Education and region effects on Philippines teenage fertility in 1998*

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Abstract

Teenage fertilities induce health risks and life impacts on both young mothers and their children. Philippines, one of the countries that have the highest adolescent birth rates, the teenage pregnancy toll is still rising here. This paper uses data collected by the National demographic and health survey in 1998 to investigate how background characteristics affect the teenage fertility rates in the Philippines. Evidence has shown that most teenage mothers received less education and lived in rural areas.

1 Introduction

According to the World Health Organization, an estimated 12 million girls aged 15–19 years give birth every year in developing countries. There are at least 777,000 girls aged under 15 years becoming pregnant yearly. Young individuals are expected to give birth after they successfully step into adulthood since early fertility leads to social and health-related impacts. It is not hard to imagine the difficulties that young mothers would face as they are economically dependent. Moreover, in current society, pregnant teenagers are disadvantaged. Research has shown that it is more likely for them to experience violence within partnerships. Other than that, early fertility contributes to health risks such as hypertension, low birth weight, and a high probability of spontaneous abortion. Thus, it is necessary and important to find ways to reduce teenage fertility.

This paper uses data collected by the National Demographic and Health Survey to seek patterns in the background information of teenage mothers from the Philippines in 1998. Data related to fertility, child health, and family planning were reported in the DHS final report. We will use R(R Core Team 2020) to phase the Table 3.10 Teenage pregnancy and motherhood on page 45 of the pdf file to a useable data frame. By using appropriate graphs, we will analyze the relationships between teenage fertility and region, education level, and residence respectively.

Results indicate that the percentage of women who are mothers increased greatly from 0.3 for the 15-years-old girls to 17 for those who were 19. Differences in residence, region, and education level lead to quite different rates. In the Philippines, rural regions of Western Mindanao, Eastern Visayas, and Cagayan Valley had the highest proportions of early fertility. The level of education had a significant effect on this rate as well. Individuals who received more education understand more of the impact caused by early fertility. Thus, we could conclude that providing more access to education would be an efficient way to reduce teenage fertility.

The rest of the paper would be: Section “Data”: introduce the survey and data. Section “Results”: graphical presentation of results. Section “Discussions”: discussions on what we find. Section “Weaknesses and next steps”: talk about limitations involved in our analysis.

*Code and data are available at: https://github.com/zhongyuhuang/DHS_Analysis-.git

2 Data

Our data is collected by the Philippines National Demographic and Health Survey (DHS) in 1998. The DHS surveyed 13,983 women aged 15-49 nationwide by using questionnaires and interviews. It was designed to analyze potential trends in fertility, children's health, and family planning knowledge and use. We focus on the Teenage pregnancy and motherhood table on page 45 and phase it to a data frame from a pdf file.(Figure 1) The table summarized the percentage of teenage mothers with different background information. Mainly with these four characteristics: Age, Residence, Region, and Education.

I created five variables: BG_inf stores the background information of teenagers, PT_Mom stores the percentage who are mothers, PT_Prg stores the percentage who are pregnant with their first child, PT_bear stores the percentage who have begun child-bearing, and NumOfTeen stores the total number of teenagers in that category. Non-surprisingly, the rate of teenage pregnancy increased linearly with age(Figure 2). The percentages of teenagers who are mothers or pregnant in the different backgrounds are linked in some ways. We see that regions had high rates are more likely less urbanized and with less access to education.

Table 3.10 Teenage pregnancy and motherhood

Percentage of teenagers age 15-19 years who are mothers or pregnant with their first child, by selected background characteristics, Philippines 1998

Background characteristic	Percentage who are: Mothers	Pregnant with first child	Percentage who have begun child-bearing	Number of teenagers
Age				
15	0.3	0.2	0.5	624
16	0.8	0.8	1.6	613
17	3.6	1.4	5.0	589
18	7.8	2.6	10.5	602
19	17.0	4.2	21.3	497
Residence				
Urban	3.4	1.3	4.7	1,701
Rural	8.3	2.4	10.8	1,223
Region				
Metro Manila	2.8	0.9	3.7	605
Cordillera Admin.	2.3	2.3	4.6	46
Ilocos	3.3	1.3	4.6	147
Cagayan Valley	5.0	5.6	10.6	106
C. Luzon	5.1	1.0	6.2	289
S. Tagalog	7.2	2.7	9.9	360
Bicol	8.4	1.4	9.8	135
W. Visayas	4.6	1.0	5.6	233
C. Visayas	4.3	1.0	5.3	228
E. Visayas	8.5	3.5	12.0	102
W. Mindanao	8.3	4.4	12.6	112
N. Mindanao	7.0	1.2	8.2	106
S . Mindanao	6.4	2.3	8.7	206
C. Mindanao	5.7	1.3	7.0	98
ARMM	11.4	1.7	13.1	83
Caraga	7.8	1.3	9.2	68
Education				
No education	17.3	0.0	17.3	15
Elementary	11.5	4.4	15.9	471
High school	4.5	1.2	5.7	1,962
College or higher	3.0	1.5	4.5	476
Total	5.5	1.8	7.2	2,924

Figure 1: The original table in DHS final report

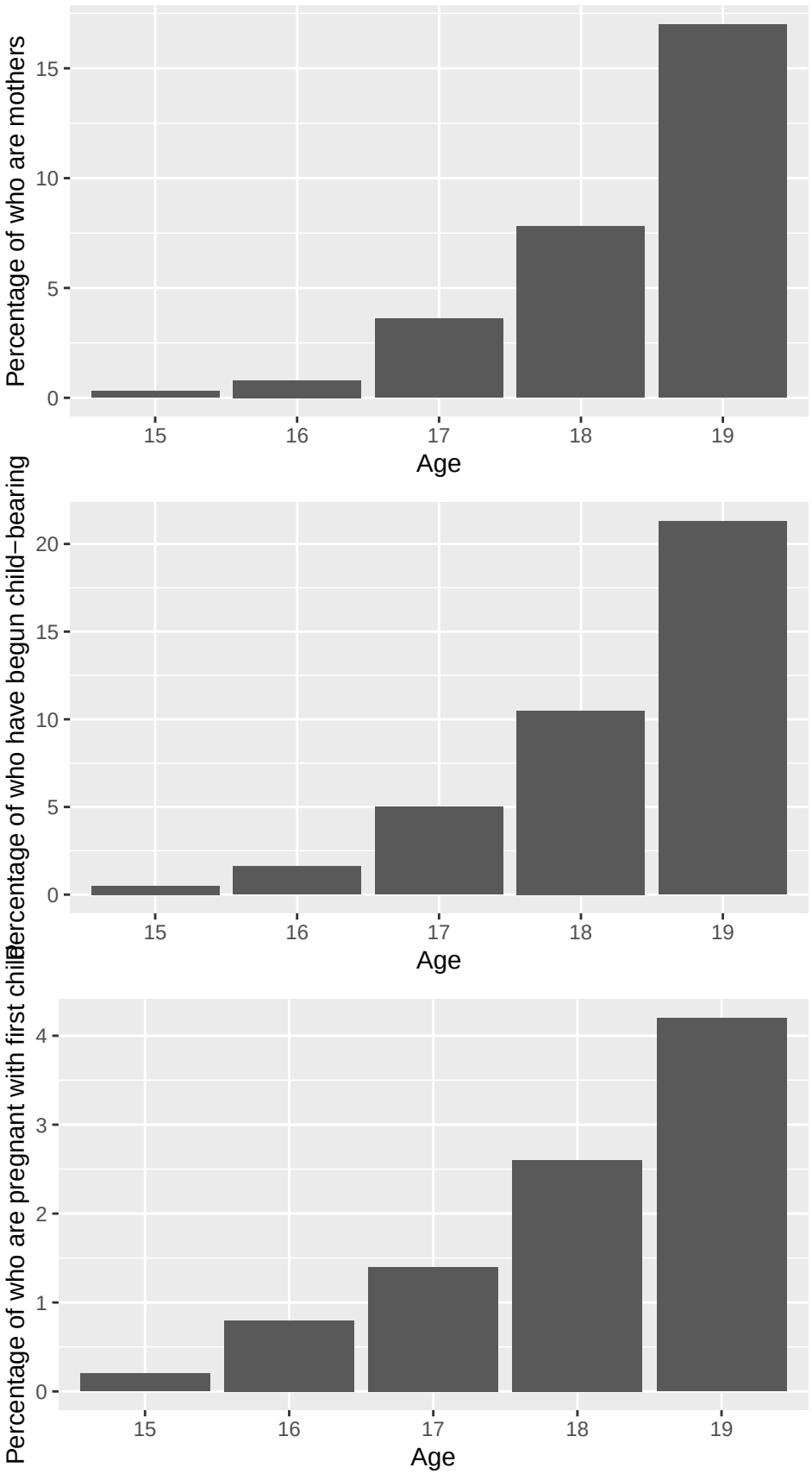

Figure 2: Percentage of teenage pregnancy and motherhood by age

3 Results

Our data is of penguins (Figure 3).

Our data is of penguins (Figure 4).

4 Discussion

4.1 First discussion point

If my paper were 10 pages, then should be be at least 2.5 pages. The discussion is a chance to show off what you know and what you learnt from all this.

4.2 Second discussion point

4.3 Third discussion point

4.4 Weaknesses and next steps

Weaknesses and next steps should also be included.

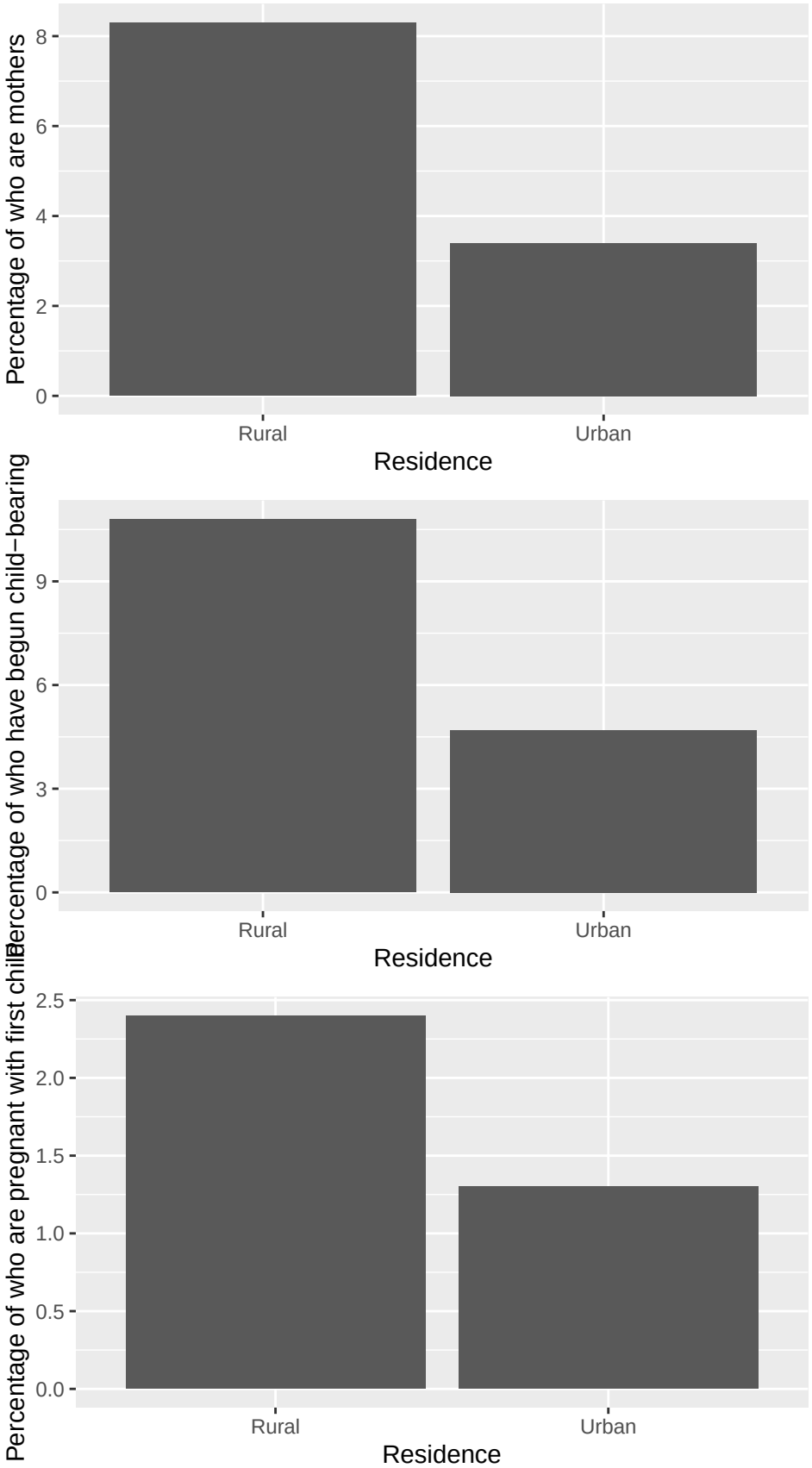

Figure 3: Percentage of teenage pregnancy and motherhood by residence

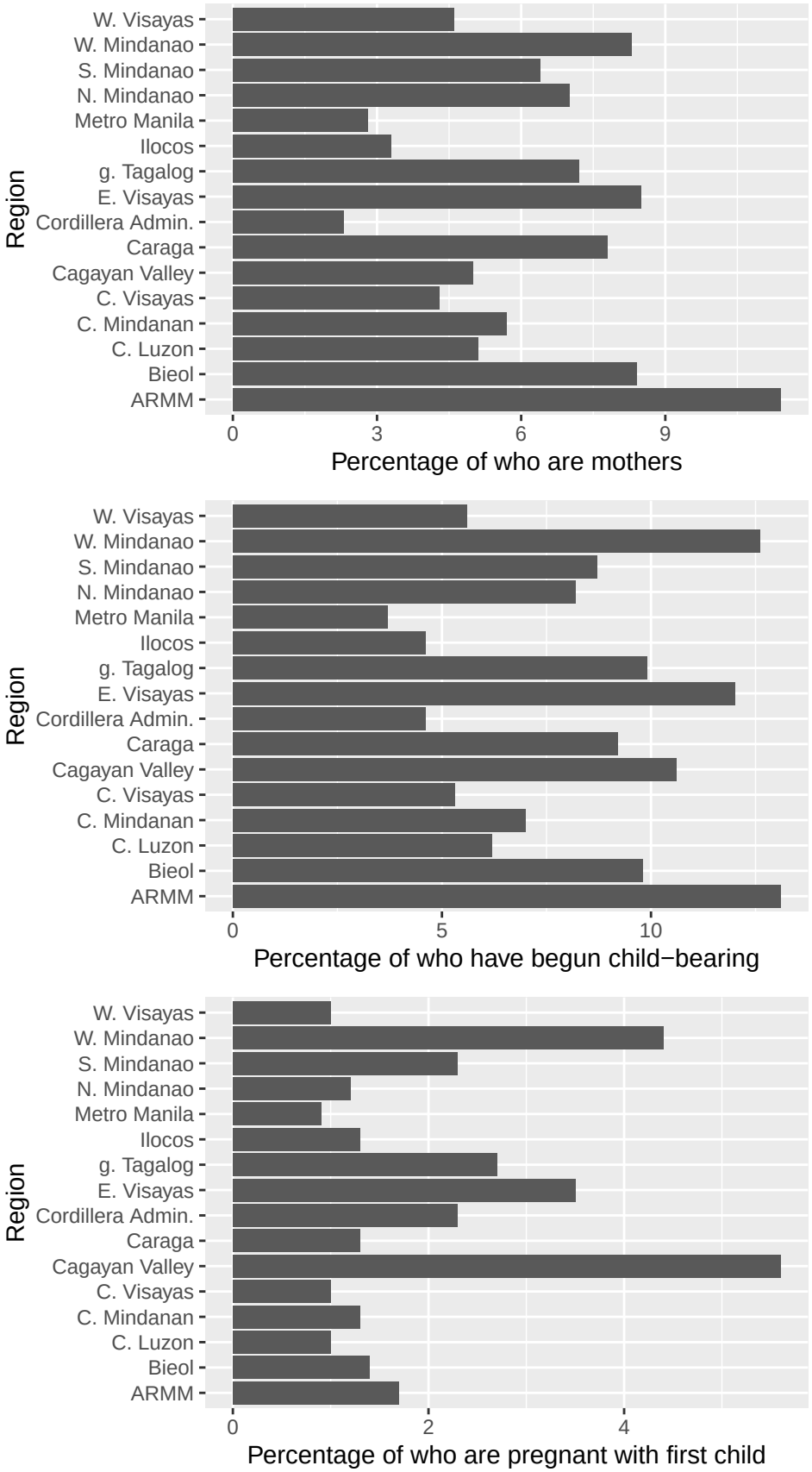

Figure 4: Percentage of teenage pregnancy and motherhood by region

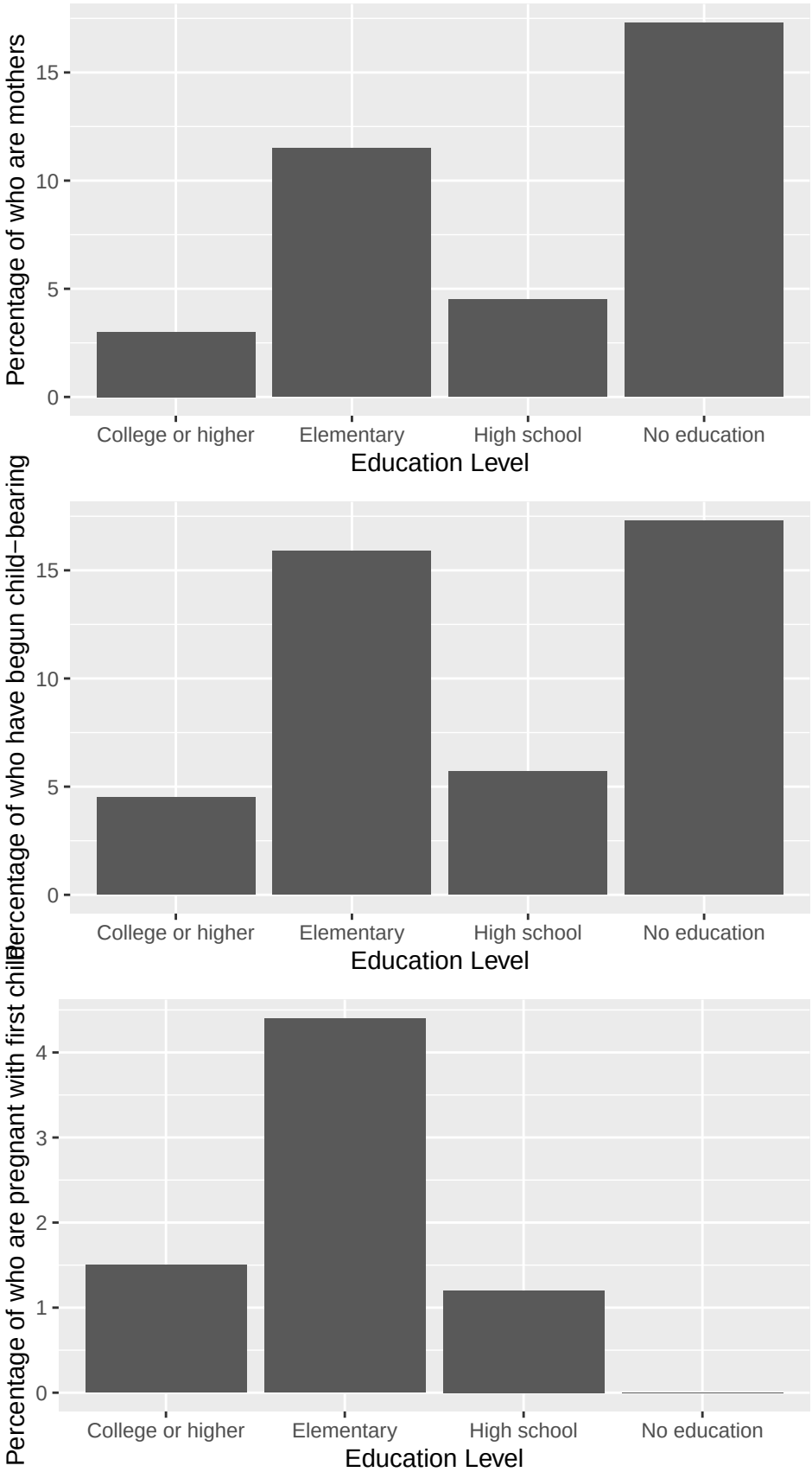

Figure 5: Percentage of teenage pregnancy and motherhood by education level

Appendix

A Additional details

References

R Core Team. 2020. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.