

Comparing Attitudes of Contraceptive Use and Pregnancy Outcomes Between Urban and Rural Areas

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Abstract

Despite the vast research on differences in sexual behaviors and comparisons of contraceptive use, little is known on how attitudes towards contraception use impact outcomes of pregnancy between metropolitan and nonmetropolitan areas. This study examines how demographic factors and sexual behaviors differ between metropolitan and nonmetropolitan areas to impact outcomes in pregnancy. An analysis is completed to understand the major drivers of pregnancy based on rural-urban residence. These findings offer insight into how metropolitan and nonmetropolitan residence should be considered in reproductive health practice and policy.

Objectives

To compare the attitudes towards contraception use and outcomes of pregnancy between metropolitan and nonmetropolitan areas using the National Survey of Family Growth (NSFG) as a nationally representative sample of women in the United States. This will also include observing across multiple surveys to assess changes in policy, behaviors, and practices over time.

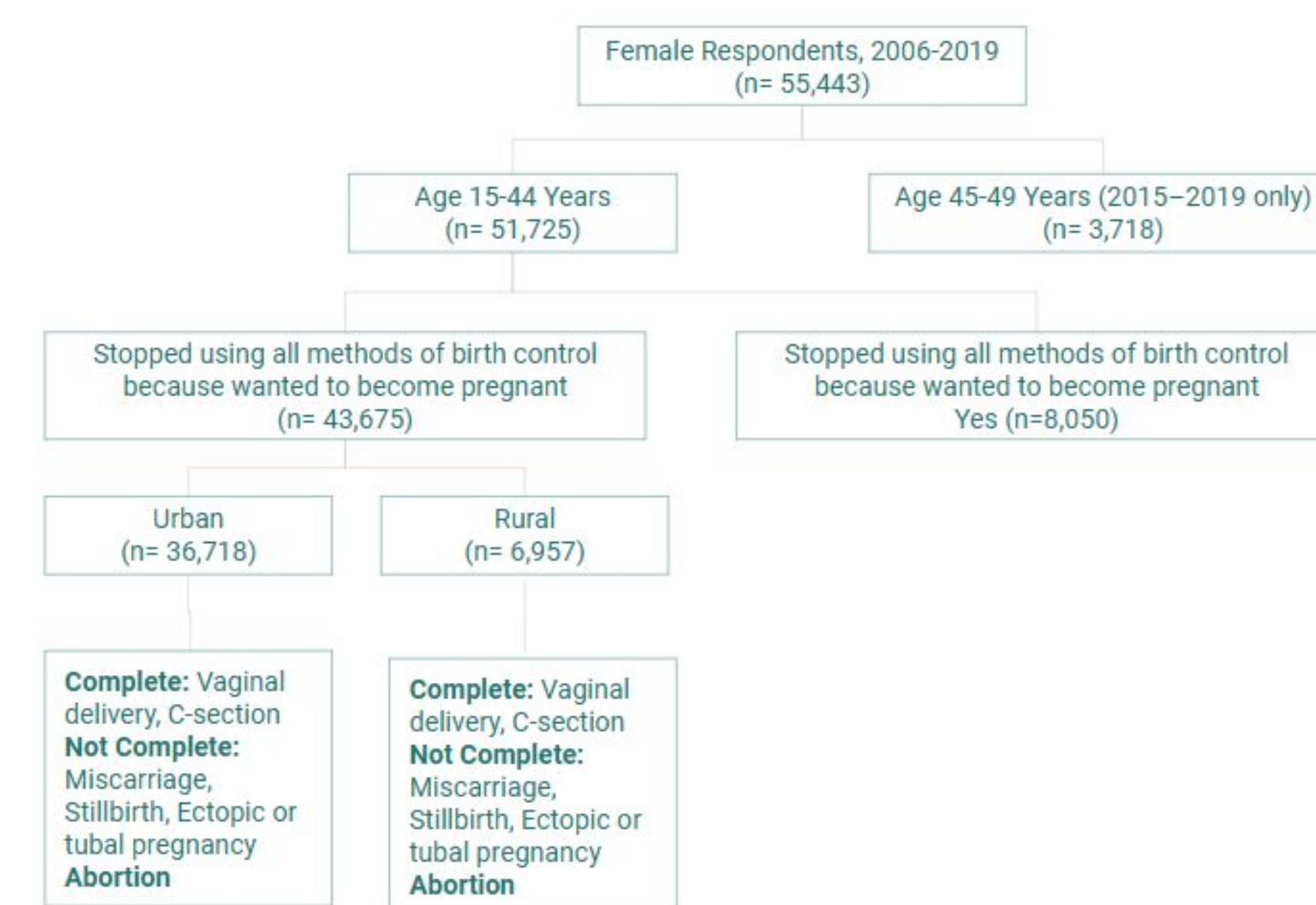


Fig. 1. Study population selection criteria, NSFG, 2006-2019, 2024.

Methods

- Our study will use the 2006-2019 NSFG, survey that represents women 15-49 years of age living in the United States (n= 55,443).
- The survey covers information on pregnancy, births, marriage and cohabitation, infertility, use of contraception, family life, and general and reproductive health.
- NSFG classified participants as either living in metropolitan or nonmetropolitan areas based on their residence using Metro Statistical Areas (MSA).
- Non-MSA areas are considered rural places. Survey data was used to estimate MSA and non-MSA residence, attitudes, and pregnancy outcomes.
- We excluded ages 45-49 years of age and those who stopped taking any form of birth control because the respondent wanted to become pregnant.
- The final study population was 43,675 respondents.
- The variables of interest included reasons did not use contraception, methods of contraception use, and wantedness of pregnancy.
- We conducted analyses with SAS 9.4 to perform descriptive statistics and calculate crude prevalence ratios.

Table 1. Demographic Characteristics of Urban and Rural participants (n=43,675). 2006-2019 National Survey of Family Growth, 2024.

Characteristic	Total		Urban		Rural	
	n	%	n	%	n	%
Total	43,675	100	36,718	84.07	6,957	15.93
Age at Interview						
15-19	820	1.88	678	1.85	142	2.03
20-24	4,523	10.36	3,721	10.14	802	11.54
25-29	9,360	21.43	7,799	21.24	1,561	22.44
30-34	10,872	24.89	9,144	24.90	1,728	24.84
35-39	9,548	21.86	8,176	22.24	1,372	19.72
40-44	8,552	19.58	7,200	19.61	1,352	19.43
Race						
Black	13,436	30.76	11,880	32.35	1,556	22.37
White	25,783	59.03	20,968	57.10	4,815	69.23
Other	4,456	10.20	3,870	10.55	586	8.40
Hispanic	11,489	26.31	10,623	29.18	866	12.44
Non-Hispanic	32,186	73.69	26,095	71.03	6,091	87.56
Religion Affiliation						
No Religion	8,809	20.17	7,409	20.18	1,400	20.13
Catholic	9,325	21.35	8,430	22.94	895	12.86
Protestant	22,563	51.66	18,303	50.10	4,260	61.01
Other Religions	2,978	6.82	2,576	7.01	402	5.80
Received Public Assistance in Prior Calendar year						
Yes	24,622	56.38	20,428	55.63	4,194	60.14
No	19,053	43.62	16,290	44.37	2,763	39.86

Results

Table 2. Contraception method used among Rural and Urban participants (n=6,886) 2006-2019 National Survey of Family Growth, 2024.

Method	Total		Rural		Urban		Ratio
	n	%	n	%	n	%	
Total	6,886	100	1,133	16.45	5,753	83.55	
No method used							
Complete	500	7.26	78	6.90	422	7.35	0.95
Not Complete	139	2.02	17	1.50	122	2.13	0.69
Abortion	95	1.38	19	1.68	76	1.32	1.16
Condom							
Complete	1,687	24.50	259	22.85	1,428	24.98	0.93
Not Complete	467	6.78	78	6.90	389	6.78	0.99
Abortion	372	5.40	59	5.21	313	5.46	0.88
Withdraw							
Complete	877	12.74	106	9.36	771	13.42	0.70
Not Complete	231	3.35	25	2.21	206	3.60	0.60
Abortion	150	2.18	13	1.14	137	2.38	0.44
Birth Control Pills							
Complete	1,611	23.40	323	28.51	1,288	22.39	1.29
Not Complete	453	6.58	95	8.38	358	6.22	1.31
Abortion	304	4.41	61	5.38	243	4.23	1.17

Fig. 2. Birth control usage among urban and rural individuals whose pregnancy resulted in an abortion (n=43,675) 2006-2019 National Survey of Family Growth, 2024

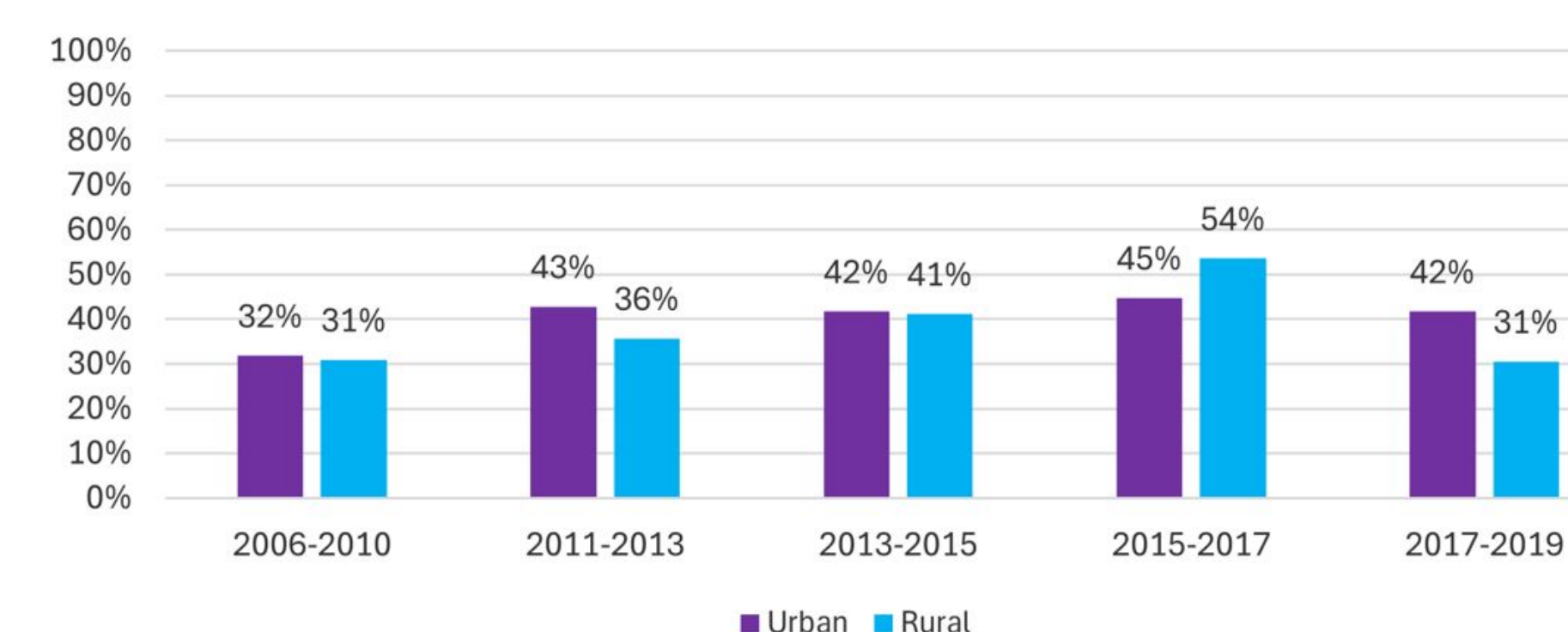


Fig. 3. Birth control usage among urban and rural individuals whose pregnancy was completed (n=43,675) 2006-2019 National Survey of Family Growth, 2024

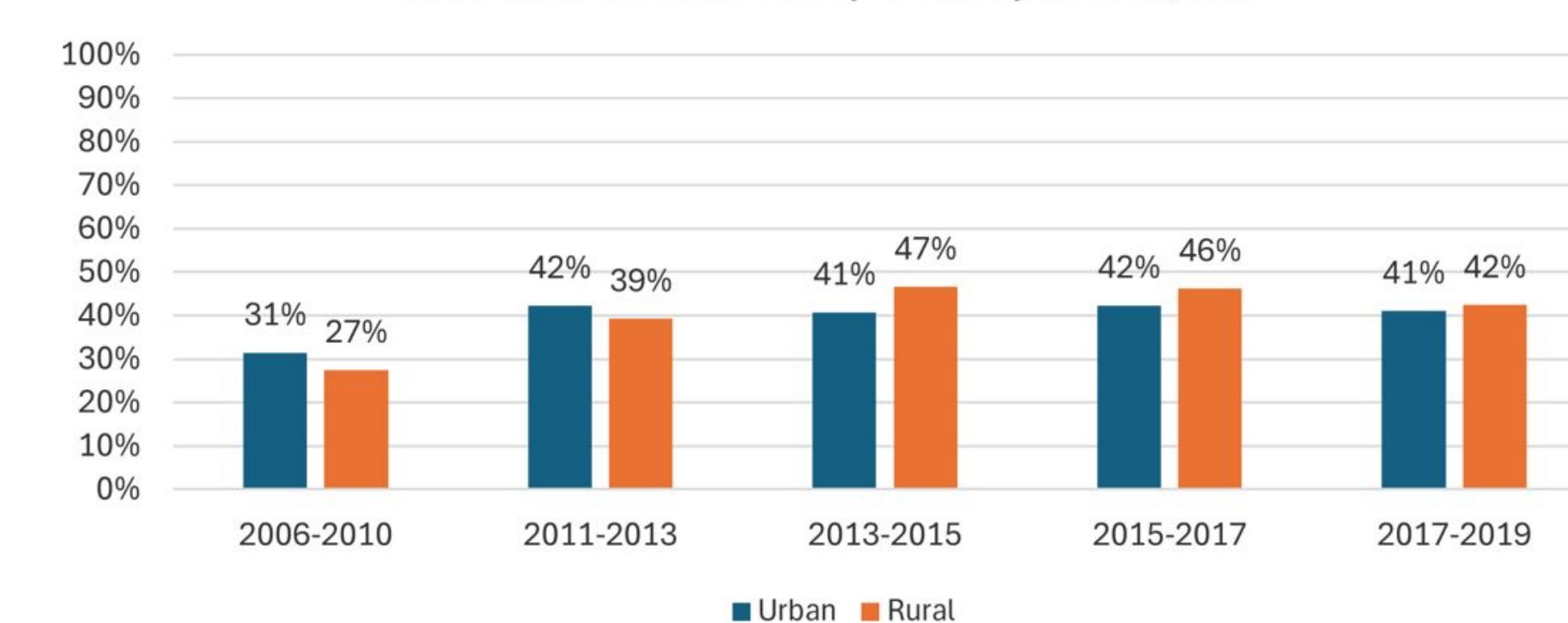
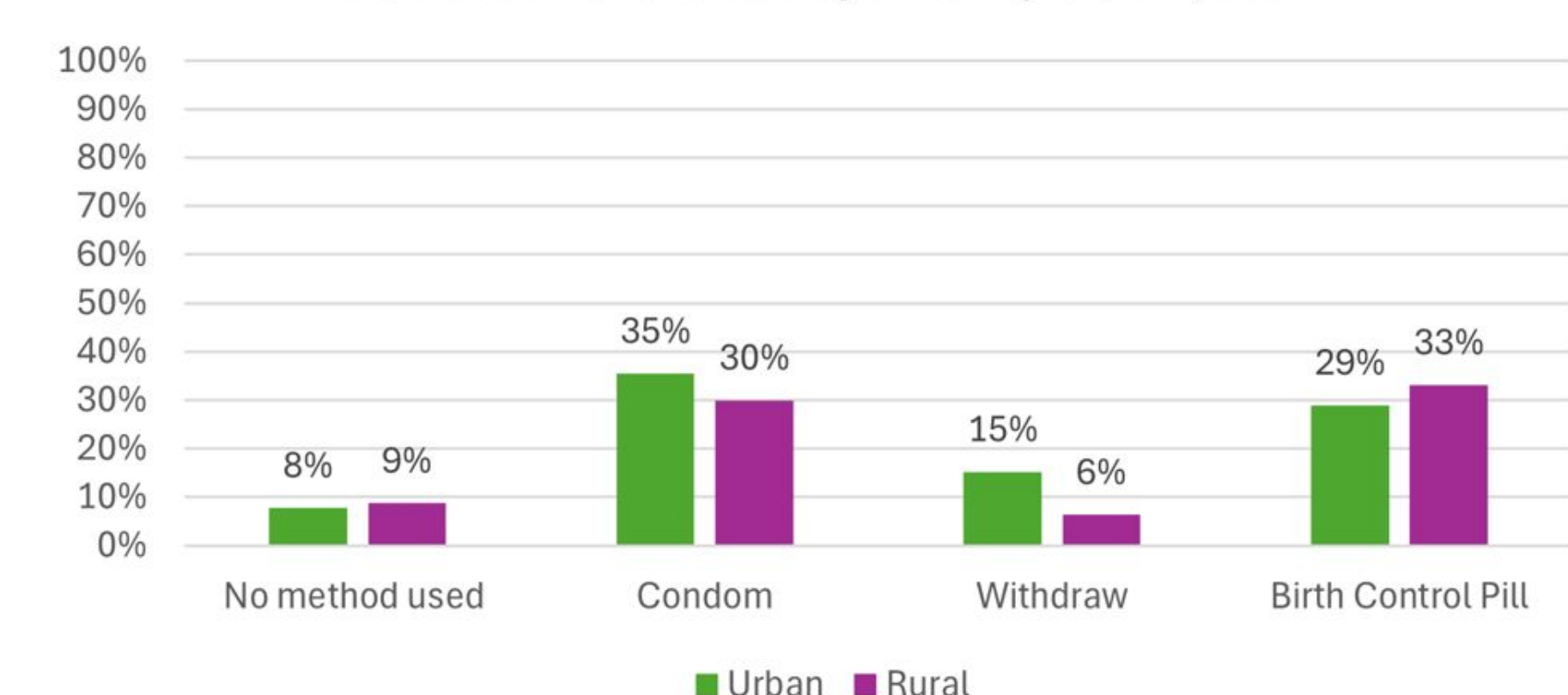


Fig. 4. Birth control usage among Protestants residing in Urban and Rural Communities (n=556) 2006-2019 National Survey of Family Growth, 2024



Conclusions

- A higher proportion of the rural population is either Protestant or Catholic compared to non-religious individuals. This may have a strong impact on contraceptive decisions.
- Both the rural and urban population displayed similar attitudes towards contraception over the last two decades, with the majority of individuals thinking they could not get pregnant as the reason they did not use contraception.
- The rural population used birth control at a higher rate compared to other contraception methods, while the urban population utilized condoms.
- Birth control usage among urban and rural individuals that resulted in an abortion has decreased since 2006, with the rural population displaying a higher proportion than the urban population. Birth control usage among urban and rural individuals whose pregnancy was completed showed similar results, with the rural population displaying a slightly higher proportion than the urban population from 2013-2019.
- Results may not be representative of the rural population due to the smaller sample size.

References

Milkowski, C. M., Ziller, E. C., & Ahrens, K. A. (2021). Rural-urban residence and emergency contraception use, access, and counseling in the United States, 2006-2017. *Contraception*, 100, 3, 100061.

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