**Married or not? Using Cross-tabulations to explore marital status patterns over time.**

Marital status is an important characteristic that can tell us about the family formation patterns of individuals in a population. By tracking marital status changes over time and comparing the data to research on the cultural, individual, and familial shifts of the time, students will engage in basic data analysis and interpretation practice while reinforcing reading comprehension skills.

**Purpose and Rationale:**

This module is designed for use in a family science course such as contemporary families or family demography. Students in this class are not assumed to have completed statistical or research methods training, so this exercise does not rely on specific statistical ability or acumen.

 At the conclusion of this exercise, students should be able to:

1. Accurately interpret data in a cross-tabulated table.
2. Explain the role of variables (dependent, independent, and control) in a cross-tabulated table.
3. Create an accurate and easily interpretable cross-tabulated table, explaining design choices.

Substantive knowledge: this lesson will be used early in the course to help students visualize changes to family structures through exploring trends in marital status over time, paying special attention to trends by age and sex. After having read Chapter 2, “Pathways to Family Formation” in *Families in America* (Brown, 2018), students should be familiar with major trends in marriage. Seeing these trends in a visual format, particularly in tables they generate themselves, may help cement this knowledge and encourage new questions.

**Instructions:**

1. Assign Chapter 2, “Pathways to Family Formation” in *Families in America* (Brown, 2018) as pre-class reading. Tell students to bring laptops to the next class period.
2. In class, ask students to respond to the prompt “what do you remember about what has changed about marriage and romantic relationships since 1950?” You could do this in a think-pair-share activity, journal response, shout-out discussion, or another open forum. This should generate some responses about age at marriage, marriage rates, or responses regarding race, gender, cohabitation, and divorce.
3. Ask students to complete 4 question pre-test (listed below). You may choose to program this into Qualtrics, Microsoft Forms, Canvas, or another tool, or print it or have students fill out answers on a notecard while you show the questions on screen.
4. Ask students to open Webchip at <https://ssdan.net/datacounts/webchip/> or using a QR code or link on LMS. Open page on classroom computer as well.
5. On the left side of the screen, under “Collection” choose “acs2016trend” and under “Dataset” choose “Marital.” Explain that these data come from the US Census and American Community Survey and are weighted to represent the US population. If necessary, explain Census, ACS, and weighting.
6. Explain that this dataset contains 5 variables – Year, Race, Sex, Age, Marital. Note the value of Race (Black and NonBlack) and Marital and what impact measurement choices and limits can have on interpretation.
	1. **Marital**
		* CurMrrd (All persons married at the time of the census)
		* Widowed (Windows and widowers who have not remarried)
		* Divorced (Legally divorced persons who have not remarried)
		* Seprated (Includes persons legally separated or otherwise absent from their spouse because of marital discord)
		* NevMrrd (Includes all persons who have never been married, including persons whose only marriage[s] was annulled)
7. Show students the steps to generate a cross tabulation with *Year* as the row and *Marital* as the column. First, use the Generate Table > Percent Down to generate a table. Ask students to help you interpret the table. After giving them a chance (some may realize right away), point out the problem with the percent down option and why it doesn’t tell the story they’re looking for.
8. Generate a table with Percent Across instead. Talk with students about the interpretation of the table – how can one look down the column to understand changes to a status over time?
9. Ask students to compare this table to their chapter reading – since different measures were given throughout the chapter (marriage rate, for example, vs. percent married at a given time), students may need to list out the various trends described and compare to the percent data in their table. **Hint**: to continue conversation about measurement choices, ask students how the cohabitation trends discussed in their readings are showing up – can we differentiate cohabitation in these data?
10. Introduce the idea of Control Variables, with Race as the example. Re-generate the table controlling for Race. Ask students to think about race in their reading – do these patterns align?
11. **Bonus:** if time allows, encourage students to use Age as a control variable and make interpretations to compare to the readings. Depending on how advanced students are in demographic knowledge, ask them to make predictions before seeing the table based on age structure changes and other knowledge they may bring to the class.
12. Administer post-test questions (shown below – pre-test questions + final question).

**Pre-test Questions** (correct answers: c, a, a, open)

1. Which of the following statements is correct regarding marital status changes between 1950 and 2016?
	1. Marriage rates have been falling precipitously the entire time.
	2. Marriage rates were higher at the end of the period than they had been throughout.
	3. Marriage rates were relatively stable until the 1970s, when they began to decline.
	4. Marriage rates were relatively stable until the 2000s, when they began to decline.
2. In the American Community Survey, the “never married” status includes singles, cohabitors, and LATs. Which of the following statements is most likely correct based on what you read about singles, cohabitors, and LATs?
	1. The proportion of “never married” adults in 2016 is higher than in 1950.
	2. The proportion of “never married” adults is roughly equal between 2016 and 1950.
	3. The proportion of “never married” adults in 2016 is lower than in 1950.
3. In the cross-tabulated table below, is *year* being used as the row variable, column variable, or as a control variable?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Currently Married** | **Widowed** | **Divorced** | **Separated** | **Never Married** |
| **1950** |  |  |  |  |  |
| **1960** |  |  |  |  |  |
| **1970** |  |  |  |  |  |
| **1980** |  |  |  |  |  |
| **1990** |  |  |  |  |  |
| **2000** |  |  |  |  |  |
| **2008** |  |  |  |  |  |
| **2016** |  |  |  |  |  |

* 1. The row variable
	2. The column variable
	3. A control variable
	4. Not enough information to tell
1. How confident do you feel in interpreting cross-tabulated data?
	1. Completely confident
	2. Somewhat confident
	3. Not too confident
	4. Not confident at all
	5. What’s cross-tabulated data?

**+ Final Question for Post Test**

1. What is one trend that stands out to you from the table we created in class together? This may be something that surprised you or something you’d like to learn more about, for example.

[open answer]