

The Explosion of Teenage Motherhood: Myth or Reality?

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Introduction

This exercise was developed for use in an introductory psychology course. The exercise was presented as part of a unit on research methodology and statistics. The exercise was completed in a 100-minute class period.

Learning Objectives:

Skill

After using this module, students will gain skills in:

- To discover the benefits of examining real research and data to answer questions about human behavior (rather than relying on hearsay, conventional wisdom, common sense, or speculation, all of which are subject to biases that invariably lead to inaccuracies in information and judgment).
- To practice interpreting percentages, frequencies, and numbers presented in tables.
- To discuss social science research issues such as sampling, random sampling, and causal inference.
- Creating visual tools representing quantitative data in the form of charts or graphs.

Substance

- To discuss the topic of teenage motherhood.

Outline of the exercise

1. Introduction: Students were told that they would be completing an exercise designed to help them appreciate the value of research and data. They were told that they would be shown actual data from the U.S. Census.
2. Worksheet for students: Students were each given a worksheet (see copy attached) to complete in small groups of 4 to 5 students each. Students were instructed to complete only the sections of the worksheet in which they had to make estimates.
3. Discussion of students' estimates: Students from the small groups volunteered some of their estimates. Where appropriate, common trends across groups as well as variability of estimates were noted.

4. Computer demonstration using WebCHIP and SSDAN datasets: The computer screen was projected at the front of the classroom for all students to see. The instructor opened DataCounts! and located the dataset (TNFM5090), explaining that it contained U.S. Census data that had been prepared by Population Studies Center at University of Michigan.
 - a. Go to <http://www.ssdan.net/datacounts>
 - b. Click on the “Data” in the menu bar
 - c. From there, click “Browse” on the left sidebar. Find “CUSTOM” in the drop-down box and select it.
 - d. Scroll down through the list of data sets until you find “TNFM5090.dat” Highlight and click “submit.”
 - e. You can also click [here](#) to launch the dataset in WebCHIP.
 - f. Generate Marginals to show all variables in the dataset and to describe percent across cross tabulations.
 - g. Each table was discussed, and students were given time to put the appropriate information on their worksheets to complete the sections on actual values.
 - h. Dataset “TNMR7090” was opened, and marginals and crosstabs were generated (using same instructions as above) to display statistics for item 6. (You can also click [here](#) to launch the dataset in WebCHIP.)
5. Comparison of estimates and actual values: In small groups, students compared their estimates to the actual statistics presented to them. Then each group of students prepared a paragraph to describe the information on teenage motherhood they had from the U.S. Census data.
6. Concluding discussion: Volunteers from small groups shared main points from their comparisons and the descriptions prepared in the small group.
7. "Minute paper": In the last 5 to 10 minutes of class, each student wrote a short reaction paper. Students were instructed to write a paragraph on their reactions to the exercise and what they had learned from it.

Comments on the exercise used Fall term 1996

I completed this exercise this fall term with two sections of General Psychology (n = 36, n = 32). When students first started working on their estimates, about a third of the groups in each section asked for help with the bar graph and/or pie charts. They seemed to have difficulty displaying their estimates in those forms. At the beginning of the computer demonstration, many students seemed puzzled by the numbers displayed, and I spent quite a bit of time

explaining the format of the crosstabs tables. I encouraged students to ask questions whenever anything was not clear. Students did not seem to "catch on" until the third crosstabs table was displayed. At that point, I noticed more talking among students as they started to recognize the meaning of the numbers themselves and then shared it with others in their small groups.

In discussion and the "minute papers," most students expressed their amazement at the difference between their estimates and the actual numbers or percentages. Many of them had overestimated the rate of teenage motherhood, some by a very large amount. In addition, many of them estimated that teenage pregnancy was a "black thing" (to quote a student's paper), and they were surprised to see the real numbers. Many students said that they thought it was a very good idea to see actual Census data, and one student said she wanted to see real data on other important issues such as the number of homeless people and the causes of their homelessness. While many students made positive comments about the use of real data, only a few made explicit comments in their minute papers about the use of the computer demonstration. Those comments are listed below.

"I hate any kind of math, but those tables really made sense to me."

"It was neat how we could see the actual percent right there on the screen. I wouldn't have believed it if I didn't see it with my own eyes."

"This was fun. You should bring in the computer again."

"I took some statistics in high school, and I liked the way you used the computer to show us stuff."

"It was interesting to compare the estimates and the actuals. I think I understand teen pregnancy better now. But class dragged for me because people kept asking the same questions over and over."

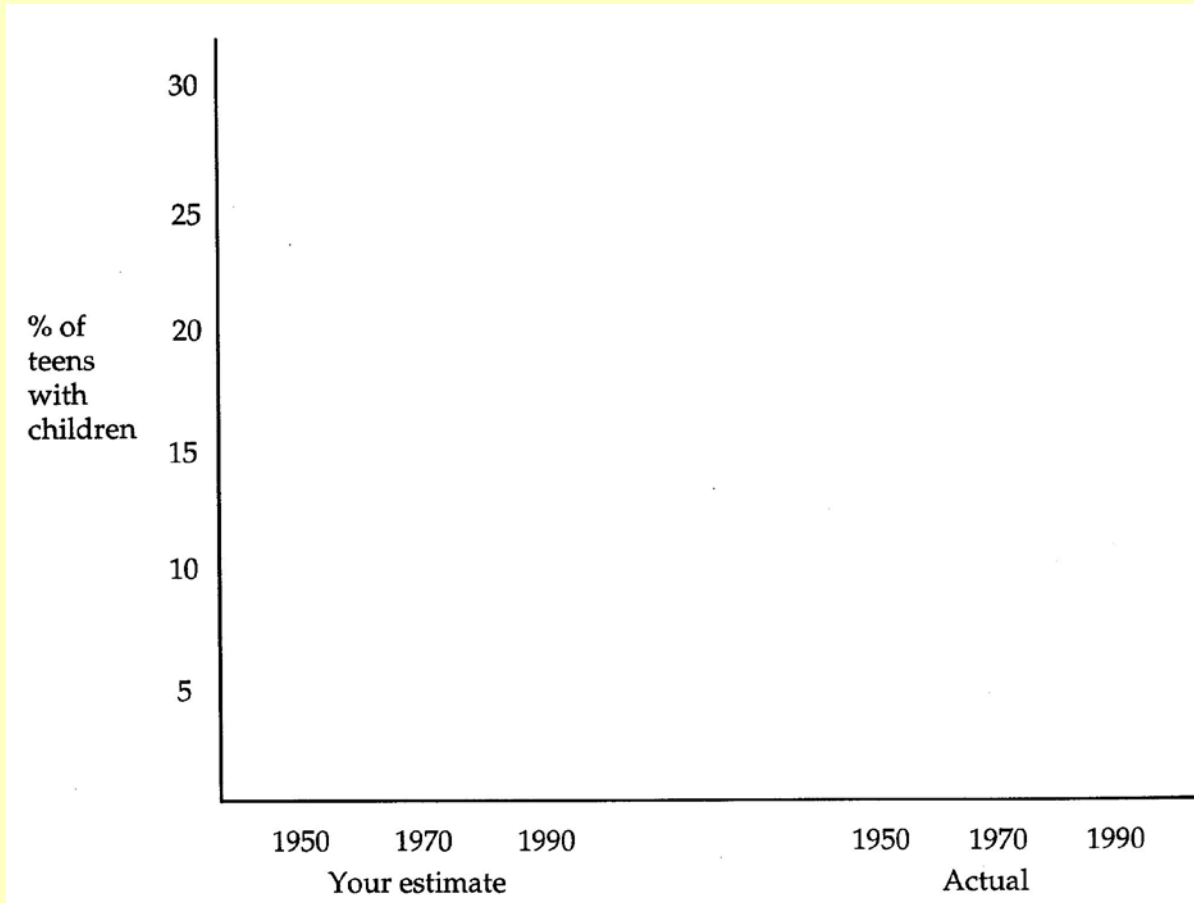
The last comment brings up a concern that I will have to address when I do the exercise again. Some students needed several repetitions of the explanations before they were able to understand the numbers, while others understood almost immediately. I encouraged the faster students to help their groups, but some of them didn't do this, and they looked bored after awhile. I plan to expand the unit and have students work more independently. That kind of format may allow me to provide extra items for those who finish quickly so they will be able to remain engaged.

Another problem with this exercise was time. The 100-minute class period was a little too short. Because the earlier parts of the exercise took so much time, I had to rush at the end to get everything done. I felt that we did not spend enough time on the concluding discussion due to lack of time. In addition, some students stayed a few minutes after the end of class to finish their minute papers. For one section, I felt that we had rushed so much that we hadn't covered some important points about the use of data and research. For this section, I used the first 15 minutes of the following class and read some students' minute paper remarks to raise those points that I thought were necessary for all students to think about.

Overall, I felt that the exercise was successful and effective. It gave students a chance to practice or acquire some quantitative skills. Given the students' comments, I believe that the exercise achieved its objectives. I am looking forward to expanding this exercise and using it in the future.

In-Class Worksheet: Teenage Motherhood

1. Over the last few decades, has there been an increase in the rate of teenage motherhood? In other words, is the percentage of teenage girls with children higher today than 20 or 40 years ago? Use the graph below, and draw a bar over each date to show your estimate of the % of teenage girls who had children in that year.



2. How many (give a number not a percentage) teenage girls had one or more children in 1950, 1970, and 1990?

	Your estimate	Actual
1950	1950	
1970	1970	
1990	1990	

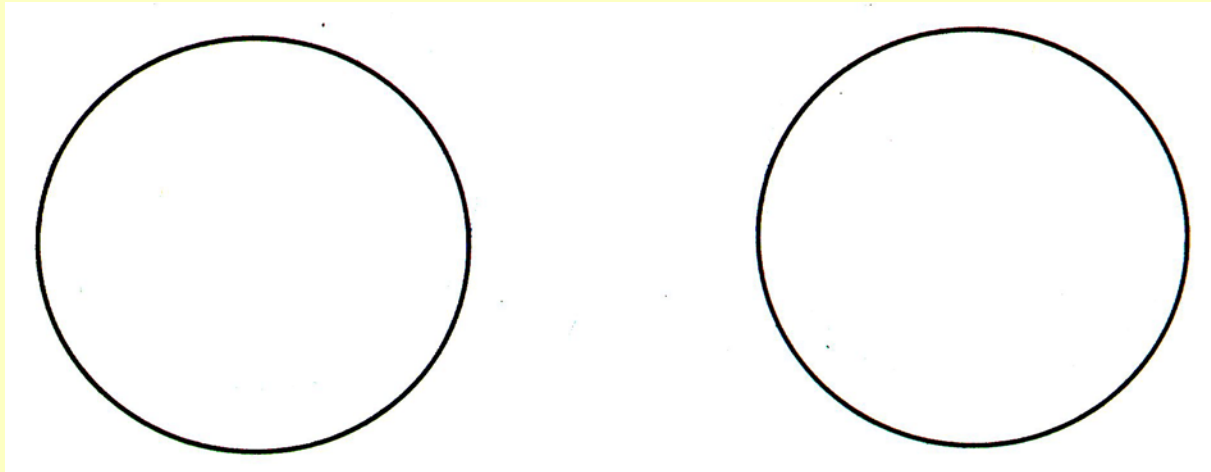
Please note: The remaining questions pertain to 1990 only.

3. Of all teenage mothers in 1990, what percentage are black and what percentage are not black? Complete the pie chart below to show your estimates.

Race of teenage mothers:

Your estimate

Actual



4. Of all black teenage girls, what % have one or more children?

Your estimate

Actual

Of all nonblack teen girls, what % have one or more children?

Your estimate

Actual

5. In 1990, how many black teenage girls had one or more children? Give a number, not a percentage.

Your estimate

Actual

In 1990, how many white teenage girls had one or more children?

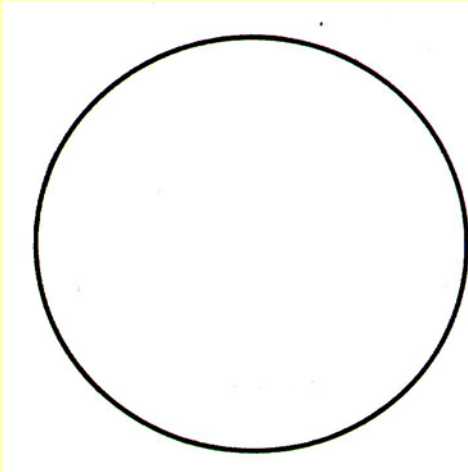
Your estimate

Actual

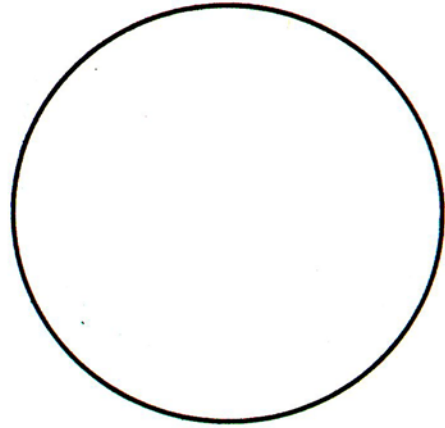
6. Teen motherhood and poverty

Of teenage girls who live in poverty or near poverty, what % have children and what % have no children? Complete the pie chart below to show your estimates.

Your estimate

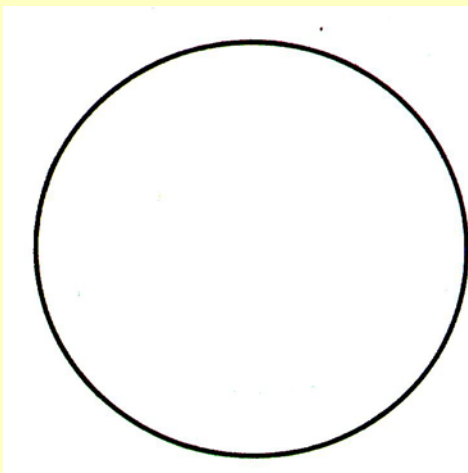


Actual



Of teens who do not live in poverty, what % have children and what % do not have children?
Complete the pie chart below to show your estimates.

Your estimate



Actual

