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Critical Gaps in US Adolescent and Young Adult Contraceptive Knowledge

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A B S T R A C T

Purpose: To assess contraceptive knowledge among adolescents and young adults (AYA) and examine differences in knowledge by demographic characteristics.
Methods: We analyzed data from a nationally representative survey of 1,203 English-speaking individuals aged 15–29 assigned female at birth in the United States. The survey assessed contraceptive knowledge via 11 true/false questions. We conducted bivariate regressions to identify demographic differences in knowledge.
Results: AYA answered approximately half of the contraceptive knowledge questions correctly. Older AYA, non-Black and LGBQ + respondents, metropolitan residents, and those living in the West had higher contraceptive knowledge. However, knowledge for these groups was still low. Misconceptions related to the necessity of taking breaks from birth control pills, the effectiveness of menstrual cycle tracking apps, and differences between abortion and contraception were prevalent.
Discussion: Contraceptive knowledge among AYA is alarmingly low, with significant demographic disparities. Increasing access to trusted, resonant, medically accurate information about contraception should be a public health priority.

IMPLICATIONS AND CONTRIBUTION

This study provides updated estimates of young people's contraceptive knowledge, given notable changes in the contraceptive information landscape. Results show that knowledge is alarmingly low, and disparities exist by age, race, sexuality, and geography. Ongoing advocacy for comprehensive sex education is essential for long-term improvements in contraceptive knowledge and reproductive autonomy.

Knowledge of the full range of contraceptive methods is a necessary component of reproductive autonomy for everyone, including adolescents and young adults (AYA) [1]. Incomplete or inaccurate knowledge can impede AYA's ability to make informed decisions about contraception, adversely affecting their reproductive health [2].

Young people—especially minors—have long been impacted by policies limiting access to sexual and reproductive health (SRH) care. For example, abstinence-based sexual health education limits information about where and how to obtain services, parental consent laws compromise patient confidentiality, and legal decisions such as *Deanda v. Becerra* have further reduced access by prohibiting minors in Texas from obtaining contraception through Title X clinics. Such restrictions have only intensified following the overturn of federal abortion protections [3]. The need to provide AYA with comprehensive information on their contraceptive options has never been greater.

However, AYA are less likely to receive formal education on contraception now than they were 25 years ago [4]. Such declines in sex education are detrimental to AYA, as research shows

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that AYA who do not receive comprehensive contraceptive education are less likely to use contraception and more likely to experience unintended pregnancy, teen birth, and chlamydia infection [5–7]. While the internet and social media may help bridge gaps in SRH education by providing accessible resources and support, they also contribute to the spread of misinformation and disinformation (MDI) [8,9].

Given this evolving landscape of contraceptive information, we use a recent nationally representative survey with AYA to examine contraceptive knowledge overall and by demographic characteristics previously associated with differences in contraceptive knowledge and behaviors. Identifying knowledge gaps and differences by demographics can inform efforts to improve knowledge.

Methods

Data were from Power to Decide's 2024 Youth Reproductive Health Access (YouR HeAlth) Survey conducted using Ipsos KnowledgePanel. Power to Decide is a national nonprofit organization known for expanding access to quality sexual and reproductive health information and services, particularly for AYA. The YouR HeAlth survey was fielded from July to September 2024 in the United States and oversampled 15–17-year-olds. Details about data collection methods can be found elsewhere [10,11]. Data collection procedures were reviewed and approved by BRANY (Biomedical Research Alliance of New York) institutional review board. Of the 18–29-year-olds invited to participate (n = 1,552), 52% (n = 804) enrolled and completed the survey. Of the parents who completed the screener and had eligible minors (n = 595), 67% (n = 399) enrolled and completed the survey.

Overall, 1,203 English-speaking individuals aged 15–29 years assigned female at birth completed the survey. Analyses are restricted to the 1,160 respondents who answered all contraceptive knowledge questions. We assess knowledge overall and by age, race and ethnicity, sexual orientation, Metropolitan Statistical Area, and geographic region. Metropolitan Statistical Area regions are designated by the Office of Management and Budget and defined as having "at least one urban area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties" [12].

Respondents were asked 11 true/false contraceptive knowledge questions (question wording can be found in Table 2 in the Results section). Items were drawn from prior national surveys (e.g. the National Survey of Reproductive and Contraceptive Knowledge and the Knowledge and Beliefs about Reproductive Health survey) and input from nationally recognized SRH experts. We summed the items to calculate the mean number answered correctly, expressed as a percentage out of 11. We conducted bivariate linear regressions to assess significant ($p < .05$) differences in mean knowledge by demographics. Sidak adjustments were used for multiple comparisons. Analyses were weighted to generate national estimates [10].

Results

Of the 1,160 AYA assigned female at birth in our sample, one-fifth (21%) were 15–17, 45% were 18–24 years, and 34% were 25–29 years. Half (52%) were non-Hispanic white, one-quarter (24%) Hispanic, 14% non-Hispanic Black, and 11% non-Hispanic other. Most were heterosexual (73%) and cisgender (95%). Approximately 88% lived in a metropolitan area. Thirty-nine percent were from the South, one-quarter (25%) from the West, one-fifth (20%) from the Midwest, and 17% from the Northeast. Over half (55%) had ever had penile-vaginal sex, and 39% had had penile-vaginal sex in the past 30 days.

Table 1
Adolescent and young adult average contraceptive knowledge overall and by demographic characteristics (N = 1,160)

	Mean # of 11 items answered correctly	Standard error	% of 11 items answered correctly
Total	5.24	0.09	47.6%
Age (years)			
15–17[a,b]	4.28	0.14	38.9%
18–24[b]	5.20	0.16	47.3%
25–29	5.90	0.15	53.6%
Race and ethnicity			
Non-Hispanic white[a]	5.56	0.11	50.5%
Non-Hispanic Black[b,c]	4.06	0.30	36.9%
Hispanic	5.16	0.20	46.9%
Non-Hispanic other	5.41	0.32	49.2%
Sexual orientation			
Heterosexual[a]	5.05	0.11	45.9%
LGBQ+	5.86	0.18	53.3%
Metropolitan area			
No[a]	4.76	0.25	43.3%
Yes	5.31	0.10	48.3%
Census region			
Northeast[c]	5.15	0.21	46.8%
Midwest[c]	5.17	0.19	47.0%
South[c]	4.89	0.16	44.5%
West	5.93	0.19	53.9%

[a] Denotes significant ($p < .05$) difference from second row (e.g. non-Hispanic White and non-Hispanic Black).
[b] Denotes significant ($p < .05$) difference from third row (e.g. non-Hispanic White and Hispanic).
[c] Denotes significant ($p < .05$) difference from fourth row (e.g. non-Hispanic White and NH Other).

Overall, contraceptive knowledge was low. The average number of statements answered correctly was 5.2 out of 11 (48%). Table 1 presents mean knowledge by demographic characteristics. Respondents aged 15–17 had lower knowledge (39%) than those aged 18–24 (47%) and 25–29 (54%). Black respondents had lower knowledge (37%) than Hispanic (47%), Other (49%), and White respondents (51%). Respondents who identified as LGBQ+ had higher knowledge (53%) than heterosexual respondents (46%), metropolitan residents had higher knowledge (48%) than respondents outside metropolitan areas (43%), and respondents from the West (54%) had higher knowledge than respondents from other regions.

Six of the 11 knowledge statements were correctly answered by at least 50% of respondents (Table 2). Fewer than half of respondents were aware that: teenagers under the age of 18 can get birth control pills over the counter (OTC) without a prescription (13%); taking a break from birth control pills is not necessary for health reasons (21%); adults can obtain OTC birth control pills without a prescription (40%); menstrual cycle tracking apps are not highly effective at preventing pregnancy (40%); and not all birth control methods contain hormones (47%). Additionally, 56% knew that emergency contraception pills are

Table 2
Adolescent and young adult average contraceptive knowledge by item and demographic characteristics (N = 1,160)

Statement (Correct Response)	Total	15–17	18–24	25–29	NH white	NH Black	Hispanic	NH other	Heterosexual	LGBQ+	Nonmetro region	Metro region	Northeast	Mid-west	South	West
There are birth control methods that people can use without their partner knowing about them (True)	77.1%	69.9%[a,b]	77.0%	81.6%	83.4%[a,b]	62.7%[a]	72.4%	75.3%	75.9%[a]	81.6%	78.1%	76.9%	76.8%	76.3%	73.5%[c]	83.5%
A person can use an IUD even if they have never had a child (True)	60.3%	40.5%[a,b]	61.5%[b]	71.1%	67.1%[a,b]	44.7%	55.5%	58.9%	57.2%[a]	70.0%	54.4%	61.2%	61.5%	61.3%	55.5%[c]	66.4%
IUDs work by causing an abortion (False)	59.7%	47.5%[a,b]	58.9%[b]	68.5%	63.7%[a]	49.5%	56.3%	61.1%	56.9%[a]	68.6%	53.8%	60.5%	59.6%	59.0%	54.2%[c]	69.1%
After someone stops taking birth control pills, they are still protected from becoming pregnant for at least 2 months (False)	57.1%	50.9%[b]	55.4%	63.2%	60.9%[a]	43.7%	56.0%	58.5%	57.4%	57.2%	52.6%	57.7%	56.7%	54.7%	56.9%	59.7%
Emergency contraception pills ("the morning after pill") are different than abortion pills (True)	55.6%	35.2%[a,b]	59.3%	63.2%	54.8%	46.0%[b]	63.2%	54.0%	51.1%[a]	68.7%	49.8%	56.4%	49.6%[c]	55.7%	52.1%[c]	65.1%
If someone has penis-in-vagina sex, condoms are the only method of birth control that can be used to help prevent sexually transmitted infections (True)	54.1%	49.9%[b]	52.8%	58.4%	56.0%[a]	41.4%[b]	56.8%	54.6%	53.7%	56.2%	56.9%	53.7%	50.7%	59.8%	50.3%	57.6%
All birth control methods have hormones in them (False)	47.0%	36.6%[b]	42.9%[b]	59.0%	57.1%[a,b]	27.9%[c]	35.4%[c]	49.3%	43.9%[a]	56.6%	43.4%	47.5%	51.7%[b]	46.2%	39.9%[c]	55.8%
Adults can get birth control pills over the counter without a prescription (True)	39.7%	35.5%	42.4%	38.8%	36.6%[b]	34.6%	48.4%	41.7%	38.5%	43.8%	29.2%[a]	41.2%	39.2%	33.5%[c]	39.8%	45.1%
Menstrual cycle tracking apps are a highly effective way to prevent pregnancy (False)	39.7%	33.1%[b]	37.8%[b]	46.3%	40.3%	30.9%	40.9%	45.1%	37.8%[a]	45.4%	33.4%	40.6%	36.7%	35.9%[c]	38.1%	47.2%
People should "take a break" from birth control pills every couple of years for health reasons (False)	20.8%	15.3%[b]	18.9%[b]	26.8%	23.8%[a]	13.0%	16.5%	25.8%	19.1%[a]	25.6%	15.7%	21.5%	22.8%	23.0%	16.9%	23.8%
Teenagers under the age of 18 can get birth control pills over the counter without a prescription (True)	13.4%	14.1%	13.7%	12.7%	12.5%	11.7%	15.0%	16.5%	13.9%	12.1%	8.7%	14.1%	10.2%[c]	11.6%[c]	11.7%[c]	19.9%

IUD = intrauterine device; NH = non-Hispanic.
[a] Denotes significant ($p < .05$) difference from second column.
[b] Denotes significant ($p < .05$) difference from third column.
[c] Denotes significant ($p < .05$) difference from fourth column.

different from abortion pills, and 60% knew that intrauterine devices do not cause abortions.

Discussion

This study finds that contraceptive knowledge among AYA assigned female at birth in the United States is alarmingly low. Our findings mirror knowledge gaps documented among AYA over 15 years ago [13,14]. It is concerning that gaps of substantial magnitude persist.

AYA knowledge about OTC birth control pills was particularly low. This finding may reflect the recent release of the first OTC pill in the United States, Opill, which became available in stores in March 2024. Data for this study were collected shortly after, between July and September 2024. While knowledge about OTC pill availability for adults was also low, it was consistently higher than knowledge about OTC pill availability for minors, suggesting targeted messaging about minors' ability to access OTC pills is needed.

We also found concerning misconceptions about contraception. A minority of adolescents correctly answered that taking a break from birth control pills is not necessary for health reasons, menstrual cycle tracking apps are not highly effective forms of contraception, and not all contraceptive methods contain hormones. Misconceptions may stem from growing online discourse about distrust of hormonal contraception and promotion of natural family planning methods that overstate or give insufficient information about their efficacy [15–17]. Findings also show that many AYA conflate abortion and contraception. Just over half of respondents knew that emergency contraception pills are different from abortion pills and that intrauterine devices do not cause abortions. These findings underscore the urgent need for medically accurate contraception education for AYA and can be used to advocate for policies mandating comprehensive, evidence-based SRH education in schools. Health care providers can help by dispelling misconceptions in a patient-centered manner during clinical encounters.

Lastly, our study finds that older AYA, non-Black and LGBQ + respondents, metropolitan residents, and those living in the West, report higher levels of contraceptive knowledge. However, even among these groups, knowledge was limited. For example, older AYA, who are more likely to be sexually experienced, answered only about 50% of questions correctly. This suggests that many AYA are not receiving adequate SRH information before becoming sexually active, putting them at risk for adverse outcomes [2]. Our finding that Black AYA have lower knowledge than their peers contrasts with some prior research that has found no differences or patterns that vary by item [14,18]. Emerging data suggest Black individuals may be more vulnerable to MDI due to structural racism, historical abuses, and mistrust of US institutions [19,20], which may partially explain our findings. More research exploring MDI pathways and variation by demographics is needed.

Higher knowledge among LGBQ + respondents may reflect greater levels of SRH knowledge-sharing within queer communities and more proactive online information-seeking [21]. Similarly, AYA in metropolitan areas or regions with more progressive SRH policies likely have better access to SRH information and services, highlighting persistent geographic SRH inequities [22].

The YouR HeAlth Survey and this brief have limitations to note. Minor participants were recruited through a parent panel member, which may have resulted in selection bias. The sample was also limited to AYA who could complete the survey in English, and we did not include individuals assigned male at birth, despite the relevance of many of the knowledge and attitude items to this population. Lastly, small sample sizes may prevent the statistical detection of some significant differences.

Conclusion

AYA contraceptive knowledge in the United States is low across demographics, putting AYA at risk of adverse SRH outcomes. Policymakers, clinical and public health professionals, and online platforms must work together to ensure reliable health information for AYA.

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