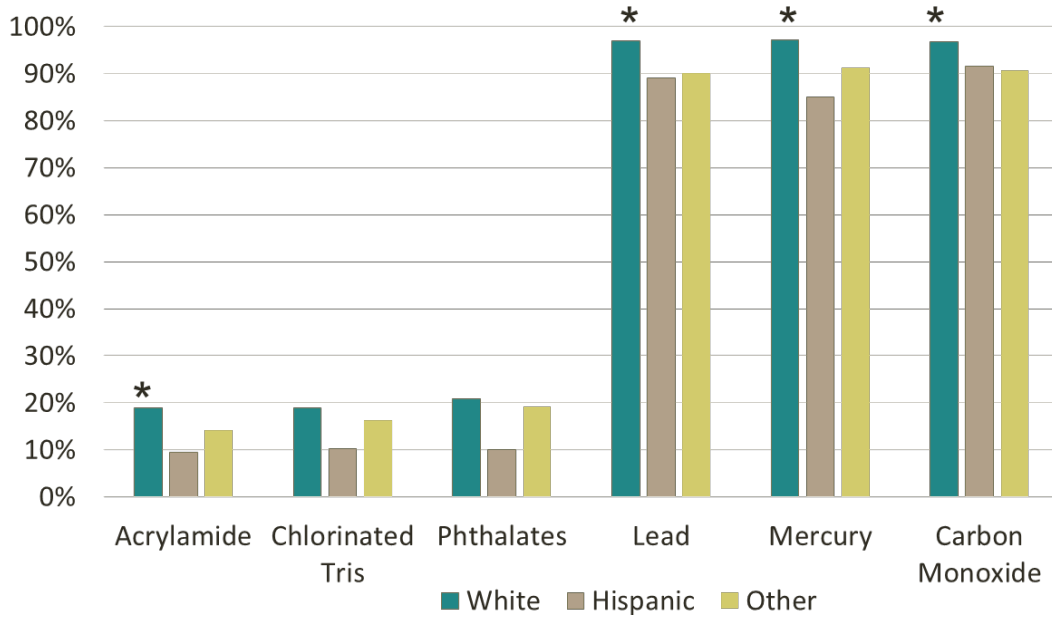


Figure 83: Knowledge of chemicals by pregnant

RACE



SURVEY LANGUAGE

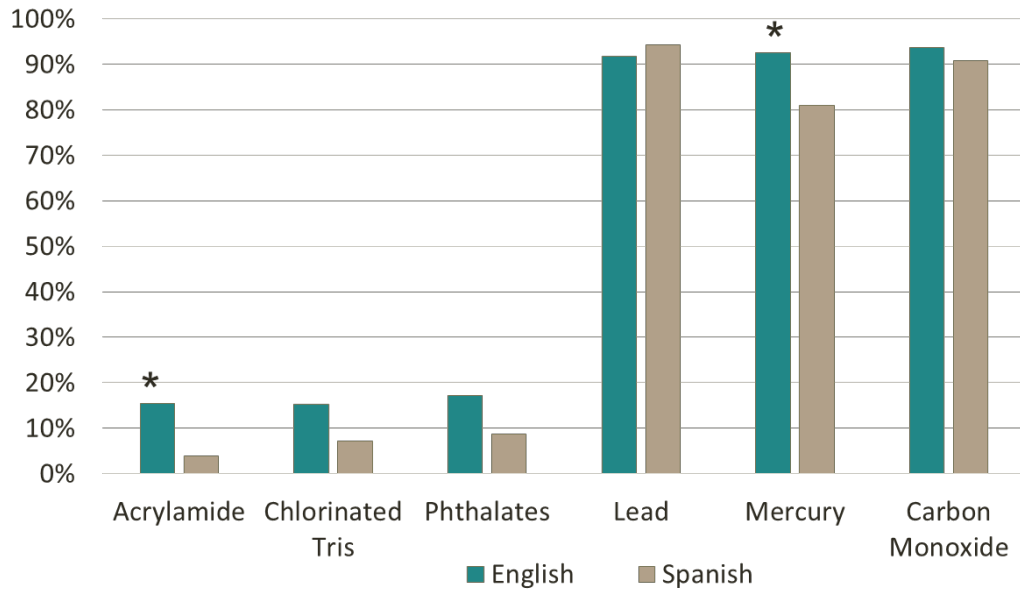


Figure 85: Knowledge of chemicals by survey language.

HOME LANGUAGE

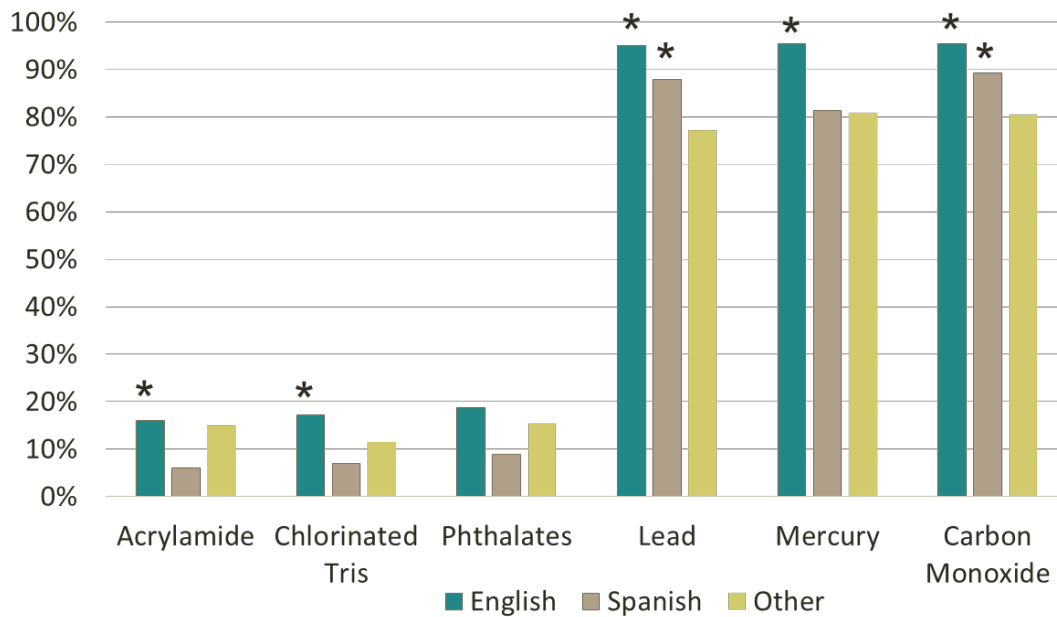
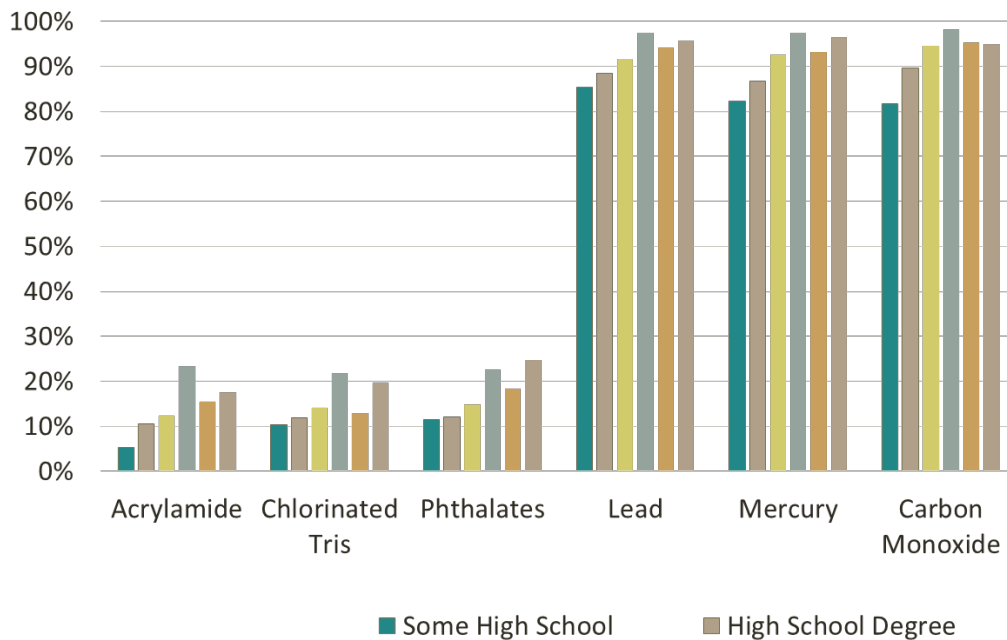


Figure 86: Knowledge of chemicals by home language.

EDUCATION



For all chemicals: greater knowledge with more education ($r_s = .07 - .11$, $p_s = .001 - .041$)

Figure 87: Knowledge of chemicals by education.


CONCLUSION

Based on a population sample similar to the population of California (1527 survey responses collected between August 6, 2015, and August 25, 2015, at 19 DMVs), the public opined that the following elements would contribute to the efficacy (helpfulness) of the Prop 65 warnings:

Proposed language: The results showed that over three-quarters of the participants selected the proposed warning as being more helpful than the existing warning.

Inclusion of the specific chemical names: The results showed that two-thirds of the people selected the warning with the specific chemical names as being more helpful than the warning that generally referred to chemicals. In addition, participants' most frequent reaction was that the inclusion of the chemical names made people feel better able to make an informed choice.

Displaying the specific chemical names on a separate line: The results showed that almost three-fourths of the people selected the warning with the chemical names on their own line as being more helpful than the one paragraph warning.

Inclusion of the  warning symbol: The most frequent reaction was that the symbol meant warning. Few people reported the symbol confused or scared them.

Inclusion of the Proposition 65 web address where the public can get additional information on the chemicals they are potentially being exposed to: Over half of the respondents said they are very likely or somewhat likely to visit the website.

APPENDIX A: SURVEY LOCATIONS

DMV offices located at:

Manteca - 955 Davis St. 95337
Modesto - 124 Burney St. 95354
Turlock - 825 E. Monte Vista Ave, 95382
Merced - 1313 W. 12th St. 95341
Stockton – 55 South Lincoln, 95203
San Mateo - 425 N. Amphlett Blvd. 94401
Redwood City - 300 Brewster Ave. 94063
Santa Clara - 3665 Flora Vista Ave. 95051
San Jose - 111 W. Alma Ave. 95110
Pasadena- 49 S. Rosemead Blvd. 91107
Los Angeles - 3615 S. Hope St. 90007
Bell Gardens - 6801 S. Garfield Ave. 90201
San Diego - 3960 Normal St. 92103
San Diego Claremont - 4375 Derrick Dr. 92117
El Cajon - 1450 Graves Ave. 92021
Oroville - 775 Mitchell Ave. 95965
Chico - 107 Parmac Rd. #1 95926
Redding - 2135 Civic Center Dr. 96001
Red Bluff - 675 Monrow St. 96080

APPENDIX B: SURVEY INSTRUMENT

What region are you in?

- Manteca/Modesto/Turlock/Merced (Aug 6-7)
- San Mateo/Redwood City (August 12)
- Santa Clara/San Jose (August 13)
- Pasadena (August 17)
- Los Angeles/Bell Gardens (August 18)
- San Diego (August 19)
- El Cajon (August 20)
- Oroville/Chico (August 24)
- Redding/Red Bluff (August 25)

Where are you located

- DMV AM
- DMV PM
- Other _____

Researcher

- Jodie
- Yadira
- Rebecca
- Leigh
- Other _____

English or Spanish?

- English
- Spanish

How are you feeling today?

- Very negative
- Negative
- Neither negative nor positive
- Positive
- Very positive

Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986, requires businesses to notify Californians about significant amounts of chemicals they may be exposed to. This enables the public to make informed decisions about protecting themselves from exposure to these chemicals.

Have you heard about Proposition 65 before today?

- Yes
- No

Not all Prop 65 signs look the same, but they all provide warnings about dangerous chemicals. Here is an example of a Prop 65 warning sign: How often have you seen a sign like this before today?

- Several times a week
- Several times a month
- A few times a year
- Never

Which sign is more helpful? (select one below)

- Image: Old – fast food restaurant
- Image: New – fast food restaurant

Do you have any comments about these signs?

Which sign is more helpful? (select one below)

- Image: Old – parking garage
- Image: New – parking garage

Do you have any comments about these signs?

Which sign is more helpful? (select one below)

- Image: Old – service station
- Image: New – service station

Do you have any comments about these signs?

Which sign is more helpful? (select one below)

- Image: Old – petroleum products
- Image: New – petroleum products

Do you have any comments about these signs?

Which sign is more helpful? (select one below)

- Image: Old – furniture
- Image: New – furniture

Do you have any comments about these signs?

Which sign is more helpful? (select one below)

- Image: Old – passenger vehicle
- Image: New – passenger vehicle

Do you have any comments about these signs?

Which sign is more helpful? (select one below)

- Image: Old – designated smoking area
- Image: New – designated smoking area

Do you have any comments about these signs?

Which sign is more helpful? (select one below)

- Image: Old – generic
- Image: New – generic

Do you have any comments about these signs?

One sign includes the chemical names and the other sign refers generally to chemicals. Which sign is more helpful?
Select one below.

- Image: Fast food restaurant – without chemical names
- Image: Fast food restaurant – with chemical names

One sign includes the chemical names and the other sign refers generally to chemicals. Which sign is more helpful?
Select one below.

- Image: Parking garage – without chemical names
- Image: Parking garage – with chemical names

One sign includes the chemical names and the other sign refers generally to chemicals. Which sign is more helpful?
Select one below.

- Image: Service station – without chemical names
- Image: Service station – with chemical names

One sign includes the chemical names and the other sign refers generally to chemicals. Which sign is more helpful?
Select one below.

- Image: Petroleum products – without chemical names
- Image: Petroleum products – with chemical names

One sign includes the chemical names and the other sign refers generally to chemicals. Which sign is more helpful?
Select one below.

- Image: Furniture – without chemical names
- Image: Furniture – with chemical names

One sign includes the chemical names and the other sign refers generally to chemicals. Which sign is more helpful?
Select one below.

- Image: Passenger vehicle – without chemical names
- Image: Passenger vehicle – with chemical names

One sign includes the chemical names and the other sign refers generally to chemicals. Which sign is more helpful?
Select one below.

- Image: Designated smoking area – without chemical names
- Image: Designated smoking area – with chemical names

These 2 signs are identical in content, but are arranged differently. Which sign is easier to read?

- Image: Fast food restaurant – chemical names in text
- Image: Fast food restaurant – chemical names set apart with spaces
- They are equally easy to read

These 2 signs are identical in content, but are arranged differently. Which sign is easier to read?

- Image: Parking garage – chemical names in text
- Image: Parking garage – chemical names set apart with spaces
- They are equally easy to read

These 2 signs are identical in content, but are arranged differently. Which sign is easier to read?

- Image: Service station – chemical names in text
- Image: Service station – chemical names set apart with spaces
- They are equally easy to read

These 2 signs are identical in content, but are arranged differently. Which sign is easier to read?

- Image: Petroleum products – chemical names in text
- Image: Petroleum products – chemical names set apart with spaces
- They are equally easy to read

These 2 signs are identical in content, but are arranged differently. Which sign is easier to read?

- Image: Furniture – chemical names in text
- Image: Furniture – chemical names set apart with spaces
- They are equally easy to read

These 2 signs are identical in content, but are arranged differently. Which sign is easier to read?

- Image: Passenger vehicle – chemical names in text
- Image: Passenger vehicle – chemical names set apart with spaces
- They are equally easy to read

These 2 signs are identical in content, but are arranged differently. Which sign is easier to read?

- Image: Designated smoking area – chemical names in text
- Image: Designated smoking area – chemical names set apart with spaces
- They are equally easy to read

Does the inclusion of the specific chemical/s in the sign: (Check all that apply)

- Make the sign more helpful
- Help me feel better able to make an informed choice
- Make me want to seek more information
- Confuse me
- Scare me
- Other (please specify) _____

Does the inclusion of the specific chemical/s in the sign: (Check all that apply)

- Make the sign more helpful
- Help me feel better able to make an informed choice
- Make me want to seek more information
- Confuse me
- Scare me
- Other (please specify) _____

Does the inclusion of the specific chemical/s in the sign: (Check all that apply)

- Make the sign more helpful
- Help me feel better able to make an informed choice
- Make me want to seek more information
- Confuse me
- Scare me
- Other (please specify) _____

Does the inclusion of the specific chemical/s in the sign: (Check all that apply)

- Make the sign more helpful
- Help me feel better able to make an informed choice
- Make me want to seek more information
- Confuse me
- Scare me
- Other (please specify) _____

Does the inclusion of the specific chemical/s in the sign: (Check all that apply)

- Make the sign more helpful
- Help me feel better able to make an informed choice
- Make me want to seek more information
- Confuse me
- Scare me
- Other (please specify) _____

Does the inclusion of the specific chemical/s in the sign: (Check all that apply)

- Make the sign more helpful
- Help me feel better able to make an informed choice
- Make me want to seek more information
- Confuse me
- Scare me
- Other (please specify) _____

Does the inclusion of the specific chemical/s in the sign: (Check all that apply)

- Make the sign more helpful
- Help me feel better able to make an informed choice
- Make me want to seek more information
- Confuse me
- Scare me
- Other (please specify) _____

What does the triangular yellow symbol mean to you? (Check all that apply)

- Warning
- Danger
- Caution
- Nothing
- It confuses me
- It scares me
- It gets my attention
- Other (please specify) _____

What does the triangular black and white symbol mean to you? (Check all that apply)

- Warning
- Danger
- Caution
- Nothing
- It confuses me
- It scares me
- It gets my attention
- Other (please specify) _____

If you wanted additional information, how likely are you to visit the website listed below?

- Very likely
- Somewhat likely
- Not likely
- Would not go to the website

Do you have any comments about this sign?

If you wanted additional information, how likely are you to visit the website listed below?

- Very likely
- Somewhat likely
- Not likely
- Would not go to the website

Do you have any comments about this sign?

If you wanted additional information, how likely are you to visit the website listed below?

- Very likely
- Somewhat likely
- Not likely
- Would not go to the website

Do you have any comments about this sign?

If you wanted additional information, how likely are you to visit the website listed below?

- Very likely
- Somewhat likely
- Not likely
- Would not go to the website

Do you have any comments about this sign?

If you wanted additional information, how likely are you to visit the website listed below?

- Very likely
- Somewhat likely
- Not likely
- Would not go to the website

Do you have any comments about this sign?

If you wanted additional information, how likely are you to visit the website listed below?

- Very likely
- Somewhat likely
- Not likely
- Would not go to the website

Do you have any comments about this sign?

If you wanted additional information, how likely are you to visit the website listed below?

- Very likely
- Somewhat likely
- Not likely
- Would not go to the website

Do you have any comments about this sign?

Are you familiar with these chemicals?

	Yes	No
Acrylamide	<input type="radio"/>	<input type="radio"/>
Carbon Monoxide	<input type="radio"/>	<input type="radio"/>
Chlorinated Tris	<input type="radio"/>	<input type="radio"/>
Phthalates	<input type="radio"/>	<input type="radio"/>
Lead	<input type="radio"/>	<input type="radio"/>
Mercury	<input type="radio"/>	<input type="radio"/>

Would you find it helpful to have a QR code on the warning sign?

- Yes
- No
- I'm not sure
- Do not know what a QR code is

In order to ensure we are surveying a representative group of Californians, please provide some information about yourself:

Gender

- Male
- Female
- Other
- Decline to State

Age

- 18-24
- 25-35
- 36-45
- 46-64
- 65+
- Decline to State

Are you or your partner pregnant or trying to become pregnant?

- Yes
- No
- Decline to State

What is your race/ethnicity?

- White
- Hispanic or Latino(a)
- Black or African American
- Asian American
- Native American
- Multi-racial (2 or more races)
- Other (please specify) _____
- Decline to state

Primary language spoken at home

- English
- Spanish
- Tagalog
- Chinese
- Vietnamese
- Korean
- Other (please specify) _____
- Decline to state

What is your highest level of education?

- Some high school
- High school graduate
- Some college
- Associate's degree
- Bachelor's degree
- Post graduate (e.g., MBA, JD, PhD, MD)
- Decline to state

Is there anything else you would like to add?

We greatly appreciate your participation in this survey. Thank you.

La Oficina de Salud Ambiental y Evaluación de Riesgos ha contratado a la Universidad de California, Davis para estudiar la efectividad de avisos de advertencia existentes y propuestos. Gracias por su participación en este breve cuestionario.

¿Cómo se siente usted hoy?

- Muy mal/o
- Mal/o
- Ni mal/o ni bien/o
- Bien/o
- Muy bien/o

La Proposición 65 es la ley de agua potable y sustancias tóxicas de 1986, la cual dicta que las compañías deben advertir a los residentes de California sobre la posible exposición a cantidades significativas de químicos peligrosos. Esto permitiría al público tomar decisiones informadas relacionadas a su protección frente a la exposición a estos químicos.

¿Has escuchado acerca de la Proposición 65 antes de hoy?

- Sí
- No

No todos los avisos de la proposición 65 son iguales, pero todos tienen advertencias sobre químicos peligrosos. Aquí está un ejemplo de un aviso de advertencia: ¿Qué tan seguido has visto un letrero como este antes del día de hoy?

- Varias veces a la semana
- Varias veces al mes
- Pocas veces al año
- Nunca

¿Cuál aviso es más útil? (escoge uno)

- Image: Old – fast food restaurant
- Image: New – fast food restaurant

¿Tienes comentarios sobre uno de estos avisos?

¿Cuál aviso es más útil? (escoge uno)

- Image: Old – parking garage
- Image: New – parking garage

¿Tienes comentarios sobre uno de estos avisos?

Un aviso incluye el nombre de los químicos y el otro se refiere a químicos en general. ¿Cuál aviso es más útil?

- Image: Fast food restaurant – general reference
- Image: Specific chemicals – fast food restaurant

Un aviso incluye el nombre de los químicos y el otro se refiere a químicos en general. ¿Cuál aviso es más útil?

- Image: Parking garage – general reference
- Image: Parking garage – specific chemicals

Estos dos avisos tienen el mismo contenido pero están presentados diferente. ¿Cuál aviso es más fácil para leer?

- Image: Fast food restaurant – chemical names in text
- Image: Fast food restaurant – chemical names set apart with spaces
- Puedo leer los dos letreros igual

Estos dos avisos tienen el mismo contenido pero están presentados diferente. ¿Cuál aviso es más fácil para leer?

- Image: Parking garage – chemical names in text
- Image: Parking garage – chemical names set apart with spaces
- Puedo leer los dos letreros igual

La inclusión de químicos específicos: (Marca todas las respuestas que apliquen)

- Hace el aviso más útil
- Me ayuda a tomar decisiones más informadas
- Me motiva a buscar más información
- Me confunde
- Me asusta
- Otro (por favor especifique) _____

¿Qué significa el triángulo amarillo para ti? (Marca todas las respuestas que apliquen)

- Advertencia
- Peligro
- Precaución
- Nada
- Me confunde
- Me asusta
- Llama mi atención
- Otro (por favor especifique) _____

¿Qué significa el triángulo en blanco y negro para ti? (Marca todas las respuestas que apliquen)

- Advertencia
- Peligro
- Precaución
- Nada
- Me confunde
- Me asusta
- Llama mi atención
- Otro (por favor especifique) _____

Si quisieras más información, ¿qué tan probable es que visites el sitio en línea mostrado abajo?

- Muy probable
- Probable
- Poco probable
- No visitaría el sitio en línea

¿Tienes algún comentario sobre este aviso?

Si quisieras más información, ¿qué tan probable es que visites el sitio en línea mostrado abajo?

- Muy probable
- Probable
- Poco probable
- No visitaría el sitio en línea

¿Tienes algún comentario sobre este aviso?

¿Son estos químicos familiares para ti?

	Si	No
Acrilamida	<input type="radio"/>	<input type="radio"/>
Monóxido de Carbono	<input type="radio"/>	<input type="radio"/>
Tris Clorada	<input type="radio"/>	<input type="radio"/>
Ftalato	<input type="radio"/>	<input type="radio"/>
Plomo	<input type="radio"/>	<input type="radio"/>
Mercurio	<input type="radio"/>	<input type="radio"/>

¿Te sería útil tener un código QR en el letrero de advertencia?

- Si
- No
- No estoy seguro
- No sé qué es un código QR

Con el fin de asegurar que estamos encuestando a un grupo representativo de Californianos, por favor provea información acerca de usted: Género

- Hombre
- Mujer
- Otro
- Omitir Respuesta

Edad

- 18-24
- 25-35
- 36-45
- 46-64
- 65+
- Omitir Respuesta

¿Está usted o su pareja tratando de quedar embarazada?

- Si
- No
- Omitir Respuesta

¿Cuál es su raza/etnicidad?

- Blanco
- Hispano o Latino(a)
- Negra o Afroamericano(a)
- Asiático Americano(a)
- Nativo Americano
- Multirracial (2 o más razas)
- Otro (por favor especifica) _____
- Omitir Respuesta

Idioma principal hablado en casa

- Inglés
- Español
- Tagalo
- Chino
- Vietnamita
- Coreano
- Otro (por favor especifica) _____
- Omitir Respuesta

¿Cuál es su mayor nivel de educación?

- Algun nivel de secundaria
- Graduado de secundaria
- Educación superior no terminada
- Diplomado o título técnico
- Bachiller o Licenciatura
- Postgrado (por ejemplo, MBA, JD, PhD, MD)
- Omitir Respuesta

¿Hay algo más que quieras añadir?

Agradecemos mucho su participación en esta encuesta. Gracias.

The California Office of Environmental Health Hazard Assessment has contracted UC Davis to study the effectiveness of existing and proposed public health warnings. Thank you for your participation in this brief survey.

APPENDIX C: WARNINGS USED IN THE SURVEY

Q3: Not all Prop 65 signs look the same, but they all provide warnings about dangerous chemicals. Here is an example of a Prop 65 warning sign. Have you seen a sign like this before today?


Warning: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Q4: Which sign is more helpful?

OLD – Fast Food/Restaurant

Warning: Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm may be present in foods or beverages sold or served here.


NEW – Fast Food/Restaurant

 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals such as acrylamide or mercury that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

OLD – Parking Garage

Warning: The air in this parking facility contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Pregnant women are especially advised to avoid or reduce their exposure to automobile engine exhaust which contains carbon monoxide, a chemical known to cause birth defects.

NEW – Parking Garage


 **WARNING:** Breathing the air in this parking garage can expose you to chemicals, such as carbon monoxide and gasoline or diesel engine exhaust that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov

OLD – Service Station

Gasoline Health Warning

Harmful or fatal if swallowed. Long-term exposure to vapors has caused cancer in laboratory animals. Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm are found in gasoline, crude oil, and many other petroleum products and their vapors, or result in their use. Read and follow label directions, and use care when handling or using all petroleum products.


NEW – Service Station

 **WARNING:** Breathing the air in this area or skin contact with petroleum products can expose you to chemicals that are known to the State of California to cause cancer or birth defects or other reproductive harm, such as benzene, motor vehicle exhaust and carbon monoxide. For more information go to:
www.P65Warnings.ca.gov

WARNING

Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm are contained in crude oil, gasoline, diesel fuel and other petroleum products and byproducts.


Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm are also contained in and around oil fields, service stations, refineries, chemical plants, transport and storage operations, including pipelines, marine terminals and tank trucks, and other facilities and equipment that manufacture, produce, process, handle, distribute, transport, store, sell or otherwise transfer crude oil, gasoline, diesel fuel or other petroleum products or byproducts.

 **WARNING:** Crude oil, gasoline, diesel fuel and other petroleum products can expose you to chemicals such as toluene and benzene that are known to the State of California to cause cancer or birth defects or other reproductive harm. These exposures can occur in and around oil fields, refineries, chemical plants, transport and storage operations such as pipelines, marine terminals, tank trucks and other facilities and equipment. For more information go to: www.P65Warnings.ca.gov

OLD – Furniture

Warning: Some products sold in this store contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.


NEW – Furniture

 **WARNING:** This product can expose you to chemicals such as phthalates and Chlorinated Tris which are known to the State of California to cause cancer, birth defects or other reproductive harm, or both. For more information go to: www.P65Warnings.ca.gov

OLD - Designated Smoking Area


Warning: Second hand smoke, also known as “Environmental Tobacco Smoke” is a chemical known to the State of California to cause cancer.

NEW – Designated Smoking Area

 **WARNING:** Breathing in air in this smoking area can expose you to chemicals such as tobacco smoke and nicotine that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to: www.P65Warnings.ca.gov

Warning: Motor Vehicles contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.


These chemicals are contained in many vehicle components and replacement parts, vehicle fluids, and paints and materials used to maintain vehicles including, but not limited to, fuel, oil, batteries, brakes and wheel balancing weights. In addition, motor vehicles emit engine exhaust and fumes, and when serviced, cleaned or maintained, generate used oil, waste fluids, fumes, grease, grime and particulates from component wear which contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

 **WARNING:** Operating, servicing and maintaining a passenger vehicle can expose you to chemicals such as lead, phthalates, engine exhaust and carbon monoxide that are known to the State of California to cause cancer or birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, service your vehicle in a well-vented area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to: www.P65Warnings.ca.gov

OLD - Generic


Warning: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

NEW – Generic


 **WARNING:** This product can expose you to chemicals known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov

Q5: One sign includes the chemical names and the other sign refers generally to chemicals. Which sign is more helpful? Select one below.


Fast Food/Restaurant – WITHOUT CHEMICAL NAMES

 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov


Fast Food/Restaurant – WITH CHEMICAL NAMES

 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals such as acrylamide or mercury that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov


Parking Garage – WITHOUT CHEMICAL NAMES

 **WARNING:** Breathing the air in this parking garage can expose you to chemicals known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov


Parking Garage – WITH CHEMICAL NAMES

 **WARNING:** Breathing the air in this parking garage can expose you to chemicals, such as carbon monoxide and gasoline or diesel engine exhaust that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov


Furniture – WITHOUT CHEMICAL NAMES

 **WARNING:** This product can expose you to chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, or both. For more information go to: www.P65Warnings.ca.gov


Furniture – WITH CHEMICAL NAMES

 **WARNING:** This product can expose you to chemicals such as phthalates and Chlorinated Tris which are known to the State of California to cause cancer, birth defects or other reproductive harm, or both. For more information go to: www.P65Warnings.ca.gov


Service Station – WITHOUT CHEMICAL NAMES

 **WARNING:** Breathing the air in this area or skin contact with petroleum products can expose you to chemicals that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov


Service Station – WITH CHEMICAL NAMES

 **WARNING:** Breathing the air in this area or skin contact with petroleum products can expose you to chemicals such as benzene, motor vehicle exhaust and carbon monoxide that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov


Petroleum Products – WITHOUT CHEMICAL NAMES

 **WARNING:** Crude oil, gasoline, diesel fuel and other petroleum products can expose you to chemicals that are known to the State of California to cause cancer or birth defects or other reproductive harm. These exposures can occur in and around oil fields, refineries, chemical plants, transport and storage operations such as pipelines, marine terminals, tank trucks, and other facilities and equipment. For more information go to: www.P65Warnings.ca.gov


Petroleum Products – WITH CHEMICAL NAMES

 **WARNING:** Crude oil, gasoline, diesel fuel and other petroleum products can expose you to chemicals such as toluene and benzene that are known to the State of California to cause cancer or birth defects or other reproductive harm. These exposures can occur in and around oil fields, refineries, chemical plants, transport and storage operations such as pipelines, marine terminals, tank trucks, and other facilities and equipment. For more information go to: www.P65Warnings.ca.gov


Passenger Vehicle – WITHOUT CHEMICAL NAMES

 **WARNING:** Operating, servicing and maintaining a passenger vehicle can expose you to chemicals that are known to the State of California to cause cancer or birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, service your vehicle in a well-vented area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to:
www.P65Warnings.ca.gov


Passenger Vehicle – WITH CHEMICAL NAMES

 **WARNING:** Operating, servicing and maintaining a passenger vehicle can expose you to chemicals such as lead, phthalates, engine exhaust and carbon monoxide that are known to the State of California to cause cancer or birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, service your vehicle in a well-vented area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to: www.P65Warnings.ca.gov

Designated Smoking Area – WITHOUT CHEMICAL NAMES


 **WARNING:** Breathing in air in this smoking area can expose you to chemicals that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to:
www.P65Warnings.ca.gov

Designated Smoking Area – WITH CHEMICAL NAMES


 **WARNING:** Breathing in air in this smoking area can expose you to chemicals such as tobacco smoke and nicotine that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to: www.P65Warnings.ca.gov

Q6: These 2 signs are identical in content, but are arranged differently. Which sign is easier to read?


Fast Food/Restaurant – Chemical names in text

 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals such as acrylamide or mercury that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov


Fast Food/Restaurant – Chemical names set apart with spaces

 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals such as
acrylamide or mercury
that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov


Parking Garage – Chemical names in text

 **WARNING:** Breathing the air in this parking garage can expose you to chemicals, such as carbon monoxide and gasoline or diesel engine exhaust that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov


Parking Garage – Chemical names set apart with spaces


 **WARNING:** Breathing the air in this parking garage can expose you to chemicals, such as carbon monoxide and gasoline or diesel engine exhaust that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov


Service Station – Chemical names in text

 **WARNING:** Breathing the air in this area or skin contact with petroleum products can expose you to chemicals such as benzene, motor vehicle exhaust and carbon monoxide that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to:
www.P65Warnings.ca.gov


Service Station – Chemical names set apart with spaces

 **WARNING:** Breathing the air in this area or skin contact with petroleum products can expose you to chemicals such as
benzene, motor vehicle exhaust
and carbon monoxide
that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to:
www.P65Warnings.ca.gov


 **WARNING:** Crude oil, gasoline, diesel fuel and other petroleum products can expose you to chemicals such as toluene and benzene that are known to the State of California to cause cancer or birth defects or other reproductive harm. These exposures can occur in and around oil fields, refineries, chemical plants, transport and storage operations such as pipelines, marine terminals, tank trucks, and other facilities and equipment. For more information go to: www.P65Warnings.ca.gov


 **WARNING:** Crude oil, gasoline, diesel fuel and other petroleum products can expose you to chemicals such as toluene and benzene that are known to the State of California to cause cancer or birth defects or other reproductive harm. These exposures can occur in and around oil fields, refineries, chemical plants, transport and storage operations such as pipelines, marine terminals, tank trucks, and other facilities and equipment. For more information go to: www.P65Warnings.ca.gov


Furniture – Chemical names in text

 **WARNING:** This product can expose you to chemicals such as phthalates and Chlorinated Tris which are known to the State of California to cause cancer, birth defects or other reproductive harm, or both. For more information go to: www.P65Warnings.ca.gov

Furniture – Chemical names set apart with spaces

 **WARNING:** This product can expose you to chemicals such as
phthalates and Chlorinated Tris
which are known to the State of California to cause cancer, birth defects or other reproductive harm, or both. For more information go to: www.P65Warnings.ca.gov


 **WARNING:** Operating, servicing and maintaining a passenger vehicle can expose you to chemicals such as lead, phthalates, engine exhaust and carbon monoxide that are known to the State of California to cause cancer or birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, service your vehicle in a well-vented area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to: www.P65Warnings.ca.gov

 **WARNING:** Operating, servicing and maintaining a passenger vehicle can expose you to chemicals such as


lead, phthalates, engine exhaust
and carbon monoxide

that are known to the State of California to cause cancer or birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, service your vehicle in a well-vented area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to:
www.P65Warnings.ca.gov

Designated Smoking Area – Chemical names in text


 **WARNING:** Breathing in air in this smoking area can expose you to chemicals such as tobacco smoke and nicotine that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to: www.P65Warnings.ca.gov

Designated Smoking Area – Chemical names set apart with spaces


 **WARNING:** Breathing in air in this smoking area can expose you to chemicals such as tobacco smoke and nicotine that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to: www.P65Warnings.ca.gov

Q7: Does the inclusion of the specific chemical/s in the sign (selection all the reactions that apply)?


Fast Food/Restaurant

 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals such as acrylamide or mercury that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov


Parking Garage

 **WARNING:** Breathing the air in this parking garage can expose you to chemicals, such as carbon monoxide and gasoline or diesel engine exhaust that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov


Service Station

 **WARNING:** Breathing the air in this area or skin contact with petroleum products can expose you to chemicals such as benzene, motor vehicle exhaust and carbon monoxide that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov


Petroleum Products


 **WARNING:** Crude oil, gasoline, diesel fuel and other petroleum products can expose you to chemicals such as toluene and benzene that are known to the State of California to cause cancer or birth defects or other reproductive harm. These exposures can occur in and around oil fields, refineries, chemical plants, transport and storage operations such as pipelines, marine terminals, tank trucks, and other facilities and equipment. For more information go to: www.P65Warnings.ca.gov

Furniture


 **WARNING:** This product can expose you to chemicals such as phthalates and Chlorinated Tris which are known to the State of California to cause cancer, birth defects or other reproductive harm, or both. For more information go to: www.P65Warnings.ca.gov

Designated Smoking Area – Chemical names in text


 **WARNING:** Breathing in air in this smoking area can expose you to chemicals such as tobacco smoke and nicotine that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to: www.P65Warnings.ca.gov

 **WARNING:** Operating, servicing and maintaining a passenger vehicle can expose you to chemicals such as lead, phthalates, engine exhaust and carbon monoxide that are known to the State of California to cause cancer or birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, service your vehicle in a well-vented area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to: www.P65Warnings.ca.gov

Q8: What does the triangular yellow symbol mean to you?


 **WARNING:** This product can expose you to chemicals known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov

Q9: What does the triangular black and white symbol mean to you?


 **WARNING:** This product can expose you to chemicals known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov

Q10: If you wanted additional information, how likely are you to visit the website listed below?


Fast Food/Restaurant

 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals such as acrylamide or mercury that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov


Parking Garage

 **WARNING:** Breathing the air in this parking garage can expose you to chemicals, such as carbon monoxide and gasoline or diesel engine exhaust that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov


Service Station

 **WARNING:** Breathing the air in this area or skin contact with petroleum products can expose you to chemicals such as benzene, motor vehicle exhaust and carbon monoxide that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov


Petroleum Products

 **WARNING:** Crude oil, gasoline, diesel fuel and other petroleum products can expose you to chemicals such as toluene and benzene that are known to the State of California to cause cancer or birth defects or other reproductive harm. These exposures can occur in and around oil fields, refineries, chemical plants, transport and storage operations such as pipelines, marine terminals, tank trucks, and other facilities and equipment. For more information go to: www.P65Warnings.ca.gov


Furniture

 **WARNING:** This product can expose you to chemicals such as phthalates and Chlorinated Tris which are known to the State of California to cause cancer, birth defects or other reproductive harm, or both. For more information go to: www.P65Warnings.ca.gov

Passenger Vehicle

 **WARNING:** Operating, servicing and maintaining a passenger vehicle can expose you to chemicals such as lead, phthalates, engine exhaust and carbon monoxide that are known to the State of California to cause cancer or birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, service your vehicle in a well-vented area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to: www.P65Warnings.ca.gov

Designated Smoking Area

 **WARNING:** Breathing in air in this smoking area can expose you to chemicals such as tobacco smoke and nicotine that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to: www.P65Warnings.ca.gov

Warnings in Spanish Language Survey

Question 3 – Typical Generic Warning

Warning: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Advertencia: Este producto contiene sustancias químicas conocidas por el Estado de California como causantes de cáncer y defectos congénitos u otros problemas reproductivos.


Question 4 – Which is More Helpful – Old or New?


OLD – Parking Garage

Warning: The air in this parking facility contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Pregnant women are especially advised to avoid or reduce their exposure to automobile engine exhaust which contains Carbon Monoxide, a chemical known to cause birth defects.

Advertencia: El aire en este estacionamiento contiene sustancias químicas conocidas en el Estado de California como causantes de cáncer, defectos congénitos u otras afectaciones reproductivas. Las mujeres embarazadas especialmente deben reducir o evitar la exposición a las emisiones de automóviles los cuales contienen Monóxido de Carbono, un químico que causa defectos

NEW – Parking Garage

 **WARNING:** Breathing the air in this parking garage can expose you to chemicals, such as Carbon Monoxide and gasoline or diesel engine exhaust that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov


 **ADVERTENCIA:** Respirar el aire en este estacionamiento puede exponerle a sustancias químicas como Monóxido de Carbono y emisiones de motores a gasolina y diésel, mismos que se conocen en el Estado de California como causantes de cáncer o defectos congénitos u otras afectaciones reproductivas. No permanezca en esta área por más tiempo del necesario. Para más información visite: www.P65Warnings.ca.gov


OLD – Fast Food/Restaurant

Warning: Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm may be present in foods or beverages sold or served here.

Advertencia: Químicos conocidos en el estado de California como causantes de cáncer y defectos congénitos u otras afectaciones reproductivas pueden estar presentes en los alimentos o bebidas que se venden o sirven aquí.


NEW – Fast Food/Restaurant


 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals such as Acrylamide or Mercury that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

 **ADVERTENCIA:** Ciertos alimentos y bebidas a la venta o servidos en este lugar pueden exponerle a sustancias químicas como Acrilamida o Mercurio, que en el Estado de California se conocen como causantes de cáncer o defectos congénitos u otras afectaciones reproductivas. Para más información visite: www.P65Warnings.ca.gov


Question 5 – Chemical Warnings


Parking Garage – General Reference

 **WARNING:** Breathing the air in this parking garage can expose you to chemicals known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov


 **ADVERTENCIA:** Respirar el aire en este estacionamiento puede exponerle a sustancias químicas conocidas en el estado de California como causantes de cáncer y defectos congénitos u otras afectaciones reproductivas. No permanezca en esta área por más tiempo de lo necesario. Para más información visite: www.P65Warnings.ca.gov


Parking Garage – Specific Chemicals

 **WARNING:** Breathing the air in this parking garage can expose you to chemicals, such as Carbon Monoxide and gasoline or diesel engine exhaust, that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov/parking.


 **ADVERTENCIA:** Respirar el aire en este estacionamiento puede exponerle a sustancias químicas como Monóxido de Carbono y emisiones de motores a gasolina y diésel, mismos que se conocen en el Estado de California como causantes de cáncer o defectos congénitos u otras afectaciones reproductivas. No permanezca en esta área por más tiempo del necesario. Para más información visite: www.P65Warnings.ca.gov


Fast Food/Restaurant – General Reference

 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

 **ADVERTENCIA:** Ciertos alimentos y bebidas a la venta o servidos en este lugar pueden exponerle a sustancias químicas conocidas Estado de California como causantes de cáncer o defectos congénitos u otras afectaciones reproductivas. Para más información visite: www.P65Warnings.ca.gov


Specific Chemicals – Fast Food/Restaurant


 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals such as Acrylamide or Mercury that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

 **ADVERTENCIA:** Ciertos alimentos y bebidas a la venta o servidos en este lugar pueden exponerle a sustancias químicas como Acrilamida o Mercurio, que en el Estado de California se conocen como causantes de cáncer o defectos congénitos u otras afectaciones reproductivas. Para más información visite: www.P65Warnings.ca.gov


Question 6 – Spacing

Fast Food/Restaurant – Chemical names in text

 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals such as Acrylamide or Mercury that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov


 **ADVERTENCIA:** Ciertos alimentos y bebidas a la venta o servidos en este lugar pueden exponerle a sustancias químicas, entre ellas Acrilamida o Mercurio, que en el Estado de California se conocen como causantes de cáncer o defectos congénitos u otras afectaciones reproductivas. Para más información visite: www.P65Warnings.ca.gov

Fast Food/Restaurant – Chemical names set apart with spaces

 **WARNING:** Certain foods and beverages sold or served here can expose you to chemicals such as

Acrylamide or Mercury


that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov


 **ADVERTENCIA:** Ciertos alimentos y bebidas a la venta o servidos en este lugar pueden exponerle a sustancias químicas, entre ellas

Acrilamida o Mercurio


que en el Estado de California se conocen como causantes de cáncer o defectos congénitos u otras afectaciones reproductivas. Para más información visite: www.P65Warnings.ca.gov

Parking Garage – Chemical names in text

 **WARNING:** Breathing the air in this parking garage can expose you to chemicals, such as Carbon Monoxide and gasoline or diesel engine exhaust that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov


 **ADVERTENCIA:** Respirar el aire en este estacionamiento puede exponerle a sustancias químicas como el Monóxido de Carbono y emisiones de motores a gasolina y diésel, mismos que se conocen en el Estado de California como causantes de cáncer o defectos congénitos u otras afectaciones reproductivas. No permanezca en esta área por más tiempo del necesario. Para más información visite: www.P65Warnings.ca.gov

Parking Garage – Chemical names set apart with spaces

 **WARNING:** Breathing the air in this parking garage can expose you to chemicals, such as

Carbon Monoxide and gasoline or diesel engine exhaust

that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to www.P65Warnings.ca.gov


 **ADVERTENCIA:** Respirar el aire en este estacionamiento puede exponerle a sustancias químicas como


Monóxido de Carbono y emisiones de motores a gasolina y diésel

mismos que se conocen en el Estado de California como causantes de cáncer o defectos congénitos u otras afectaciones reproductivas. No permanezca en esta área por más tiempo del necesario. Para más información visite: www.P65Warnings.ca.gov


Question 7 – Inclusion of specific chemical names


Furniture Products – Chemical names in text

 **WARNING:** This product can expose you to chemicals such as Formaldehyde and Chlorinated Tris that are known to the State of California to cause cancer, birth defects or other reproductive harm, or both. For more information go to: www.P65Warnings.ca.gov


 **ADVERTENCIA:** Este producto pueda exponerle a sustancias químicas como Formaldehído y Tris Clorada que en el Estado de California se conocen como causantes de cáncer y defectos congénitos u otras afectaciones reproductivas. Para más información visite: www.P65Warnings.ca.gov


Question 8 – Yellow Triangle

 **WARNING:** This product can expose you to chemicals known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov

 **ADVERTENCIA:** Este producto puede exponerle a varias sustancias químicas conocidas en el Estado de California como causantes de cáncer y defectos congénitos u otras afectaciones reproductivas. Para más información visite: www.P65Warnings.ca.gov


Question 9 - B/W Triangle


 **WARNING:** This product can expose you to chemicals known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov

 **ADVERTENCIA:** Este producto puede exponerle a sustancias químicas conocidas en el Estado de California como causantes de cáncer y defectos congénitos u otras afectaciones reproductivas. Para más información visite: www.P65Warnings.ca.gov


Question 10 – Website


Service Station – WITH CHEMICAL NAMES

 **WARNING:** Breathing the air in this area or skin contact with petroleum products can expose you to chemicals such as Benzene, motor vehicle exhaust and Carbon Monoxide that are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov

 **ADVERTENCIA:** Respirar el aire en esta área o el contacto con la piel de productos derivados del petróleo puede exponerle a químicos como el Benceno, emisiones de motores automóviles, y Monóxido de Carbono, que en el estado de California se conocen como causantes de cáncer o defectos congénitos u otras afectaciones reproductivas. Para más información visite: www.P65Warnings.ca.gov
www.P65Warnings.ca.gov

Designated Smoking Area – WITH CHEMICAL NAMES

 **WARNING:** Breathing in air in this smoking area can expose you to chemicals such as tobacco smoke and Nicotine that are known to the State of California to cause cancer or birth defects or other reproductive harm. Do not stay in this area longer than necessary. For more information go to: www.P65Warnings.ca.gov

 **ADVERTENCIA:** Respirar el aire en esta área para fumar puede exponerte a químicos como el humo del tabaco y a la Nicotina que en el estado de California se conocen como causantes de cáncer o defectos congénitos u otras afectaciones reproductivas. Para más información visite: www.P65Warnings.ca.gov

APPENDIX D: SURVEY COMMENTS

Smoking: First Warning = New
First one
Looks to busy.
N/a
No
The one on the bottom doesn't really draw any attention
The shorter simple is better but it needs yellow warning sign and the bold words
The top one is more informative
Too long . No one will read it
Too much wording

Smoking: First Warning Old
Bigger and symbol draws the eye.
Both
Both are helpful but people tend not to read signs that are too lengthy.
Both seem to have sufficient information.
Could be better more graphics
I don't pay attention to either
I like the brief message of the first one but it needs something to catch someone's attention
No
None
People should not not smoke
The longer the statement fewer will read it. Keep it simple. Retired school teacher.
The second sign is more compelling, but is also unnecessarily verbose.
The warning sign attracts your interest in what is being said on the warning sign
While I don't want to read the longer sign I end up doing so because my eye is drawn to the hazard symbol. But that might be because these two signs are the only things I see on this screen. I would not likely read the sign without the symbol in its real nvironment.
Yellow symbol and bright colors catch attention.
Yes both of these signs are very helpful!

Fast Food: First Warning = New
Bolder font and color attracts the eye
Both
Color
Easier to read
First sign is more clear
I like the first one
I'm agree with these signs.
If this sign (with less words) had the bold warning with the warning symbol, it would be best.
More detail one
No
The first sign is too long for the average lazy person to read, but it contains more pertinent information
Way too much info on yellow one

Fast Food: First Warning = New
El más corto porque la gente no le gusta leer
No
Sometimes I don't notice the English signs because I don't understand
The yellow sign calls my attention more.
They are both good.

Fast Food: First Warning Old
I like more info on the sign
Less words for dumb people. However using a greater number of words can aggravate simple mind of a simple humans. It does elaborate further for those that do care and have the vocabulary to comprehend However.
No
The color on the 2nd sign, helps draws my eyes there
The lower one is much clearer and more informative
The yellow one gives more information
Too much regulatory oversight
Useful
Warning indicator helps

Fast Food: First Warning Old

Alomejor si eh visto estos letreros pero porque están en iglesia no le entiendo

Alomejor si eh visto letreros como estos pero si están en ingles no les pongo atención porque no entiendo

It's good to inform people.

No

None.

They should be bilingual

We've seen that toxic chemical have the skull symbol in a triangle. That would show more of a warning on a sign like this not

Fast Food: First Warning = New

I don't like to see these signs around

It's warns you but might not stop you from doing it.

no

No

The bottom one is better.

The first sign grabs my attention more and gives more detailed information allowing me to make a more informed decision.

The yellow sign grabs my attention.

This "product" needs to be more specific.

Too generic. Doesn't really tell you anything. Most people are not going to get on line and look up warnings

Furniture: First Warning Old
A little simpler
Because it is more specific.
Can look up in google with the 2nd sign
I can look at product packaging for detail once reminded to do so
More informative
Neither
Neither, need to work with technical writers and design artists to make text more readable. Spacing between lines makes it just a black and white blob.
No
Not good for our children in the future
The bottom sign has the website which is helpful, but the names of chemicals is unnecessary.
The second sign is more specific which to my mind is more informative.
This one is more informative, but I don't know if the average American will understand the terminology.
Top is basic bottom gives the option to gain further knowledge
YELLOW CAUTION SIGN IS HELPFUL

Generic: First Warning = New
Both about the same.
color should be more attractive to the eye so people see it, and it doesn't seem to be hidden.
Expressive sign
I'm more alerted by the bolder warning sign with the added color. All warning signs should be more prominent, in my opinion.
Larger and with yellow symbol
Neither
No
Print in bolder letters
Shorter is better
The second one doesn't catch your attention
The triangle makes me look at the warning.
The website is helpful to look up information.
These chemicals should not be near us voluntarily.
They need too make them more noticable

Generic: First Warning Old
Allowing the public to get more knowledge and allowing easy access to the knowledge is important
Change the color of the warning to be more noticeable
I see them frequently
I wish they were seen more
Looks good
N
Na
No
Scary
This one is way to long
This sign provides the person reading for further information to get more knowledge in informing of chemicals that is harmful for human.
Warning sign draws attention and is more helpful
Yes the triangle and bold should be on the first message

Parking Garage: First Warning = New
Certified or approved by a authority makes it more seriously acceptable
I like the fact that this sign provides the website
Identify types of chemical, specificity
Information between the signs are different
Neither
No
Noops
Symbol helps
The first explains the problem and what to do about it. The second does not.
The first sign captures my attention
The sign above

Parking Garage: First Warning = New
I like the second better (non yellow)
I like the webpage provided for more information.
Pongan una calaverita
The large font helps
They are the same to me.
Usar los dos

Parking Garage: First Warning Old
Add this to the beginning of the sign "if you're reading this sign you're probably being exposed to hazardous chemicals" then continue with the rest of the sign.
Attention grabber
Both
Details but it can give rise to scare!,
I have seen these signs. Though they are posted in areas as if they were hiding them. Out of eye level. Essentially hidden in plain sight.
I like this sign but had never seen one before
Interesting
It's the explanation symbol that draws in the observer
N/a
No
None
The 2nd sign has more details.
Too many words for short-time read
Warning with yellow triangle is attention grabbing.
Yes this is very informative

Parking Garage: First Warning Old
It's good to inform the community.
No gracias
Signs are a good idea
They are the same to me.

Passenger: First Warning = New
An idiot figure will catch your eye. Crossbones.
Both way too long. I would never read the entire text.
It is very helpful if government let know people about the hazards in products
no
No
None
Symbols eyecatchinh

Passenger: First Warning Old
Big letters and symbol makes you more aware of sign.
Both too long.
Creates a sense of urgency
Exclamation point jumps at you
Good to warn the public
Information creates awareness
May suggest use of a mask also
No
Not sure.
Second is more specific as to what chemicals
Shorter is better
The 2nd sign caught my attention
The second is broken down a little more.
The toxic sign leaves a quick impression and prepares me for the proceeding warning, I think it's more impactful
The warning implies driving only, not just sitting in it
Too long to read
Warning icon and bolding make second sign more noticeable
Yellow catches attention

Petroleum: First Warning = New
Just the yellow triangle is enough to catch my eye.
Long to read in passing
No
None, I work in a gas station and I don't believe in warning signs. Common sense.
Nope...
Shorter one, pay more attention to that one
Starting with "chemicals that cause cancer" is more eye-catching than "warning"
The first one looks more harmful
The reason why is because it lets me know that the topic is cancer-causing chemicals (which I care about) before reading too much further
The shorter the better
Too wordy
What exactly are toluene and benzene?

Petroleum: First Warning = Old
Do they relate with drinking water?
Don't read either. Too wordy.
Highlight key words, make font bigger, make sign shorter.
Maybe a picture might help.
N/a
No
Not really
Second; but both are too wordy
the first one reads more informatively but the yellow caution sign caught my attention on the second one.
The second sign is doesn't convey the message in a user friendly way to me
They both do a good job at providing information.
Try an inexpensive alternative like stickers or and don't change he signs that don't need to be changed
Why is this happening, why is the action now.

Service Station: First Warning = New
A simple alert button makes huge difference and instantly attracts attention hence I liked the first warning signal
All signs need bright colored warning symbols
Caught my attention
First one Tells me if I'm in the exposed area
I could see where the second one might be confusing
I like the symbols
I think the warning sign initiates a bigger response
No
None
People know not to drink petroleum but often don't know what they're breathing.
Put "harmful or fatal if swallowed" in the first box (warning). This combo of wording will catch my attention faster.
The logo and the word, "WARNING" bolded and in caps is more effective in getting people to take notice.
The second sign needs that yellow triangle it gets your attention
They need to be put up in more places!! And more visibly, usual they are too small
This is more convenient
This is more helpful to me, but may be too long in general.
Warning sign
Wow that's alarming

Service Station: First Warning Old
First one does not explain it as well
Good warning information
I like the 2nd one best.
I like the information on the first sign but I like the 2nd sign more because it has the warning sign and website to go to for more info
It is too long
Majority of the people I know are visual first and having a hazard or warning symbol helps to draw attention that it's not just another useless sign, that it's important.
No
Nope,
The first warning has sufficient information and does not require a second step. Because of our busy lives I feel the quick and informative warning is sufficient.
The yellow sign helps
The yellow sign stands out
They need to get the same information across in a much simpler way. The signs are too cluttered.
Top sign is more informative, but could benefit from the yellow warning icon.
Yes, put Warning sign: Gasoline health warning