# National Health and Nutrition Examination Survey

## 2017-March 2020 Data Documentation, Codebook, and Frequencies

## Acculturation (P_ACQ)

**Data File: P_ACQ.xpt**

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## Component Description

The NHANES program suspended field operations in March 2020 due to the coronavirus disease 2019 (COVID-19) pandemic. As a result, data collection for the NHANES 2019-2020 cycle was not completed and the collected data are not nationally representative. Therefore, data collected from 2019 to March 2020 were combined with data from the NHANES 2017-2018 cycle to form a nationally representative sample of NHANES 2017-March 2020 pre-pandemic data, and made available to the public. Please refer to the Analytic Notes section for more details on the use of the data.

The Acculturation section (variable name prefix ACQ) provides personal interview data on language use in the home. Questions asked and response categories used were customized, based on self-identified race and Hispanic origin, as shown in the table below.

| Participants' Self-Identification | Question Asked | Response Categories | Variable Name for Data Release |
|---|---|---|---|
| Non-Hispanic White, Non-Hispanic Black, or Other race - including multi-racial | What language(s) do you usually speak at home? | Check all that apply:<br>- English (ACD011A)<br>- Spanish (ACD011B)<br>- Other languages (ACD011C) | ACD011A-C |
| Mexican American or Other Hispanic | What language(s) do you usually speak at home? Do you speak only Spanish, more Spanish than English, both equally, more English than Spanish, or only English? | - Only Spanish<br>- More Spanish than English<br>- Both equally<br>- More English than Spanish<br>- Only English | ACD040 |
| Non-Hispanic Asian | Do you speak only (NON-ENGLISH LANGUAGE), more (NON-ENGLISH LANGUAGE) than English, both equally, more English than (NON-ENGLISH LANGUAGE), or only English?<br><br>Note: Participant self-reported "NON-ENGLISH LANGUAGE" used at home is pre-filled in this question during the interview. | - Only non-English language<br>- More non-English than English<br>- Both equally<br>- More English than non-English language<br>- Only English | ACD110 |

## Eligible Sample

Participants aged 3 years and older in the NHANES 2017-March 2020 pre-pandemic sample were eligible.

## Interview Setting and Mode of Administration

These questions were asked, in the home, by trained interviewers using the Computer-Assisted Personal Interview (CAPI) system.

Persons 16 years of age and older and emancipated minors were interviewed directly. A proxy provided information for participants who were under 16 years of age and for those who could not answer the questions themselves.

The NHANES 2017-2018 and 2019-2020 acculturation questionnaires are available on the NHANES website.

## Quality Assurance & Quality Control

The ACQ data were systematically reviewed for logical, processing, and data input errors on a periodic basis during the process of data collection.

The CAPI system is programmed with automated data consistency checks to reduce data entry errors. CAPI also uses online help screens to assist interviewers in defining key terms used in the questionnaire.

## Data Processing and Editing

Edits were made to ensure the completeness, consistency, and analytic usefulness of the data.

## Analytic Notes

The COVID-19 pandemic required suspension of NHANES 2019-2020 field operations in March 2020 after data was collected in 18 of the 30 survey locations in the 2019-2020 sample. Data collection was cancelled for the remaining 12 locations. Because the collected data from 18 locations were not nationally representative, these data were combined with data from the previous cycle (2017-2018) to create a 2017-March 2020 pre-pandemic data file. A special weighting process was applied to the 2017-March 2020 pre-pandemic data file. The resulting sample weights in the demographic file should be used to calculate estimates from the combined cycles. The sample weights are not appropriate for independent analyses of the 2019-2020 data and will not yield nationally representative results for either the 2017-2018 data alone or the 2019-March 2020 data alone. Please refer to the NHANES website for additional information for the NHANES 2017-March 2020 pre-pandemic data, and for the previous 2017-2018 public use data file with specific weights for that 2-year cycle.

**ACD011A, ACD011B and ACD011C (Language spoken at home for non-Hispanic White, non-Hispanic Black, and Other races including multiracial)**
These variables encoded the information on language(s) spoken at home for non-Hispanic white and non-Hispanic black participants, and participants of other races including multiracial. Responses to the question were collected as "check all that apply," which means that the participants could report more than one language and all of their responses were recorded. Please note that these variables also apply to participants sampled as non-Hispanic Asian but self-identified as multiracial.

**Language spoken at home for non-Hispanics (NHANES 2011-2018 [ACD011 A,B,C] vs. NHANES 1999-2010 [ACD010 A,B,C])**
Prior to 2011, one single question was used to collect information on language spoken at home for all non-Hispanic participants and the responses were released as variables ACD010A, ACD010B, and ACD010C. Starting in 2011, to accommodate the Asian oversample, information on language spoken at home was collected separately for non-Hispanic Asians and other non-Hispanics using two different questions (i.e., ACQ110 and ACQ011). Analysts who wish to include "language spoken at home" data in analyses that use multiple 2-year NHANES cycles, may recode variables ACD011A, ACD011B, ACD011C, and ACD110 to create variables compatible with those released with the NHANES 1999-2010 data (i.e., ACD010A, ACD010B, and ACD010C) using the following SAS programming code:

```
If SDDSRVYR in (7, 8, 9, 10) then do;
  ACD010B = ACD011B;
  If ACD110 in (2, 3, 4, 5) then ACD010A = 1;
  Else ACD010A = ACD011A;
  If ACD110 in (1, 2, 3, 4) then ACD010C = 9;
  Else ACD010C = ACD011C;
End;
```

**ACD040 (Language spoken at home for Hispanics)**
In the current ACQ instrument, the item number for this question is ACQ042. However, to keep the data release variable names the same as those in previous years, the responses to ACQ042 were renamed ACD040.

**ACD110 (Language spoken at home for non-Hispanic Asian, single race)**
Question ACQ110, which asks language spoken at home of non-Hispanic Asian participants, was added to NHANES 2011–2012, to compliment the Asian oversample. More detailed data on specific Asian language(s) used by participants at home is available through the National Center for Health Statistics' Research Data Center (RDC). Please note that acculturation data on participants sampled as non-Hispanic Asian, but who self-identified as multiracial, are reported in variables ACD011A, ACD011B and ACD011C in this public data set. If you wish to combine these participants with single Asian race participants in your analysis, you can request access to more detailed Asian language use data through the RDC as well.

Although these data were collected as part of the household questionnaire, if they are merged with the MEC exam data, exam sample weights should be used for the analyses.

Please refer to the NHANES Analytic Guidelines and the on-line NHANES Tutorial for further details on the use of sample weights and other analytic issues.

## Codebook and Frequencies

### SEQN - Respondent sequence number

| | |
|---|---|
| **Variable Name:** | SEQN |
| **SAS Label:** | Respondent sequence number |
| **English Text:** | Respondent sequence number. |
| **Target:** | Both males and females 3 YEARS - 150 YEARS |

# ACQBOX1 - CHECK ITEM

| | |
|---|---|
| **Variable Name:** | ACQBOX1 |
| **English Instructions:** | BOX 1. CHECK ITEM: IF THE PARTICIPANT SELF-IDENTIFIED AS "MEXICAN AMERICAN" OR "OTHER HISPANIC" (i.e., RIDRETH3=1, OR 2), GO TO ACD040; IF THE PARTICIPANT SELF-IDENTIFIED AS "NON-HISPANIC ASIAN" (i.e., RIDRETH3=6), GO TO ACD110; IF THE PARTICIPANT SELF-IDENTIFIED AS "NON-HISPANIC WHITE", "NON-HISPANIC BLACK", OR "OTHER RACE - INCLUDING MULTI-RACIAL" (i.e., RIDRETH3=3, 4, OR 7), CONTINUE WITH ACD011A. |
| **Target:** | Both males and females 3 YEARS - 150 YEARS |

## ACD011A - Speak English at home - NHW or NHB

**Variable Name:** ACD011A

**SAS Label:** Speak English at home - NHW or NHB

**English Text:** What language(s) {do you/does SP} usually speak at home?

**English Instructions:** CODE ALL THAT APPLY. THIS VARIABLE ONLY APPLIES TO PARTICIPANTS SELF-IDENTIFIED AS "NON-HISPANIC WHITE", "NON-HISPANIC BLACK", OR "OTHER RACE - INCLUDING MULTI-RACIAL" (i.e., RIDRETH3=3, 4, OR 7).

**Target:** Both males and females 3 YEARS - 150 YEARS

| Code or Value | Value Description | Count | Cumulative | Skip to Item |
|---|---|---|---|---|
| 1 | English | 9238 | 9238 | |
| 77 | Refused | 0 | 9238 | |
| 99 | Don't know | 0 | 9238 | |
| . | Missing | 4911 | 14149 | |

## ACD011B - Speak Spanish at home - NHW or NHB

| | |
|---|---|
| **Variable Name:** | ACD011B |
| **SAS Label:** | Speak Spanish at home - NHW or NHB |
| **English Text:** | What language(s) {do you/does SP} usually speak at home? |
| **English Instructions:** | CODE ALL THAT APPLY. THIS VARIABLE ONLY APPLIES TO PARTICIPANTS SELF-IDENTIFIED AS "NON-HISPANIC WHITE", "NON-HISPANIC BLACK", OR "OTHER RACE - INCLUDING MULTI-RACIAL" (i.e., RIDRETH3=3, 4, OR 7). |
| **Target:** | Both males and females 3 YEARS - 150 YEARS |

| Code or Value | Value Description | Count | Cumulative | Skip to Item |
|---|---|---|---|---|
| 8 | Spanish | 42 | 42 | |
| . | Missing | 14107 | 14149 | |

## ACD011C - Speak other language at home -NHW or NHB

**Variable Name:**          ACD011C

**SAS Label:**              Speak other language at home -NHW or NHB

**English Text:**           What language(s) {do you/does SP} usually speak at home?

**English Instructions:**   CODE ALL THAT APPLY. THIS VARIABLE ONLY APPLIES TO PARTICIPANTS SELF-IDENTIFIED AS "NON-HISPANIC WHITE", "NON-HISPANIC BLACK", OR "OTHER RACE - INCLUDING MULTI-RACIAL" (i.e., RIDRETH3=3, 4, OR 7).

**Target:**                 Both males and females 3 YEARS - 150 YEARS

| Code or Value | Value Description | Count | Cumulative | Skip to Item |
|---|---|---|---|---|
| 9 | Other | 259 | 259 | |
| . | Missing | 13890 | 14149 | |

## ACD040 - Language(s) spoken at home - Hispanics

| | |
|---|---|
| **Variable Name:** | ACD040 |
| **SAS Label:** | Language(s) spoken at home - Hispanics |
| **English Text:** | Now I'm going to ask you about language use. What language(s) {do you/does SP} usually speak at home? {Do you/Does he/Does she} speak only Spanish, more Spanish than English, both equally, more English than Spanish, or only English? |
| **English Instructions:** | HAND CARD ACQ1. THIS VARIABLE ONLY APPLIES TO PARTICIPANTS SELF-IDENTIFIED AS "MEXICAN AMERICAN" OR "OTHER HISPANIC" (i.e., RIDRETH3=1, OR 2). |
| **Target:** | Both males and females 3 YEARS - 150 YEARS |

| Code or Value | Value Description | Count | Cumulative | Skip to Item |
|---|---|---|---|---|
| 1 | Only Spanish, | 828 | 828 | |
| 2 | More Spanish than English | 516 | 1344 | |
| 3 | Both equally | 522 | 1866 | |
| 4 | More English than Spanish | 570 | 2436 | |
| 5 | Only English | 723 | 3159 | |
| 7 | Refused | 4 | 3163 | |
| 9 | Don't know | 5 | 3168 | |
| . | Missing | 10981 | 14149 | |

## ACD110 - Language(s) spoken at home - Asians

| | |
|---|---|
| **Variable Name:** | ACD110 |
| **SAS Label:** | Language(s) spoken at home - Asians |
| **English Text:** | {Do you/Does SP} speak only (NON-ENGLISH LANGUAGE), more (NON-ENGLISH LANGUAGE) than English, both equally, more English than (NON-ENGLISH LANGUAGE), or only English? |
| **English Instructions:** | THIS VARIABLE ONLY APPLIES TO PARTICIPANTS SELF-IDENTIFIED "NON-HISPANIC ASIAN" (i.e., RIDRETH3=6). |
| **Target:** | Both males and females 3 YEARS - 150 YEARS |

| Code or Value | Value Description | Count | Cumulative | Skip to Item |
|---|---|---|---|---|
| 1 | Only Non-English language | 600 | 600 | |
| 2 | More Non-English than English | 142 | 742 | |
| 3 | Both equally | 178 | 920 | |
| 4 | More English than Non-English | 212 | 1132 | |
| 5 | Only English | 449 | 1581 | |
| 7 | Refused | 0 | 1581 | |
| 9 | Don't know | 1 | 1582 | |
| . | Missing | 12567 | 14149 | |