ICPSR | INTER-UNIVERSITY CONSORTIUM FOR POLITICAL AND SOCIAL RESEARCH

ICPSR 34969

Survey of Midlife in Japan (MIDJA): Biomarker Project, 2009-2010

MIDJA Biomarker Data File Notes

Inter-university Consortium for
Political and Social Research
P.O. Box 1248
Ann Arbor, Michigan 48106
www.icpsr.umich.edu

Survey of Midlife in Japan (MIDJA): Biomarker Project, 2009-2010

Hazel Rose Markus
Stanford University

Christopher L. Coe
University of Wisconsin--Madison

Carol D. Ryff
University of Wisconsin--Madison

Mayumi Karasawa
Tokyo Woman's Christian University

Norito Kawakami
Tokyo Daigaku

Shinobu Kitayama
University of Michigan

Terms of Use

Information about Copyrighted Content

MIDJA 1 BIOMARKER PROJECT DATA FILE NOTES
August 2018

This document highlights aspects of the MIDJA 1 Biomarker data that analysts should be aware of prior to working with the indicated section of data. For example, there are instances when administrative and flag variables were created to protect confidentiality or to facilitate analysis. General issues are addressed first followed by issues that are unique to specific components of the Biomarker data.

Documents providing more detailed information about specific sections of the data are referenced throughout.

GENERAL ISSUES

Variable Naming & Missing Values

The document "MIDJA Naming and Coding Conventions 5-5-11.pdf" specifies that the third character of the variable name be a letter that identifies the type, or name, of the instrument used to collect the data. Components of the MIDJA Biomarker data file are designated by the indicated letters:

Q = Self-Administered Questionnaire (SAQ)
C = Clinic Visit Items (including Syowa Lab values)
B = BioCore Lab Results (Blood, Saliva)
S = Saliva Collection and computed Cortisol values
M = Medication Data

This document further specifies that Missing values appear as follows:

7, 97 etc. = Don't Know

8, 98 etc. = Missing or Refused

9, 99 etc. = Respondent self-defined question as "INAPP"

Administrative Variables

The following administrative variables appear at the beginning of the file:

- Month and Year the Clinic visit was completed (J2CMONTH, J2CYEAR)
- Respondent gender from the MIDJA Survey (J1SQ1)
- Respondent age when the Clinic data was collected (J2CAGE)

In addition to the above we also created administrative variables for use with specific components of the Biomarker data (e.g. SAQ, Clinic Visit). These include flag variables, indicating whether a given condition applies to the participant, as well as a series of lag variables indicating the time elapsed between different elements of the Biomarker data collection. The relevant variables are described below as appropriate.

Date and Time Variables

Date and time data often have proprietary or conflicting formatting characteristics that can create problems when moving between data file types (i.e. SPSS to Excel). Thus, the MIDJA Naming and Coding Conventions require that dates and times be converted to formats that

allow them to be read by a wider array of software programs. In response to this requirement, dates and times are included in the updated MIDJA 1 Biomarker data file as follows:

1. Dates – dates continue to be presented as separate month and year variables.
2. Times – in the original MIDJA 1 Biomarker data times were reported in a 12-hour clock SPSS time format across 3 variables indicating Hours, Minutes and AM/PM. *That convention was modified in MIDUS*, thus to maintain consistency the MIDJA 1 Biomarker time variables have now been converted to a 24-hour clock (i.e. day runs from midnight to midnight and is divided into 24 hours, indicating the number of hours since midnight, from 0 to 23). The time variables are also formatted as 4 digit SPSS Restricted Numeric which allows leading zero's to be displayed. Thus, 1:00 a.m. appears in the data as '0100', while 10:00 p.m. as '2200'.
    a. Time variables in this format are found in:
        i. The Pittsburgh Sleep Questionnaire (PSQ) data
        ii. The following times included in the Clinic data:
            1. Time of last meal
            2. Time blood sample was collected
            3. Times that specific sample collection and storage tubes were centrifuged or frozen.
        iii. Saliva Sample Collection Times

SPECIFIC ISSUES BY COMPONENT OF THE PROTOCOL

Biomarker SAQ

A majority of the items in the MIDJA 1 Biomarker SAQ were taken from the MIDUS 2 Biomarker (Project 4, P4) Medical History and SAQ. Of the remaining items some were taken from the MIDUS 2 Survey (Project 1, P1) SAQ. Some of the MIDUS items were modified slightly to accommodate cultural differences, while more substantial changes were made to others. In addition the Biomarker SAQ includes a number of measures that are unique to MIDJA (e.g. Ikigai, work situation). These items are highlighted in the color-coded "Roadmap MIDJA-MIDUS Biomarker (SAQ & Clinic)" file which also specifies the variable name and label for the corresponding MIDUS items as appropriate. In addition, users of this data should note:

1. The SAQ also included open-ended questions or requests to 'Please Specify' or 'Please Describe' when the respondent gives a response in the category "Other". This text was entered in Japanese and has been translated into English. Much of this text will eventually be coded and converted to categorical variables to facilitate analysis.
2. The first section contains a list of symptoms & conditions the participant may have had. An error was made when creating the variables for this section, such that the variable names jump from J2Qcc to J2Qee (i.e. "dd" was skipped). At the time the error was discovered, the information was embedded in multiple documents, thus the variable naming was not changed.
3. Variables corresponding to question set 53 (items 1-17) have been dropped from the data file. An error was made in formatting the questionnaire and the data are not useable.

The users of the data should also note the following differences between the MIDJA and MIDUS items:

1. Primary & Secondary Control Items (J2Q49A-H) response options are in the opposite direction from the MIDUS items. These were reverse coded and relabeled as

appropriate for scale construction. See the MIDJA Biomarker Documentation of Scales and Constructed Variables for details.

2. Biomarker SAQ question text and/or response options for a few items (see below) were modified to reflect cultural differences between Japan and the US. In some instances the MIDJA and MIDUS data for these items are sufficiently different that the users will need to examine both sets of items and choose a method of integration that is most appropriate for their analyses. These items are also highlighted in **light** or **dark** green in the color-coded version of the SAQ and the Roadmap file. The affected items include:

    a. Colon Cancer: MIDJA item J2Q2B2 & MIDUS item B1PA28C. In MIDUS this item is "Colon or rectal cancer".

    b. Spielberger Trait Anxiety items: MIDJA items J2Q44a-t, J2QTA_AX and MIDUS items B4Q7a-t, B4QTA_AX. Value labels are somewhat different.

    c. Spielberger Trait Anger items: MIDJA items J2Q45a-o, J2QTA_AG, J2QTA_AT, J2QTA_AR and MIDUS items B4Q6a-t, B4QTA_AG, B4QTA_AT, B4QTA_AR. Value labels are somewhat different.

    d. Nutrition Assessment Items: MIDJA items J2Q27A-J2Q32 and MIDUS items B4H17AF – B4H21. MIDJA items were modified to reflect dietary differences (i.e. consumption of small fish as a source of calcium, etc.) as noted in the Roadmap file.

    e. Sleep assessment: Variables indicating the participants 'usual bed time' and 'usual getting up time' are formatted differently at MIDJA 2, compared to the MIDJA 1 variables (J2Q7, J2Q8) and MIDUS variables (B4S1 and B4S3). Users may need to reformat these variables to be consistent across projects.

    f. Life Events: Variable J2Q41K indicates if the individual ever experienced the death of a parent. Some participants checked the box and the reported information about both parents in the space for recording "At what age(s) did this happen?". There is no way for us to appropriately separate the information reported at MIDJA 1 into specific responses about mother and father, but that data can be made available to individual users upon request.

Additional details about merging MIDJA Biomarker SAQ and MIDUS data for comparative analysis can be found in the "Guide to Merging MIDJA Biomarker and MIDUS Data".

Clinic and Lab Data

This section identifies issues associated with data and tissue samples collected during the clinic visit. Details about data collection and processing can be found in the "Clinic Visit Documentation" file.

1. Waist-Hip Measurements: The protocol (see Clinic Visit Documentation, Section B) requires that waist measurements be made directly on the skin or over a single layer of clothing (i.e. under garment). Similarly it requires that hip measurements be made over a single layer of clothing. Project staff noted instances where the protocol was not followed or if there was an unusual circumstance (e.g. pregnancy). Categorical codes

were created based on these comments and the variable (J2CHIPCM) is included in the data file.

2. Blood sample collection and processing: MIDJA Biomarker clinic visits are completed throughout the day, thus the blood draw is non-fasting. The results of some biomarker assays may be affected by food or drink consumed by the participant prior to their arrival at the clinic, thus, project staff also recorded the day and time of the last meal along with details about the timing of blood sample collection and processing. These administrative variables are described below along with additional computed variables that researchers may want to use as controls when working with these data. Details about formats for time variables are provided above along with an example.

3. Additional details about blood sample collection and processing can be found in Section C of the "Clinic Visit Documentation" file.
    a. Time Since Last Meal:
        i. J2CLMDAY – On what day did the respondent eat last?
        ii. J2CLMT– the time of the last meal eaten by the participant

    b. Blood Sample Processing Times: Sometimes assay results are affected by the amount of time between blood collection, centrifuging, and freezing. Thus project staff also recorded these times. The administrative variables are listed first followed by computed lag variables:
        i. J2CBLD: Blood sample collection status. This variable indicates whether a complete, partial, or no blood sample was collected.
        ii. J2CBLDT: Time of Blood Sample Collection
        iii. J2CCCT: Time Citrate Tube was Centrifuged
        iv. J2CCSST: Time SST Tube was Centrifuged
        v. J2CFCT: Time Citrate Tube was Frozen
        vi. J2CFSST: Time SST Tube was Frozen
        vii. J2CLMBLD: Lag time in hours from last meal to blood sample collection
        viii. J2CBLDCTC: Lag time in minutes from blood sample collection to Citrate tube (fibrinogen, CRP assay) centrifugation
        ix. J2CBLDSSC: Lag time in minutes from blood sample collection to SST tube (all other blood assays) centrifugation
        x. J2CBLDCTF: Lag time in minutes from Citrate tube (fibrinogen, CRP assay) centrifugation to time the tube was frozen
        xi. J2CBLDSSF: Lag time in minutes from SST tube (all other blood assays) centrifugation to time the tube was frozen

    NOTE: Timing and lag variables are included in the MIDJA data so researchers can control for possible effects related to how recently the participant ate, delays in processing etc. Such variables are not included in the MDUS Biomarker data because the samples were collected as part of an overnight hospital stay thus timing was more constrained (i.e. blood samples are fasting draws, etc.)

4. Blood Assay Results: Additional details about assay protocols and assay sensitivity can be found in Section D of the "Clinic Visit Documentation". In particular, this documentation describes corrections made to HA1c values, HDL Cholesterol and the Ratio Total/HDL Cholesterol to facilitate cross-cultural comparisons. Please review this information before working with this data.

The following may also be helpful in working with these data:

a. Blood assay results may be missing if a partial sample, or no sample, was collected. This can be determined by looking at the variable J2CBLD which indicates if a complete, partial or no sample was obtained.
b. Sometimes lab values are reported as ">" or "<" some value. When this occurs, the reported value is replaced with a value 'one unit' below the minimal or maximal detectable score. For example:
    i. If the lower limit was <1.0, then we could change all of those scores to .9
    ii. If the highest possible score was 120 for a particular test, and was not normally reported with decimal values, then all the >120 would be converted to 121.

    Extremely high and low values, therefore, are curtailed. Consequently the variance on the tails of the distribution is truncated. This is only problematic if a high percent of values fall in this category.
c. Variable names for lab assays performed at Syowa begin with the unique 3 character set 'J2C' and the corresponding labels include the phrase "Tokyo Lab".
d. Variable names for lab assays performed in the U.S. begin with the unique 3 character set 'J2B' and the corresponding labels include the phrase "Biocore".
e. Variable names for assays values that have been adjusted to MIDUS values begin with the unique 3 character set 'J2B' and the corresponding labels include the phrase "MIDUS adjusted".

5. Assay Values: the Assay Documentation describes corrections applied to HA1c, HDL Cholesterol and the Ratio of Total/HDL Cholesterol to compensate for differences in assay methods as well as changes to assay methods over the course of the MIDUS 2 P4 Biomarker data collection.
    a. When doing comparative analysis, investigators should only use the MIDJA assay variables that correspond directly to the MIDUS values.
        i. These variables begin with the unique 3 character set 'J2B'.
        ii. See the MIDJA BioAssay Documentation for more information.

Saliva Collection and Cortisol Data

The MIDJA Saliva collection protocol parallels MIDUS 2 Project 2 (Daily Stress Study) saliva collection protocol. The primary difference is that MIDJA collected 3 samples per day (30 minutes after waking, midday, and evening). The Daily Stress project obtained 4 samples, three at the same time as MIDJA, plus an initial sample collected at waking (before getting out of bed). To facilitate analysis the following administrative variables were created:

1. The following variables provide information about saliva sample collection:
    a. J2SSAL: Did R provide any saliva samples?
    b. J2SCVSC1: Lag in Days: from Clinic Visit Date to Saliva Collection Start Date
    c. J2SSCSEQ: Saliva Sample Collected on 3 Consecutive Days?

2. The following variables provide information about the quality of the samples collected (i.e. was a valid cortisol value obtained for any samples on a given day?)
    a. J2SCDAY1: Did R Have Any Valid Saliva Sample on Day 1?
    b. J2SCDAY2: Did R Have Any Valid Saliva Sample on Day 2?
    c. J2SCDAY3: Did R Have Any Valid Saliva Sample on Day 3?

3. The file includes data about the time that the samples were collected. These times are also reported as pairs of variables (hour, minute) as noted for the blood samples above.

Details about the saliva cortisol assay and sensitivity can be found in Section D of the "Clinic Visit Documentation".

Individuals interested in doing comparative analysis of MIDJA and MIDUS saliva cortisol data should see the publicly available Daily Stress (Project 2) data and documentation at: http://www.icpsr.umich.edu/icpsrweb/NACDA/studies/26841?archive=NACDA&q=MIDUS

In a few instances participants did not provide saliva samples at the prescribed times. The table below contains comments provided by these individuals to explain deviations from the prescribed protocol. Prior to beginning analyses investigators may want to examine the data for the following individuals to determine if they should be included or not.

MIDJA_IDs	Comments
20134	Day 1 – Saliva collected after lunch
21507	Day 1 - washed artificial teeth by water 30 minutes before taking saliva
22133	Day 3- Saliva collected 30 minutes after breakfast.
23115	Saliva collected after lunch (Day not specified).
24832	Day 2 – Saliva collected after lunch
25671	Day 1 morning and midday sample collection times are the same (11:00 am)

Medication Data

The MIDJA Biomarker data includes details about the medications participants are taking at the time of the clinic visit. Specifically information is recorded about the following:

- Prescription Medications
- Quasi Medications (i.e. non-prescription medications) – includes other herbal or homeopathic medications
- Medication Allergies

Details about collection and processing of these data are provided in Section E of the "Clinic Visit Documentation" and also the Documentation for MIDUS and MIDJA Medication Data.

Users of the medication data should be aware of the following:

1. Some information about dosage and frequency of taking a medication was recorded in Japanese as "Other Specify". This text was translated into English and coding was pending when the MIDJA 1 Biomarker data was originally released. As part of the

current update this text was used to clarify the dosage and frequency data where appropriate.

2. In the U.S. a distinction is made between Over-The-Counter (OTC) non-prescription medications and supplements, herbals, etc. that are considered 'Alternative' medications. All of these medications are included in the category "Quasi" medications in Japan. Thus, there are only two sets of medication variables in the MIDJA data "Prescription" and "Quasi".
3. The MIDJA medication data includes the following administrative variables:
    a. J2MPMD: Taking Prescription Medication?--YES/NO
    b. J2MPM: Prescription: Number of prescription medications
    c. J2MQMD: Taking Quasi Medication?--YES/NO
    d. J2MQM: Number of Quasi (non-prescription) medications