

Results of Cognitive Testing of Alcohol Questions for the NHIS (National Health Interview Survey) and the National Health and Nutrition Examination Survey (NHANES)

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I. Introduction

This report summarizes the findings of a cognitive interview study to test questions on alcohol consumption for use in the National Health Interview Survey (NHIS) and the National health and Nutrition Examination Survey (NHANES). Since 1957, the NHIS has been a major source of information on trends in illnesses and disability in the United States. Data from the NHIS are used in epidemiologic models, policy analysis and program evaluation. The 2018 NHIS will be updated with new content and structure. NHANES is a program of studies designed to assess the health and nutritional status of adults and children in the United States. The purpose of this cognitive interviewing study was to evaluate questions with the aim of developing a core set of alcohol consumption questions that could be used by both NHIS and NHANES as well as to evaluate questions that may be used on each survey individually.

This evaluation is based on 30 cognitive interviews (20 English and 10 Spanish) that were conducted by a team of researchers from the Center for Questionnaire Design and Evaluation Research (CCQDER) at the National Center for Health Statistics.

The following report details the methods used in this question evaluation study, provides a summary overview of the findings and addresses patterns that are relevant to the instrument as a whole and presents an in-depth question-by-question review of the findings. The complete instruments, as tested, are presented in Appendices A and B.

Methods

Cognitive Interviewing: Cognitive interviewing is a qualitative method designed to evaluate items on survey questionnaires. In particular, cognitive interviewing studies investigate how respondents understand and respond to questionnaire items and if their understandings are in line with the question intent. Through semi-structured interviews, cognitive interviewing provides an in-depth understanding of how respondents formulate their responses to questions

based on their particular social and cultural contexts. Findings of a cognitive interviewing project often lead to recommendations for question improvement, provide evidence of question validity and can be used in post-survey quantitative analysis to assist in data interpretation.

Cognitive interviewing studies typically involve in-depth, semi-structured interviews with a small sample of approximately twenty to forty respondents. In these interviews, respondents are first administered the survey items under evaluation and then answer a series of probe questions that reveal how they arrived at their particular response choices. These probes can be either concurrent (asked with each survey item) or retrospective (asked after all survey items).

Sample selection for a cognitive interviewing project is purposive with respondents selected for specific characteristics -- such as race, health status or occupation-- that are relevant to the intended purpose of survey instrument. When studying questions designed to investigate chronic health conditions, for example, the sample would likely consist of respondents with previously identified chronic conditions of various severity as well as some respondents with no known chronic conditions in order to examine potential sources of false positive reporting. Because of the small sample size, not all social and demographic groups are represented although an effort is made to maintain a varied sample.

Analysis of cognitive interview data involves an iterative process of synthesis and reduction—beginning with a large amount of textual data and ending with conclusions that are meaningful and serve the ultimate purpose of the study. The steps consist of: 1) Conducting interviews; 2) Synthesizing interview text into summaries; 3) Comparing summaries across respondents; 4) Comparing identified themes across subgroups; and 5) Making conclusions (Miller, Willson, Chepp, & Padilla, 2014). Through this reduction of the cognitive interview data, a comprehensive understanding of a question's performance emerges and a more complex and complete understanding of understanding of the question response process is revealed. In the beginning it is only possible to understand how each individual respondent makes sense of and answers the survey question. By the end, individual interpretations are understood as well as how those interpretations relate across groups and within the overall context of the question's performance.

Sample: A team of researchers from the CCQDER interviewed a total of 30 respondents. The research team recruited a purposive sample of adults over age 18 through newspaper advertisements, email list contacts and flyers. Inclusion criteria included having consumed alcohol within the last year. A screening process was employed over the telephone to

determine eligibility for participation. Almost half of all respondents reported having less than a high school diploma. About one third of respondents were Hispanic while 43 percent were black and half were male. Demographics for the full sample are shown in Table 1.

<i>Table 1. Demographic profile of respondents</i>		
	Number (n=30)	Percent
Race/Ethnicity		
Asian/American	2	6.6
Indian or Alaskan Native		
Black	13	43.3
White	5	16.6
No response	11	36.6
Ethnicity		
Hispanic	11	36.6
Non/Hispanic	19	63.3
Gender		
Male	15	50
Female	15	50
Education		
Less than HS	3	10
HS or GED	6	20
Some College or Bachelor's Degree	16	53.3
Graduate Degree	5	16.6
Age		
18-29	3	10
30-49	14	46.6
50+	12	40
No Response	1	3.3

Interviewing Procedures

All respondents were asked both the NHIS and NHANES questions. In between the two sets of alcohol questions, questions on e-cigarette exposure were asked. Results of the testing of questions on e-cigarette exposure are detailed in a separate report (Massey 2016). During the interviews, retrospective and concurrent, intensive verbal probing was used to collect response process data. Video/Audio recordings and written notes of interview summaries were collected

and used as the basis of data analysis. Most interviews were conducted face-to-face in the Questionnaire Design Research Laboratory within the CCQDER while some were conducted off-site. Interviews typically lasted 60 minutes and respondents were given \$40 once the interview was complete.

Data Analysis: Analysis of interviews followed the guidelines for cognitive interviewing methodology which is guided by the grounded theory approach. This approach does not aim to test existing hypotheses, but instead generates explanations of response error and various interpretive patterns that are closely tied to the empirical data. This includes the constant comparative method of analysis, in which analysts continually compare data findings to original data (Cresswell, 1998; Lincoln, 1985; Strauss & Corbin). This is an iterative process of data synthesis and reduction (Strauss & Corbin). After each interview was conducted, summary notes were written for each question. Summary notes included information on the way in which a respondent interpreted and processed individual questions, what experiences or perceptions a respondent included in formulating a response and any response difficulties experienced by the respondent. After all interviews and summaries were completed, interviews were compared to identify common patterns of interpretation and response difficulties for each question. Sub-group analysis looked at patterns of interpretation and responses as they varied across different groups within the sample.

A data entry and analysis software application (Q-Notes) was used to conduct analysis. Q-Notes, developed by CCQDER, ensures systematic and transparent analysis across all cognitive interviews as well as provides an audit trail depicting the way in which findings are generated from the raw interview data.

III. Overall Findings

Sensitivity, Trust and Reliability

Although the topic of alcohol consumption could be a sensitive topic, most respondents were quite forthcoming about their drinking habits. Even respondents who had drunk alcohol every day or in large quantities of alcohol were willing to describe these habits to the interviewer. However, a few respondents reacted to the questions with feelings of shame and others were reluctant to go into much detail. One asked, "So...you want me to answer truthfully?" Finally, a few respondents' estimates of their own drinking varied widely from the beginning to the end of the interviews. For example, one respondent began the interview estimating that she drank 4 times a month and ended the interview detailing how she usually drinks at least 5 days a week. One of the possible explanations for these shifting estimates is that respondents grew more relaxed as the interviews proceeded and were willing to reveal more details of their

drinking towards the end of the interviews. Indeed, respondents' estimates of their drinking always increased, rather than decreased over the hour long interviews.

Item Elements and Error

Each question asks respondents to consider a number of different elements, each of which introduces the potential for response error. All of the elements are presented in Figure 2; some are discussed in further detail below.

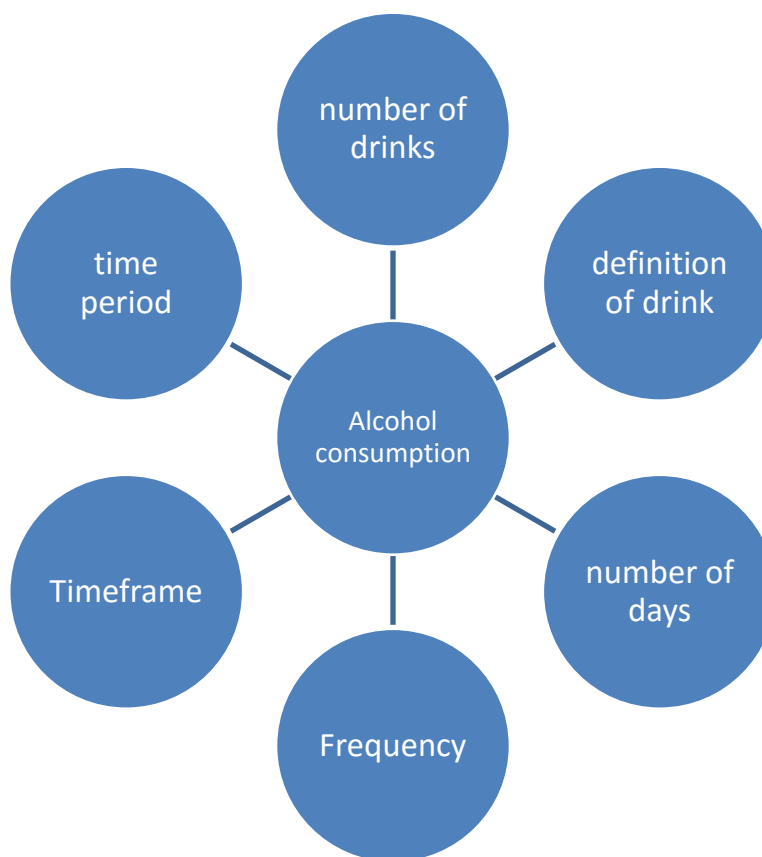


Figure 1. Elements of questions on alcohol consumption

Definition of drink. Almost all of the questions are based on the unit of measurement “a drink.” The preamble to the NHIS set of questions specifies the type of drinks as “liquor such as whiskey or gin, beer, win, wine coolers, and any other type of alcoholic beverage.” Meanwhile, the NHANES questions begin with a similar preamble, but then specify further in ALQ.NEW1 that a drink is, “a 12. oz beer, a 5 oz. glass of wine, or one and a half ounces of liquor.” Despite these specifications, there was no consistent definition of “a drink” among respondents.

Most respondents included all types of alcohol when answering these questions, but some limited their understanding of “drink” to only beer or only liquor (even though they drink other types of alcohol). The NHANES questions are presented with a hand card picturing beer, wine and alcohol to signal respondents to include all three types of alcohol when answering. However, this led a few respondents to understand the questions in terms of drinking beer, wine and liquor together *at the same time*.

Similarly, there was no consistency in terms of the quantity of alcohol that constituted a drink. One respondent counted “sips of champagne” and several counted “gulps” of whiskey while others counted 12 oz. cans of beer, 24 oz. cans of beer, 40 oz. bottles of beer or half-pints of whiskey as single drinks. These measurements only became more muddled when respondents tried to convert to standard quantities. Some respondents translated 24 oz. “tallboys” of beer into “2 drinks” while other didn’t. A few respondents noted that beer in Europe is stronger than American beer and wondered whether it should count double. One respondent counted his self-poured drinks as .5 drinks each since he is a “light pourer” while another respondent counted her self-poured gin and ginger made “in a pint glass with mostly gin and a splash of ginger” as a single drink.

The definition of “a drink” sometimes shifted from question to question within individual respondents. One respondent shifted back and forth from defining a tallboy as 2 drinks to defining it as a single drink. This had a real impact when it came to answering questions dealing with drinking 5 drinks in a day (or in two hours). Another respondent initially made the distinction between a restaurant “serving size” of wine and glasses of wine she pours herself. When doing this, she counted one bottle of wine as “5 servings” even though she only poured 3 glasses of wine. Later, she reverted to counting glasses saying, “That’s me pouring, so I don’t know how much that is.”

For Spanish-speakers the definition of ‘a drink’ was complicated by the use of the word ‘trago.’ While a few respondents understood ‘trago’ as ‘a drink’ in general, most asserted that ‘trago’ was more similar to a shot or a sip of alcohol. One respondent explained:

I have heard that people say 'do you want a trago [drink]?' and they give them a small glass. That is a 'trago' of whiskey or alcohol. It is different than beer. When they say 'do you want a beer?' They give you a beer, and a beer has a lot of gluglú [noise made when you drink something].

This respondent and others agreed that ‘bebidas’ might be a better word choice. One respondent even asked, “tragos o bebidas?” and then tried to figure out how many sips (tragos) were in 40 ounces of beer. Another respondent said, “I do not consider beer a ‘trago.’ A ‘trago’

is a mixed drink or just alcohol.” This respondent did not include the many beers he had drunk in his estimates of his drinking.

Timeframe. Although a few questions asked about lifetime consumption, most of the NHIS questions asked about a 30-day timeframe and most of the NHANES questions used a 12-month timeframe. Respondents occasionally missed or ignored timeframes specified in the questions, but for the most part, they attended to the timeframes.

Questions on lifetime consumption were generally easier for respondents because there was a wide margin for an accurate response. Respondents could accurately indicate whether they had consumed one drink or 12 drinks in their lifetimes without complicated calculations or needing to recall specific events.

When answering 30-day questions, respondents relied heavily on recall of specific events or estimation based on recent habits.

The 12-month questions were most difficult for respondents because they required recall across a long span of time or complicated calculations. Respondents frequently expressed their frustration with the 12-month questions. In answering the question about average number of drinks in the previous 12 months [ALQ.130], one respondent said, “That’s kind of a crazy question. It’s hard to say how much in the last 12 months.”

Because of the perceived difficulty of answering questions about the previous 12 months, a few respondents refused to answer while others provided a response but clearly refused to do the cognitive work necessary to provide an *accurate* response.

Compounding Error: Since each of the question elements described in Figure 2 has the potential to introduce some degree of measurement error, questions with more elements have a greater potential for measurement error. For example, the question, “In your ENTIRE LIFE, have you had at least 12 drinks of any type of alcoholic beverage?” [ALQLIFE] contains two elements: timeframe (entire life) and drinks (12 drinks of any alcoholic beverage). In contrast, the question, “In the past 12 months, about how often did you drink [4 female/5 male] or more drinks in a period of TWO HOURS OR LESS?” [ALQ.NEW2] contains five elements: timeframe (past 12 months), frequency (how often), definition of drink, number of drinks (4 female/5 male or more) and time period (two hours or less). More error was seen in questions like the latter and respondents had a more difficult time formulating responses due to the difficulty of holding all of the elements in working memory.

Shifting focus: Furthermore, shifting the desired unit of response from one question to the next caused respondents considerable confusion. For example, some questions ask about number of days while other questions ask about number of drinks and still others ask about frequency of

consumption. These shifts in focus frequently resulted in responses given in the wrong units leading to considerable error. For example, one respondent gave the answer '4' to the question on average number of drinks consumed in the previous 30 days [AL07]. However, she later explained that her answer was meant to indicate 4 *days* rather than an average of 4 *drinks*. She thought the question the same as the previous question which had asked about number of days drinking in the previous 30 days [AL06]. Once the question was explained to her, she changed her response to an average of 2 drinks. Two of the most problematic of these elements, definition of drink and timeframe, are described in more detail below.

Response Strategies

When formulating their answers to the alcohol consumption questions, respondents employed several strategies. Some strategies were more likely to result in accurate responses than others. These strategies are depicted in Figure 1 and described in detail below.

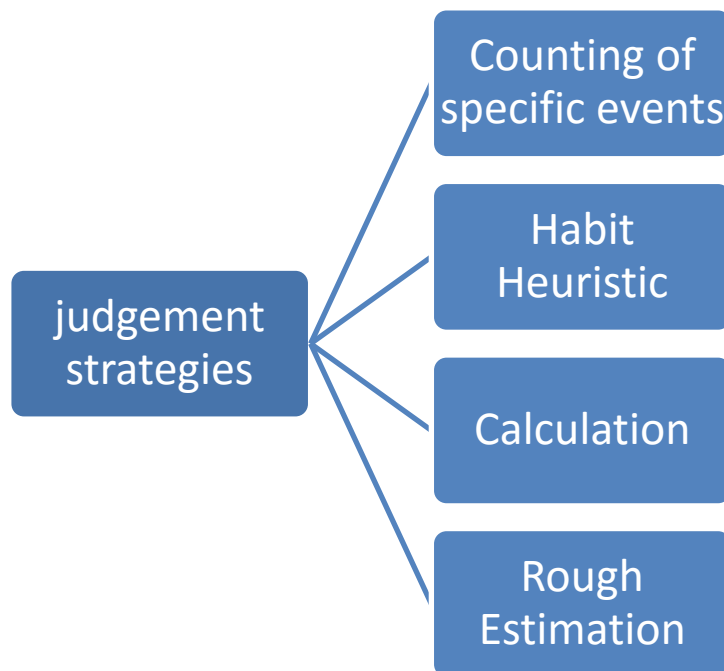


Figure 2. Response strategies employed by respondents

Counting of specific events. Sometimes respondents counted specific instances of drinking to come up with their responses. For example, when answering the question on largest number of drinks in the past 30 days [AL08], one respondent recalled having 5 drinks at a birthday celebration for a friend two weeks prior and used this memory as the basis of her response.

Sometimes respondents who employed the counting strategy later remembered additional instances when they had consumed alcohol, so responses based on counting of specific events tended to be slightly low. One respondent initially indicated that he had consumed alcohol on 1 day in the previous 30 days [AL06] but later said, "Come to think of it, it may have been 2 or 3...It was 2..." This strategy was most frequently employed by respondents who drink irregularly and infrequently.

Habit Heuristic. Respondents often used the heuristic, or shortcut, of relying on their regular habit of alcohol consumption to come up with their responses. Instead of making the effort to recall and count specific instances of drinking, respondents who used the habit heuristic strategy simply stated their habit. In taking this shortcut, respondents did not consider whether their regular habit mapped onto the reality of their drinking over the given time period. For example, one respondent answered '4' to the question about days of alcohol consumption in the past 30 days [AL06] because he always goes out on Wednesdays after work. Another respondent answered '12' saying, "I drink every weekend--so Friday, Saturday, and Sunday. 3 Weekend days every week." Using this heuristic was easy for respondents but did not take into account behavior that was outside of the norm. A few respondents made up for that by adding or subtracting from their original estimates. One respondent added some days saying, "There were probably some other days thrown in there," and another said, "I took some off because there may have been one weekend when I didn't drink." This strategy was employed primarily by respondents who had a very regular pattern of drinking (either frequent or infrequent) and employed equally among those who drank a lot and those who drank a little.

Calculation. Some questions lead respondents to make calculations. For example, to come up with a frequency for drinking alcohol over the last 12 months [ALQ120], one respondent said, "4-5 times a month, so multiply that by 12, I'd say 48 times." However, respondents were not always accurate in their calculations and by the time they had completed all the steps of the calculations, sometimes they forgot what the question was. One respondent explained why he responded that he drank an average of 15 drinks each time he drank [ALQ130]:

Usual is 3 shots of gin and a 6 pack of beer. I was averaging out what I drink in a week. I was looking at it like ...you have 4 weeks in a month. If I'm drinking 3 shots a day, 4 days a week, that's 12 in a month. That's why it averages out to 15 in a month. Between the shots and the beer, around 15.

In this way, the respondent provided an estimate of his average for a month rather than his average for each time he drank. This strategy was employed primarily by respondents who drank both frequently and with regularity.

Rough Estimation. Many respondents did not want to exert the mental energy necessary to recall specific instances of drinking or to do calculations, so they provided rough estimates. Respondents who used this strategy often said things like, “That’s just a guess” or “That’s a ballpark figure.” Other estimates were entirely random. For example, one respondent indicated that she drank 50 times in the previous 12 months [ALQ120] and said, “I guess. It may be more; it may be less.” After thinking about it more carefully, this respondent changed her answer to 100 which was still a guess, but a more considered one. This strategy was employed mostly but not exclusively by respondents who frequently drank large quantities of alcohol. The unifying factor among respondents who employed this strategy was a desire to not think about it too much.

Varying levels of error can be seen across all of these response strategies. Respondents who drink less frequently tend to use the counting strategy because it is easy to count small numbers of events. However, this strategy is subject to error when respondents fail to remember all events. This forgetting happened fairly frequently especially for events that happened more than 2 weeks prior. The habit heuristic strategy is reliable for respondents who have a regular habit, but less reliable when there are any deviations to this regularity, especially when respondents try to adjust their estimates by adding or subtracting days. In this case, when respondents shift from an easy strategy (habit heuristic) to a more difficult strategy (making an adjustment based on counting specific events) they tend to resist putting in the mental effort necessary to make an accurate count. Therefore, the estimates from respondents who used both the habit heuristic and the counting events strategies were less accurate than estimates from respondents who used only one strategy or the other.

Both the calculation and the rough estimation strategies were prone to more error than the other strategies. Calculation required more mental energy from respondents but was less reliable due to errors in calculations and drop off of effort before the calculations were complete. Respondents often employed the rough estimate strategy in order to use as little mental energy as possible. Thus, these respondents did not care how accurate their responses were, or rather, to these respondents “a ball park estimate” was close enough.

Hand Cards

The NHANES questions are accompanied by hand cards while the NHIS questions are not. The hand cards attempt to clarify the definition of “a drink” and to make it easier for respondents to choose from a long list of response options. Although the hand cards have potential to help respondents, in practice, they were not always useful. The images shown on the card depicting the types and quantities of alcoholic drinks did not necessarily correspond to the real life drinking conditions of most of the respondents. The images showed drinks in glasses, while

many respondents reported drinking from cans or bottles. One respondent said, “I ain’t never drink none of that. My drinks come in cans. I don’t go to a bar. This is what you get in a bar.” The other hand card listed the response options available for the frequency questions. Some respondents found it helpful to refer to the hand card when selecting their responses. Other respondents did not refer to the hand card at all or found it confusing to be presented with a long list of text.

IV. Question-by-question Review

NHIS Questions

ALCLIFE In your ENTIRE LIFE, have you had at least 12 drinks of any type of alcoholic beverage?

All respondents understood this as a question about whether they had consumed 12 alcoholic drinks in their lives. In practical terms, the question lead respondents to classify the number of drinks they had ever consumed into one of two categories: less than 12 or more than 12. As such, respondents did not count the actual number of drinks they had ever consumed but rather relied on broad estimates to categorize their drinking. One respondent said, “It’s gotta be way over 12. If it had asked like 5000, I wouldn’t know but 12, I’m sure.” This respondent then described how he started drinking when he was 21. Even though he drinks less frequently now, there was a period of 5 years when he drank 2-3 beers every weekend night. Without adding up the actual total number of drinks he’d ever had, knew that it was more than 12. The only respondent to answer ‘no’ also did not count specific drinks but estimated that she’d had about 6-7 drinks (including sips of champagne) since she first tried alcohol five years ago.

Because respondents thought in general terms rather than about specifics, they also thought about drinks in very generic terms such as “glasses of wine”, “cans of beer” or “shots of liquor.” This was in contrast to later questions when respondents thought about drinks in very specific terms (tall boys, self-poured mixed drinks, ½ pints of liquor)

AL06 During the past 30 days, on how many days did you drink one or more drinks of an alcoholic beverage?

Definition of Drink

In answering this question, respondents relied on idiosyncratic understandings of “a drink”: Most respondents thought about quantities such as cans of beer or glasses of wine but others thought about less consistent quantities such as self-poured drinks or sips of champagne. For example, one respondent answered ‘yes’ because she had taken one sip of champagne.

Although for this question, most differences in interpretation of ‘drink’ did not lead to response error, interpreting a ‘sip’ as a ‘drink’ in this case did.

Patterns of Interpretation

Most respondents understood this question as asking how many days they had consumed one or more alcoholic beverages. However, as seen in Figure 3, there were several other interpretations.

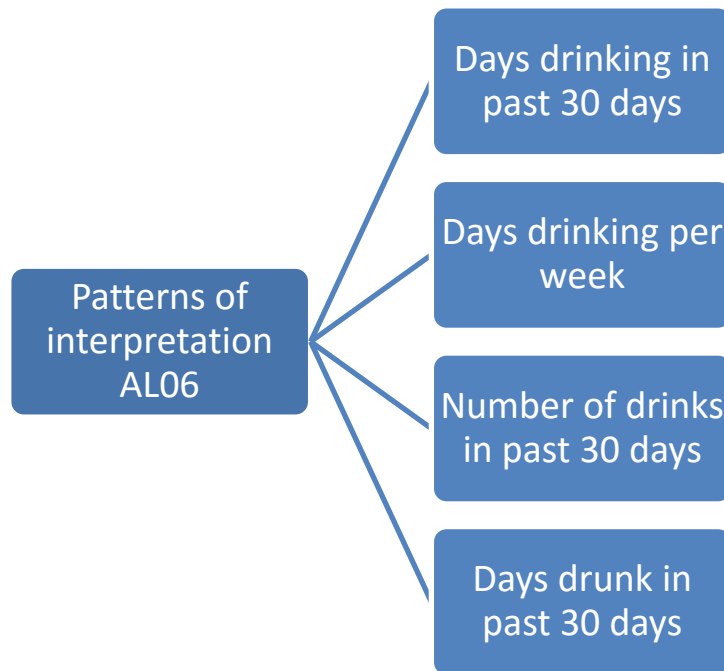


Figure 1. Patterns of interpretation for AL06.

Days in last 30 days: Some respondents provided the total number of days they had consumed alcohol in the previous 30 days. For example, one respondent answered “one.” He described going out for a beer with friends 2 weeks prior and stated that this was the only time he had gone out to drink for several months. Another respondent answered “twelve” because he goes out to drink every weekend night.

Days in past week. A few respondents answered based on how many days per week they had consumed alcohol. For example, one respondent answered “three.” She said, “Ummmm. I’ll say three. Three times, once a week.” Another respondent answered “five” and explained that she understood the question to mean, “How many times a week do I drink alcohol?”

When asked to explain their answers, some respondents realized that they had answered based on the wrong timeframe. These respondents provided revised answers based on how often

they drink per month. Not surprisingly, revised estimates for the entire month were much larger than the original estimates based on a single week. For example, the respondent who answered “five,” mentioned above, revised her answer to “15 to 20” when she realized the question was asking about 30 days rather than one week.

Number of drinks: A few respondents answered based on the number of drinks they had had consumed in the previous 30 days. One respondent answered “eight.” When asked to explain, she said, “I don’t usually count how many drinks unless it’s that day. I might have a cocktail or wine sometimes at dinner.” She then estimated that she had 8 total drinks over the previous 30 days.

Days drinking vs. Days drunk: One respondent initially answered “eight” based on the number of days she had consumed alcohol with the purpose of getting drunk. Later, she revised her answer to “twenty” which included all the days she had consumed alcohol even if she didn’t get drunk.

Response Strategies

There were several ways that respondents formulated their responses (see above for a detailed analysis of response strategies employed by respondents).

Counting of specific events. Some respondents counted specific times when they had consumed alcohol over the previous month. These respondents came up with their responses by adding up all of the specific times they could remember. This strategy was employed primarily by respondents who had consumed alcohol infrequently in the previous month. For example, a respondent who answered “3” said, “I don’t do alcohol very frequently, so I remembered having company and drinking wine with dinner on those occasions.” A few respondents who used this strategy to provide their initial responses, later remembered additional times they had consumed alcohol and had to change their responses.

Habit Heuristic. Some respondents used the heuristic of answering based on their habits. This was used primarily by respondents who had a regular, consistent habit of alcohol consumption. For example, one respondent answered “4” because he goes to happy hour every Wednesday. He added up the Wednesdays in the previous 30 days rather than trying to recall the specific times he had consumed alcohol. Respondents whose habits were not entirely regular used their regular habit as an anchor and then added or subtracted from there. For example, one respondent came up with the answer “10” based on her habit of going out every weekend. She said, “That would be 8 weekend days plus a couple of extra days I went out in the month.” Respondents who used their regular habit as an anchor did not try to recall specific times that

they had consumed alcohol and tended to express some uncertainty about their precise response saying things like, “Probably 5” or “I’d say about 6 or 7.”

Rough Estimation. Some respondents relied on rough estimates of how many days they had consumed alcohol. One respondent answered “5.” When asked to explain this response, she said, “Well, that’s just a guesstimate.” Another respondent explained his answer of “4” saying, “That just feels right.” Respondents who employed this strategy aimed for a “ballpark” figure rather than a precise count.

2ALC12MNO2 In the past year, have you had one or more drinks of an alcoholic beverage?

Due to the skip pattern, only two respondents were asked this question. Therefore, there is not enough data to determine any patterns. The two respondents, each of whom indicated that he had consumed zero drinks of alcohol in the previous 30 days, answered ‘yes’ and described occasions within the previous year when they had consumed alcohol. In the case of one of the respondents, he described his regular pattern of drinking which was to drink large amounts of alcohol every day for a period of several weeks or months and then to stop drinking all together for several months.

AL07 During the past 30 days, on the days that you drank, about how many drinks did you drink on the average?

In general, respondents approached this question with some confusion and trepidation. One respondent seemed annoyed and said, “If I knew I was going to have to count them...”

Definition of Drink

In answering this question, respondents continued their sometimes idiosyncratic understandings of “a drink.” Most respondents thought about quantities such as cans of beer or glasses of wine. However, one respondent counted sips of champagne while another thought about drinks she mixed herself which she described as “12 ounces of gin and ginger ale, mostly gin.” Two respondents made the distinction between what they drink and “a single serving.” One said, “Well, it depends on the size of the drink. If you’re at a restaurant, it’s based on a serving, but at home, my glasses are bigger.” This respondent estimated that she poured herself 3 glasses of wine but equated that with 5 servings. Another respondent estimated that there were 5 shots in a beer and used that to calculate her response.

Patterns of Interpretation

As seen in Figure 4 there were several interpretations of this question most of which were not in line with question intent.

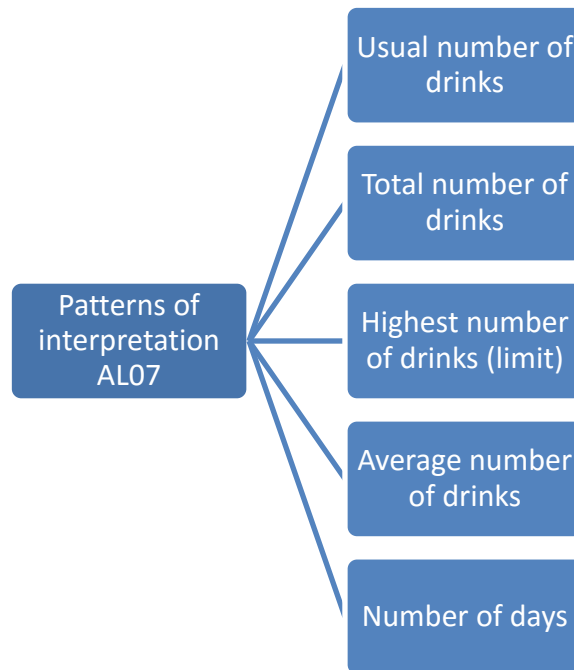


Figure 2. Patterns of interpretation for AL07

Usual number of drinks. Most respondents answered based on the usual number of drinks that they consume. One respondent said she understood that the question was asking “How much do I drink when I be drinking.” Another respondent answered “2” and said, “Two is what it takes me to get tipsy, so I usually drink 2.” Another respondent answered “16” because he usually drinks 16 beers a day.

Total number of drinks. Several respondents provided the total number of drinks they had consumed in the previous 30 days. For example, one respondent explained why she answered “80” saying, “More or less 80 because if I went out 10 times... yeah. And I had 8 drinks each time...yeah.”

Highest number of drinks. A few respondents answered based on their limit. For example, one respondent answered “3” explaining that 3 is her upper limit “in case I have to drive, I can sober up.”

Average/middle number of drinks. A few respondents provided an average. For some respondents, this was easy because they consistently drank the same amount each time. For example, one respondent answered “2” because he had gone drinking twice in the past thirty days and drank 2 drinks each time. Other respondents merely provided a number that was in the middle of the range of how many drinks they might drink. For example, one respondent

said that she might drink anywhere from 2 to 12 beers. She answered “6” which is in the middle of her range.

Number of days. A few respondents, understood the question as asking the same thing as AL06. These respondents repeated their responses, giving the number of days they had consumed alcohol in the previous 30 days.

ALC5UPNO2 During the past 30 days, on how many days did you have [5 or more/4 or more] drinks?

All English-speaking respondents seemed to understand the question as asking how many days they had consumed more than 4 or 5 drinks. A single respondent initially answered “zero” thinking the question was asking how many times he had *exactly* 5 drinks. Once he realized that the question asked about 5 *or more* drinks, he changed his response to 12. Spanish-speakers had a more difficult time understanding the intent of the question. In particular the phrase “cuantas veces tuvo” was confusing. When respondents were asked how many times they *drank* rather than *had* 4 or 5 drinks, they were more readily able to answer the question.

Definition of Drink

In answering this question, respondents continued their sometimes idiosyncratic understandings of “a drink.” One respondent calculated that two 24-ounce beers were the equivalent of “5 drinks” while another respondent counted two pint glasses filled mostly with gin and topped with ginger ale as “2 drinks.”

Certainty and Precision

Respondents who had a regular, consistent drinking pattern were certain of their responses. Respondents who answered “zero” had clear limits for how much alcohol they would consume and knew that they would never approach 4 or 5 drinks. One said, “Oh never more than two!” Another said, “I can’t drink that much. My body won’t allow it. After 2 I feel intoxicated.” Other respondents knew that they ALWAYS drank more than 4 or 5 drinks, so for their responses they just repeated their responses from AL06 because the number of days they drank 4 or 5 drinks equaled the number of days they had drunk anything.

Respondents who drank irregularly, gave less precise answers. Several offered a range such as “1 to 2” or “4 to 6.” Others indicated that their responses were guesses. One said, “This is just an estimate.” Some tried to anchor their responses to other times or events. One counted the number of weekend days (Friday- Sunday) and answered “12” assuming that she had drunk

more than 4 drinks every weekend day. Another answered “2” based on the number of times she had drunk with her husband.

AL08 During the past 30 days, what is the largest number of drinks you had on any occasion?

All respondents understood this as a question about the largest number of drinks they had consumed. However, two noted that they could not remember exactly since they had been very drunk at the time. While most respondents attended to the 30-day time period, quite a few did not. These respondents answered based on the largest number of drinks they had EVER consumed.

Definition of Drink

In answering this question, respondents continued using their sometimes idiosyncratic understandings of “a drink.” For this question, in particular, respondents used an expansive definition of drink. While some respondents thought about “sips” or “gulps,” others answered in much larger quantities such as “pints of Patron” and “tallboys.” While none of these non-standard quantities meets the desired definition of a drink, respondents did at times try to translate their measurements into “standard servings.” However, there was no consistency in this conversion. One respondent estimated that a single tallboy or 2 shots of liquor would equal “one drink.” Another respondent estimated that 3 of the drinks he makes at home, because they are “weak,” would be the equivalent of 1.5 drinks. Spanish-speaking respondents continued to be tripped up by the word “trago” to denote “drink.” One respondent answered “3” not including the many beers he had consumed because he did not consider beers to be “tragos.” When asked about “bebidas,” his answer increased to 12.

Definition of Occasion

Only one respondent asked “What’s an occasion?” but other respondents had various definitions of what constituted an occasion. Most agreed that an occasion was some type of celebration like a birthday or a party. However, anything could be an occasion as one respondent noted:

Drinking is odd. We always think of a reason we can do it...from celebratory to despondent... ‘Oh I had a long day; I’ll get smashed’ or ‘I had a wonderful day; let’s celebrate!’ We can come up with any possible scenario to justify the over indulgence.

Therefore, some respondents simply defined an occasion as “a single event” or “any time you’re drinking.” In practical terms, respondents did not distinguish between days and occasions such that no respondent reported more than one occasion on a single day.

NHANES Questions:

ALQ.NEW1 [Show hand card ALQ1] In your entire life, have you had at least 1 drink of any kind of alcohol, not counting small tastes or sips? By a drink, I mean a 12 oz. beer, a 5 oz. glass of wine, or one and a half ounces of liquor.

All respondents answered 'yes' to this question which is not surprising given the recruitment criteria. All respondents answered based on whether they had ever consumed at least one alcoholic drink. A single respondent initially thought the question was asking if he had ever had a combination of the types of drinks depicted on the hand card, but when the question was repeated, he revised his understanding.

ALQ.120 In the past 12 months, how often did you drink any type of alcoholic beverage? PROBE if no response: How many days per week, per month, or per year did you drink?

Quite a few respondents found this to be a difficult question. Several initially balked at providing a response with comments like, "That is a big question!" and "Really? 12 months?"

Ultimately all respondents attempted a response using one of the following response strategies. In terms of what respondents counted as an alcoholic beverage, most thought about cans of beer, shots of liquor, glasses of wine or self-poured cocktails. However, two respondents, using the hand card as a reference, understood the question to be asking how often they consumed all of the types of drinks on the hand card at the same time. Similarly, one respondent answered only about how many times she'd had straight liquor, and another respondent answered only about times he'd consumed beer (even though each of them had consumed other types of alcoholic beverages as well).

Response Strategies

Habit Heuristic. Most respondents used recent, regular patterns of drinking to anchor their responses. Using this heuristic allowed these respondents to provide a quick response without thinking about it too much. Some, such as the respondent who said "3 times a week, every week," had very regular habits. Others' habits were less regular. For example, one respondent said, "About twice a week. Sometimes more; sometimes less." These respondents used an average frequency.

Counting of specific events. A few respondents just counted to determine their drinking frequency. These respondents were generally infrequent drinkers. One respondent could remember each of the three times he had consumed alcohol over the previous year, so he answered '3 times per year.'

Calculations. Some respondents chose to do calculations to come up with their responses. These respondents first determined their regular pattern for drinking and then used that to

calculate a frequency per month or per year. For example, one respondent walked through her calculations, “Five days a week...20 days in a month times 12 equals 240 days out of 365 days in a year.”

Not all calculations were accurate, however. For example, one respondent asserted that she drank 54 weeks per year.

Rough Estimation. Because the task seemed daunting, some respondents threw out a rough estimate rather than take the time to come up with a precise response. In fact, some estimates were more accurate than others. One respondent initially guessed that he drank ‘75 times per year.’ When asked how he came up with that number she said, “That was a ballpark. I don’t really know.”

Variation over the Year

Some respondents’ drinking habits had varied widely across the previous year. A single respondent may have spent several months drinking every day and then several months not drinking at all. Almost all respondents indicated they drank more in some months and less in others. Respondents dealt with this variation in different ways. Some respondents used their most recent patterns of drinking to determine their responses. Others calculated an average frequency over time. For example, one respondent drank only once a week in the early months of the year but had recently been drinking a lot more. Her response of ‘2 times a month’ was her average of these two different frequencies. Another respondent only drank during two three-week long drinking binges over the previous year but answered ‘every day’ because he drank every day during the times he was drinking.

ALQ.130 *Please refer to FLASHCARD ALQ1: In the past 12 months, on those days that you drank alcoholic beverages, on the average, how many drinks did {you/he/she} have? (By a drink, I mean a 12 oz. beer, a 5 oz. glass of wine, or one and a half ounces of liquor.)*

Quite a few respondents were initially confused by this question and asked to have it repeated. Several were unable to answer because they did not know what the question was asking. In particular, the phrases “on those days that you drank” and “on the average” were not clear, especially to Spanish-speakers. Even respondents who understood the question balked at its complexity saying things like, “It’s like a math problem!”

Definition of Drinks

Respondents generally did not adhere to the prescribed definition of drink, instead employing personalized definitions of drinks based on their own experiences. Estimations of “a drink”

included sips of champagne, 12-oz cans of beer, 24-oz cans of beer, shots of liquor and self-poured mixed drinks.

Patterns of Interpretation

As seen in Figure 5, respondents did not all understand the question in the same way.

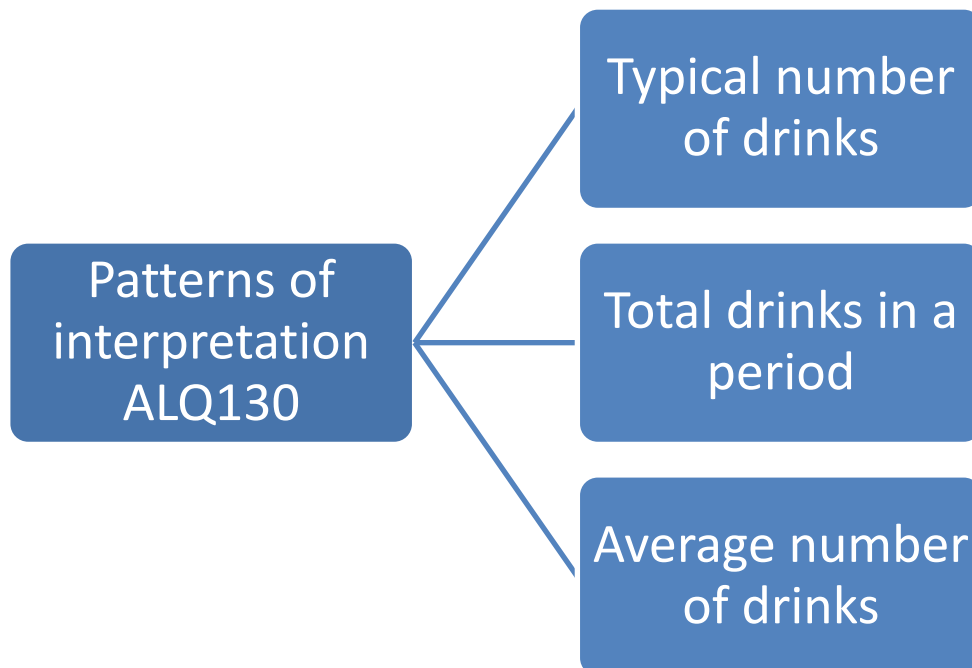


Figure 3. Patterns of interpretation for ALQ.130.

A few respondents were stymied by the question but wanted to provide a response so they threw out a guess. One respondent initially answered '17' but then revised her response to '10' after a lengthy discussion with the interviewer. She said initially she was "just guessing something."

Regardless of how they understood the question, respondents preferred to provide ranges rather than single numbers for their responses. When forced to answer with single numbers, respondents generally chose the higher number of the range.

Typical number of drinks. Most respondents initially offered ranges for how much they would typically drink rather than a mathematical average. One said, "Typically it's 1, 2 or 3." When asked for a single number, he said, "Usually 3." Another respondent said, "On average, about 6. I drink until I'm intoxicated and drunk and that's how many it takes, so that's how many I

drink.” She was not the only respondent to answer based on how many drinks it took to get drunk.

Almost all Spanish-speaking respondents understood “on average” as “in total” and provided the total amount they drink when they drink.

Total drinks in a period. Quite a few respondents answered based on the total number of drinks they had consumed in a given period. Typically, these respondents tried to tally the total number of drinks they had consumed in the previous year although a few thought about their total over a month.

Average number of drinks. Only a few respondents tried to calculate a mathematical average. One respondent walked through the process:

I tried to think of roughly how many times I went out to drink. Then, I had to think how many drinks. That was the harder part to remember. Some months I didn’t drink at all but some months I’d go out 3 times, so 18-24 drinks for the whole year and then I did the math to get 1-3 drinks on average.

ALQ.141. In the past 12 months, how often did you have [4 female/5 male] or more drinks of any alcoholic beverage?

A few respondents were not able to answer the question. One said, “You said a year? Honestly, I can’t say.” For these respondents, the timeframe was too long.

In contrast to ALQNEW2 which asks about drinking 4 (or 5) drinks in a 2 hour time period, respondents did not consider drinking over a period of time. Instead, respondents thought about drinking 4 (or 5) drinks during a single event such as a dinner, a party, a celebration or a night out at a bar.

As seen in Figure 6, respondents approached this question differently depending on how often they consumed 4 (or 5) drinks.

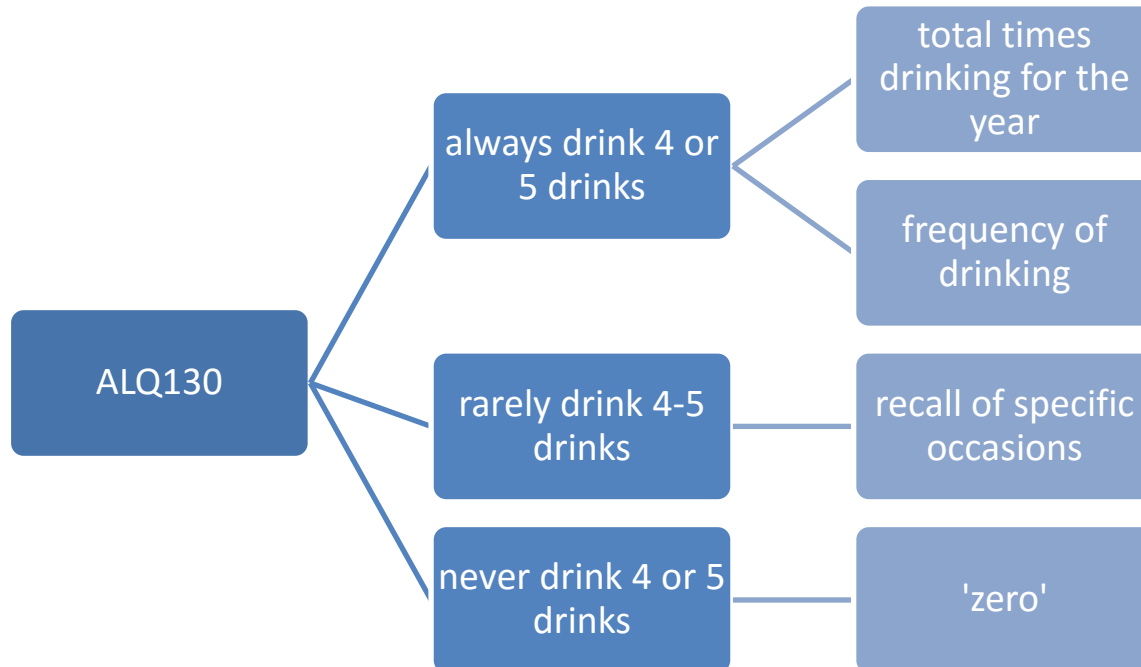


Figure 4. Response patterns for ALQ.130

Always drink 4 (or 5) drinks. Respondents who always drink 4 (or 5) drinks were not always sure what the question was asking by “how often...” Most respondents provided either a frequency or a total number of times. One said, “Oh we’re doing math again!” and then calculated that she had consumed alcohol 96 days of the year. Other respondents provided the frequency of their typical alcohol drinking habit. Several respondents said, “2 days per week” based on drinking every weekend.

Infrequently drink 4 (or 5) drinks. Respondents who infrequently drink 4 (or 5) drinks generally relied on recall. These instances were tied to special occasions such as holidays or birthdays when they had more to drink than usual. One respondent tried to turn this infrequent occurrence into a frequency. He had consumed 5 drinks on two separate occasions within a single month, but generally, he never had that much. He respondent ‘twice a month’ meaning that it had happened “twice in a one month period.”

Never drink 4 (or 5) drinks. Respondents who never drink 4 (or 5) drinks had the easiest time coming up with a response. These respondents had set limits for how much they drank—usually 2 or 3 drinks at a time, so they all answered ‘zero.’

ALQ.NEW2 [HAND CARD ALQ2] In the past 12 months, about how often did you drink [4 female/5 male] or more drinks in a period of TWO HOURS OR LESS? Every day; nearly every day; 3-4 times a week; 2 times a week; once a week; 2-3 times a month; once a month; 7-11

times in the past year; 3-6 times in the past year; 1-2 times in the past year; never in the last year

Respondents understood this question as asking how often in the previous year they had consumed 4 (or 5) drinks in 2 hours or less. Most respondents thought that 2 hours was a very short amount of time to drink 4 (or 5) drinks. Even respondents who indicated in ALQ130 that they had consumed 4 (or 5) at a time answered 'never in the last year' because they had taken longer than 2 hours to consume that many drinks. One respondent said, "Usually if I'm drinking 4 or more, it's 4-6 hours. 2 hours, I'd be stumbling home!" Three respondents thought 2 hours sounded like a long time. One of these respondents said, "Yeah, sometimes I like to sip [my beer] slow." A few respondents missed the two hour time period altogether, so they understood this as a repetition of ALQ130.

A few respondents changed their responses once they saw the options. For example, one respondent initially said, "I don't think I've ever did that" but when he read through the response options, he chose 'once a month.' Similarly, several respondents did not initially see the option "never." For example, one respondent answered "once a week" thinking that was the least frequent time period but then changed his answer to "never" when he realized that was an option.

A few respondents had difficulty choosing a response option because they didn't see any that fit their situation. In particular, respondents whose patterns of drinking had changed over the course of the year had trouble finding an appropriate response. For example, one respondent figured that he had consumed 5 or more drinks in under two hours at least 36 times in the previous year, but none of those times had occurred within the previous three months, so he didn't want to choose '2-3 times a month.'

ALQNEW 3 [HAND CARD ALQ2] In the past 12 months, about how often did you drink 8 or more drinks in a single day?

All respondents understood the question as asking how often they drank 8 or more drinks in a day. One respondent wondered what 'a single day' was. "Is it 24 hours?" she asked. She ultimately decided that 'a single day' was "from the time you get up til when you go to bed." Another respondent ignored the 'single day' timeframe altogether. He answered '1-2 times a year' to indicate that he had had more than 8 drinks during each of his 3 week long drinking binges.

Most respondents answered 'never in the past year' and asserted 8 drinks was too many for one sitting. One respondent said, "I don't drink 8 drinks... I would be sick in the hospital." Other

respondents did report having 8 or more drinks, some quite regularly. These respondents based their responses either on their regular pattern of drinking or on recall of specific events.

A few respondents were not able to choose from among the response categories. One respondent calculated that he had consumed 8 or more drinks '75 times' during the previous year. Another respondent figured that she drank that many drinks '6 times a month.' Since they couldn't find these responses on the card, they did not answer at all.

ALQNEW4 HAND CARD ALQ2] In the past 12 months, about how often did you drink 12 or more drinks in a single day?

All respondents understood the question as asking how often they consumed 12 or more drinks in a day. Respondents did seem to differentiate between this question and ALQNEW3 which asks about drinking 8 or more drinks in a day. Almost all respondents who indicated that they had consumed 8 or more drinks in the previous year, gave a lower frequency for drinking 12 drinks in the previous year. For example, one respondent indicated that he drank 8 drinks "3-6 times in the last year." He said that he on special occasions such as his birthday or New Year's, he would drink up to a full pint of vodka which he estimated to be 10 drinks. When asked ALQNEW4, this respondent answered "never in the last year." Therefore, these answers are consistent.

Aside from respondents who answered "never" for both ALQNEW3 (8 drinks) and ALQNEW4 (12 drinks) only a few respondents gave the same answer for both questions. For example, one respondent answered "2-3 times a month" and described how he and his friends usually spend Saturday nights drinking 15-20 drinks each. In fact, most respondents based their responses to the two questions on the upper limit of how much they usually drink (a ½ pint of vodka, an 18 pack of beer, two bottles of wine) rather than on a precise count of drinks they had consumed at specific times.

Most respondents answered 'never in the past year' stating that 12 drinks was too many for one sitting. Several respondents speculated that 12 drinks might kill them. One said, "I'd be dead if I did that." Other respondents did report having 12 or more drinks in the previous year. These respondents based their responses either on their regular pattern of drinking such as the respondent who said, "I drink at least a 12 pack every Saturday" or on recall of specific events such as the respondent who was thinking about "going out on New Year's."

ALQ151 Was there ever a time or times in your life when you [drank 4 female/5 male] or more drinks of any kind of alcoholic beverage almost every day?

Respondents uniformly understood this question as asking if there had ever been a period in their lives when they drank 4 (or 5) drinks nearly every day. Most respondents said 'no'

indicating that this would be too much drinking. One said, “No way! Even in college I couldn’t drink that much! I had to function.” Respondents who had occasionally or even frequently consumed 4 (or 5) drinks at any point in their lives answered no if this had not occurred with regularity or nearly every day.

Those that said ‘yes’ described periods of drinking this much that lasted anywhere from 2 weeks to several years. Some of these periods were long ago such as the one described by one respondent, “There was a time when I was young. That young stupid age when I used to get twisted.” A few respondents described this as their current drinking pattern.

NEWALQ.160 Considering all types of alcoholic beverages, during the past 30 days, how many times did you have [4 female/5 male] or more drinks on one occasion?

Respondents all understood the question as asking how many times they had consumed 4 (or 5) drinks at any one time. Two respondents asked “What’s an occasion?” before they were able to respond. Ultimately, they both decided that an occasion was “a day.” In fact, almost all respondents answered based on drinking 4 (or 5) drinks in *one day*. A single respondent answered based drinking over a period of 2 days. To this respondent, a weekend of drinking was “an occasion.”

Most respondents who answered ‘no’ indicated that they rarely or never drank this amount. Respondents who answered ‘yes’ based their responses on recall of specific events or guesstimates of how often they had consumed that amount within the previous 30 days. For example, one respondent guessed that he had consumed 6 drinks at least once in the previous month. “More than likely it was on a day off. A Friday night,” he speculated.

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The following questions ask about alcohol use. This includes beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey.

ALQ.NEW1 [Show hand card ALQ1] In your **entire life**, have you had at least 1 drink of any kind of alcohol, not counting small tastes or sips? By a drink, I mean a 12 oz. beer, a 5 oz. glass of wine, or one and a half ounces of liquor Yes No

ALQ.120 In the **past 12 months**, how often did you drink any type of alcoholic beverage? _____/Day
 _____/Week
 PROBE: How many days per week, per month, or per year did you drink? _____/Year

Skip IF ALQ.120=0, GO TO ALQ.151.
 OTHERWISE, CONTINUE WITH ALQ.130.

ALQ.130 [Show hand card ALQ1] In the **past 12 months**, on those days that you drank alcoholic beverages, on **average**, how many drinks did you have? _____ #
 (By a drink, I mean a 12 oz. beer, a 5 oz. glass of wine, or one and a half ounces of liquor.)

ALQ.141 In the **past 12 months**, how **often** did you have **[4 female/5 male]** or more drinks of any alcoholic beverage? _____/Day
 _____/Week
 _____/Year

Skip IF ALQ.141Q = 0, GO TO ALQ.151.
 OTHERWISE, CONTINUE.

ALQ.NEW2 [HAND CARD ALQ2] In the **past 12 months**, about how often did you drink **[4 female/5 male]** or more drinks in a period of TWO HOURS OR LESS? Every Day Nearly Every Day 3-4 Times/week 2 Times/week Once a week 2-3 Times/Month One/Month 7-11 times/last year 3-6 times/last year 1-2 times/last year Never/last year

ALQ.NEW3

[HAND CARD ALQ2] In the **past 12 months**, about how often did you drink **8 or more** drinks in a **single day**?

- Every Day
- Nearly Every Day
- 3-4 Times/week
- 2 Times/week
- Once a week
- 2-3 Times/Month
- One/Month
- 7-11 times/last year
- 3-6 times/last year
- 1-2 times/last year
- Never/last year

Appendix B

SECTION I: Las siguientes preguntas se refieren al consumo de bebidas alcohólicas, incluyendo licor como whiskey o ginebra, la cerveza, el vino, "wine coolers" y cualquier otro tipo de bebida alcohólica.

ALCLIFE : Durante **toda su vida**, ¿ha consumido por lo menos 12 tragos de cualquier tipo de bebida alcohólica?

Yes.....1

No.....2

SKIP: If ALCLIFE= 1, ask AL06, otherwise, Go to E-Cigarettes.

AL06 : ¿Durante los últimos 30 días, cuántos días consumió usted uno u más tragos de bebida alcohólica?

of DAYS _____ [RANGE: 0-30]

Enter '0' if no drinks in past 30 days (Ningún trago en los últimos 30 días)

SKIP: If AL06=0, ask ALC12MNO2

ALC12MNO2: En CUALQUIER AÑO, ¿ha consumido por lo menos un trago de cualquier tipo de bebida alcohólica?

Yes.....1

No.....2

SKIP: If AL06 is between 1-30, ask AL07 and AL08

AL07: En los últimos 30 días, en los días que bebió, ¿aproximadamente cuántos tragos tomó en promedio?

OF DRINKS: _____ [RANGE: 1-90]

Enter '1' if part of one drink

ALC5UPNO2: Durante **los últimos 30 días**, ¿cuántas veces tuvo **[4 female/5 male]** o más bebidas?

DAYS _____ [0-30]

DK/REF

AL08: Durante los últimos 30 días, ¿cuánto es la mayor cantidad de tragos que tomó en alguna ocasión?)

OF DRINKS: _____ [RANGE: 1-90]

SECTION II

SMQ.856: Durante los últimos 7 días, ¿estuvo {usted/SP} trabajando en **un lugar fuera de casa**?

- YES 1
- NO 2 (SMQ.860)
- REFUSED..... 7 (SMQ.860)
- DON'T KNOW 9 (SMQ.860)

SMQ.858: Mientras {usted/SP} **trabajaba en un lugar fuera de casa**, ¿alguna persona fumó cigarrillos u otros productos de tabaco dentro de ese lugar?

- YES 1
- NO 2
- REFUSED..... 7
- DON'T KNOW 9

SMQ.860: {Ahora le preguntaré acerca de fumar en otros lugares.} Durante los últimos 7 días, ¿estuvo {usted/SP} en un **restaurante**?

- YES 1
- NO 2 (BOX 6)
- REFUSED..... 7 (BOX 6)
- DON'T KNOW 9 (BOX 6)

SMQ.862: Mientras {usted/SP} estaba en un **restaurante**, ¿alguna persona fumó cigarrillos u otros productos de tabaco adentro del restaurante?

- YES 1
- NO 2
- REFUSED..... 7
- DON'T KNOW 9

SMQ.866: Durante los últimos 7 días, ¿estuvo {usted/SP} en **un bar**?

YES	1
NO	2 (SMQ.870)
REFUSED.....	7 (SMQ.870)
DON'T KNOW	9 (SMQ.870)

SMQ.868: Mientras {usted/SP} estaba en **un bar**, ¿alguna persona fumó cigarrillos u otros productos de tabaco dentro del bar?

YES	1
NO	2
REFUSED.....	7
DON'T KNOW	9

SMQ.870: Durante los últimos 7 días, ¿viajó {usted/SP} en un **automóvil u otro vehículo motorizado**?

YES	1
NO	2 (SMQ.874)
REFUSED.....	7 (SMQ.874)
DON'T KNOW	9 (SMQ.874)

SMQ.872: Mientras {usted/SP} viajaba en un **automóvil u otro vehículo motorizado**, ¿alguna persona fumó cigarrillos u otros productos de tabaco?

YES	1
NO	2
REFUSED.....	7
DON'T KNOW	9

SMQ.874: Durante los últimos 7 días, ¿estuvo {usted/SP} en **una casa aparte de la {suya/de él/de ella}**?

YES 1
NO 2 (SMQ.878)
REFUSED..... 7 (SMQ.878)
DON'T KNOW 9 (SMQ.878)

SMQ.876: Mientras {usted/SP} estuvo en **una casa aparte de la {suya/de él/de ella}**, ¿alguna persona fumó cigarrillos u otros productos de tabaco dentro de la casa?

YES 1
NO 2
REFUSED..... 7
DON'T KNOW 9

SMQ.878: Durante los últimos 7 días, ¿estuvo {usted/SP} en **algún otro espacio cerrado**?

INTERVIEWER: IF RESPONDENT ASKS WHAT IS MEANT BY OR DOESN'T SEEM TO UNDERSTAND "ALGÚN OTRO ESPACIO CERRADO" SAY "APARTE DEL TRABAJO, ESTAR EN UN BAR, RESTAURANTE, AUTOMÓVIL, OTRO VEHÍCULO O UNA CASA."

YES 1
NO 2 (NEW QUESTION#1)
REFUSED..... 7 (NEW QUESTION#1)
DON'T KNOW 9 (NEW QUESTION#1)

SMQ.880: Mientras {usted/SP} estuvo en **algún otro espacio cerrado**, ¿alguna persona fumó cigarrillos u otros productos de tabaco?

YES 1
NO 2
REFUSED..... 7
DON'T KNOW 9

E-Cigarettes

Los sistemas electrónicos de administración de nicotina son sistemas operadas por baterías que calientan una solución conteniendo nicotina y producen un vapor o aerosol en lugar de humo. La gente los usa en manera de simular fumar. Ejemplos de sistemas electrónicos de administración de nicotina son cigarrillos electrónicos, hookahs electrónicas, y pluma estilo de fumar electrónica.

NEW SMQ.1 Durante los últimos 7 días, ¿{estuvo usted/estuvo SP} en un lugar donde alguien estaba usando un cigarrillo electrónico, hookah electrónica, pluma estilo de fumar electrónica, u otro producto electrónico parecido?

YES	1
NO	2
REFUSED.....	7
DON'T KNOW	9

NEW SMQ2. En los últimos 7 días, ¿respiró el aerosol o vapor de otra persona que estaba fumando un cigarrillo electrónico, una hookah electrónica, una pluma electrónica u otro producto electrónico similar en un lugar público o privado?

YES	1
NO	2
REFUSED.....	7
DON'T KNOW	9

INTERVIEWER: "indoors" refers to any public or private space. Questions refer to being around OTHERS using e-cigarettes not use of e-cigarettes by the respondent.

SECTION III: ALCOHOL

Las siguientes preguntas son acerca del consumo de bebidas alcohólicas, las cuales incluyen cerveza, vino, sangría y licores como ron, ginebra, vodka o whiskey.

ALQ.NEW1: [HAND CARD] En **toda su vida**, ¿se ha tomado al menos 1 bebida de cualquier tipo de alcohol, sin incluir probaditas o sorbos? Por bebida, quiero decir una cerveza de 12 onzas, una copa de vino de 5 onzas o una onza y media de licor.

YES 1
NO 2 (END OF SECTION)

ALQ.120: En los **últimos 12 meses**, ¿con qué frecuencia se tomó {usted/SP} algún tipo de bebida alcohólica? -- PROBE: ¿Cuántos días por semana, por mes o por año tomó {usted/SP}?

|_|_|_|_|
ENTER QUANTITY

ALQ.130: [HAND CARD ALQ1] En los **últimos 12 meses**, en aquellos días en que {usted/SP} se tomó algún tipo de bebida alcohólica, ¿cuántas bebidas se tomó {usted(SE)/él(MPR)/ella(FPR)} en **promedio?** (Por bebida, quiero decir una cerveza de 12 onzas, una copa de vino de 5 onzas o una onza y media de licor.)

ALQ.141: En los **últimos 12 meses**, ¿con qué **frecuencia** se tomó {usted/SP} [**4 female/5 male**] o más bebidas alcohólicas de cualquier tipo?

PROBE: ¿Cuántos días por semana, por mes o por año tomó {usted/SP} [**4 female/5 male**] o más bebidas alcohólicas en un solo día?

Skip: IF QUANTITY CODED '0', GO TO ALQ.151

|_|_|_|_|
ENTER QUANTITY

ALQ.NEW2: [HAND CARD ALQ2] En los **últimos 12 meses**, ¿aproximadamente con qué frecuencia se tomó {usted/SP} [**4 female/5 male**] o más bebidas en un periodo de DOS HORAS O MENOS?

ALQ.NEW3: [HAND CARD ALQ2] En los **últimos 12 meses**, ¿aproximadamente con qué frecuencia se tomó {usted/SP} **8 o más** bebidas en **un solo día**?

- Every Day
- Nearly Every Day
- 3-4 Times/week
- 2 Times/week
- Once a week
- 2-3 Times/Month
- One/Month
- 7-11 times/last year
- 3-6 times/last year
- 1-2 times/last year

ALQ.NEW4: [HAND CARD ALQ2] En los **últimos 12 meses**, ¿aproximadamente con qué frecuencia se tomó {usted/SP} **12 o más** bebidas en **un solo día**?

- Every Day
- Nearly Every Day
- 3-4 Times/week
- 2 Times/week
- Once a week
- 2-3 Times/Month
- One/Month
- 7-11 times/last year
- 3-6 times/last year
- 1-2 times/last year

Never/last year

ALQ.151: ¿Hubo alguna vez un tiempo o tiempos en {su vida/la vida de SP} cuando {usted(SE)/él(MPR)/ella(FPR)} **se tomó [4 female/5 male] o más bebidas alcohólicas** de cualquier tipo, **casi todos los días**?

YES 1
NO 2

NEWALQ.160: Teniendo en cuenta todos los tipos de bebidas alcohólicas, DURANTE LOS ÚLTIMOS 30 DÍAS, ¿cuántas veces tuvo **[4 female/5 male] bebidas en una sola ocasión**?