

IPUMS MICS web exercise: Data on maternal health care

(women age 15-49 as the unit of analysis)

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Exploring the IPUMS MICS website

On the IPUMS MICS website (mics.ipums.org), go to the "Select Data" page and choose "Women" as the unit of analysis. Women-level variables related to antenatal and maternal health are accessible under the "Maternal and newborn health" tab in the variables drop down menu. Answers are at the end of the exercise (page 3).

1a. What variable could you use if you are interested in whether a woman received antenatal care from a skilled provider during her last pregnancy?

1b. What kind of providers are considered skilled?

2a. The variable BIRTHSIZE reports the woman's description of the size of her last-born child at birth. Hint: This variable is related to the delivery care of the child.

Click on that variable name and select the Description tab to bring up the variable description. The Universe tab for BIRTHSIZE reports which women were asked this question. The most common universe is "Women age 15-49 with a live birth in the last 2 years." What samples have a different universe, and in what ways are the universes different?

2b. Under the Codes tab for BIRTHSIZE, click on the "Case-count view" option. How many women in the Fiji 2021 sample reported their child was "very large" or "very small"? What categories might you combine if you were concerned about small sample size for these categories?

3. BIRTHWEIGHT provides an alternative measure of the last-born child's size at birth. Look at the Codes and Description pages of that variable. What are the advantages of this variable, compared to BIRTHSIZE? What are the disadvantages?

4a. In the United States, poorer birth outcomes, such as children with low birthweight or fetal alcohol syndrome, are often tied to health behaviors such as smoking cigarettes or consuming alcohol during pregnancy. Examine the case counts for the variables CIGEVER (ever smoked cigarettes) and ALCOHOLEVER (ever drink alcohol) and indicate whether cigarette smoking and alcohol consumption are common for women in the countries included in IPUMS MICS (so far as you can tell for the samples included in those variables). Hint: Use the "Search" option to locate these variables quickly.

4b. What other variables related to cigarettes and alcohol consumption would you want to consider when looking at these health behaviors during pregnancy?

5. Open-ended questions

a. What variables would you choose to identify the socio-economic status of a woman? Examine the variables available under the "Household Wealth Index" and "Education" topics. These cover a variety of

measures, including those relating to household wealth (based on household possessions and housing quality) divided into quintiles (WINDEX5) and education.

b. Maternal health care and delivery might be affected by or have effects on other areas of women's health and well-being. Explore other topic areas on the IPUMS MICS Select Data page for Women and frame a hypothesis about some relationship between an aspect of maternal health and a variable from another topical area.

For example, how might the place of delivery (DELPLACE), such as outside a medical facility, be associated with the likelihood that a woman has experienced postnatal care for herself and the baby (Postnatal Care menu)? Do women who have access to a mobile phone or internet (MOBILEWM, INTEVER) have higher usage of family planning (CPEVER, CPCURR)? Frame a hypothesis linking some aspect of maternal health to another topic and write it down, specifying the variables you would use.

Answers to maternal health website exercises:

1. Variable indicating whether the woman received antenatal care for her last pregnancy is ANCARESKILL. This variable is found in the "Maternal and Newborn Child Health" tab in the subcategory "Antenatal Care". This variable is reported for women who had a pregnancy in the last two years (typically).

1a. Looking at the comparability tab, typically skilled providers are doctors, nurse/midwives, or auxiliary midwives.

2a. BIRTHSIZE is found in the "Maternal and Newborn Child Health" tab in the subcategory "Delivery Care".

The major universe difference for BIRTHSIZE is that some countries limit to ever-married women. For example: Afghanistan, Algeria, Bangladesh, Djibouti, Egypt, Iraq, Lebanon, Mauritania, Mozambique, Nepal, Pakistan, Qatar, Somalia, Syria, Tunisia, and Yemen.

Also, note a different reference period of five years before surveys such as Egypt 2013 and Sierra Leone 2017.

2b. 67 very large and 19 very small last-born births in Fiji 2021. It may be useful to combine "very large" responses into "larger than average" (code 2) and "very small" responses into "Smaller than average" (code 4) to handle small numbers of cases or incorporate samples with fewer responses, such as Tuvalu 2019.

3. BIRTHWEIGHT reports the weight of the child in kilograms and is reported as a numeric value. If you were to download this variable into a statistical software, the format of the variable would be "double".

Advantages and disadvantages of using BIRTHWEIGHT rather than BIRTHSIZE answer: BIRTHWEIGHT is a less subjective measure and allows the data to be recoded into standard categories such as "low birth weight" (under 2500 grams), "very low birthweight" (under 1500 grams), and "extremely low birth weight" (under 1000 grams). The disadvantage is that it is only available for infants who were weighed at birth (see variable KIDWEIGHTBIRTH). This variable may also be subject to recall error and coding errors that result in implausibly large or small weights.

4a. Smoking and alcohol use vary across countries and therefore may lead to maternal health issues that are very dependent on the location. For example, alcohol consumption in Eastern European and South Asian countries appears to be common (for example, see Belarus 2019, Laos 2017, Ukraine 2012). However, for African countries such as Malawi 2019 and Zimbabwe 2014, it is much rarer that a woman has ever drunk alcohol.

4b. The variables CIGEVER and ALCOHOLEVER report if a woman has ever smoked a cigarette or drunk an alcoholic drink in her lifetime. However, this may not reflect her behaviors during pregnancy. By looking at CIGCURR, CIG24HR, and CIGLASTMO you can better understand the woman's current or recent smoking behavior. Likewise, ALCOHOLLASTMO and ALCOHOLDRINKNUM can represent how much alcohol the woman drank in the last month.