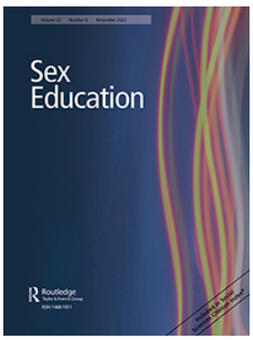

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National trends and disparate access to formal and informal sex education among youth involved with the child welfare system in the USA

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ABSTRACT

This study investigated whether youth involved with the child welfare system in the USA are receiving formal and informal sex education. Data come from the Second National Survey of Child and Adolescent Wellbeing, a nationally representative sample of children and adolescents in contact with child protective services. Participants included young people (n = 1093, aged 11–21) involved with the child welfare system. Participants reported whether they had received formal sex education about a) abstinence only; b) contraceptives/condoms only; c) abstinence and contraceptives/condoms; or d) none. They also reported whether they knew where to access family planning services. We examined the prevalence of sex education experiences and differences in sex education access and knowledge based on participants' pregnancy history and sociodemographic characteristics. Only half (49%) of participants had received any form of formal sex education. Pregnant youth were less likely to have received any sex education compared to non-pregnant youth . 72% of adolescents who had received sex education about contraceptives/condoms reported knowing where to access family planning services compared to only 46% of adolescents who had not received this sex education . There is a pressing need for comprehensive sex education among youth involved with the child welfare system.

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Sex education; youth involved with the child welfare system; family planning; contraception; sexual health

Introduction

Governing bodies and medical and public health organisations worldwide are in agreement that sexual health is a fundamental human right, yet it is often neglected (WAS 2014; WHO 2021). Adolescents in particular are often overlooked when it comes to sexual health due to restrictive social norms dictating that expressions of sexuality are not appropriate for young people, which limits their access to sexual health education and care (Buller and Schulte 2018). As a result, many adolescents experience adverse sexual health outcomes such as HIV and other sexually transmitted infections (STIs), with significant sexual health

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disparities existing among marginalised groups of adolescents. For example, in the USA racial and ethnic minority adolescents and LGBTQ+ adolescents are more at risk for HIV and STIs compared to white, heterosexual youth (CDC 2021, 2020; Graham and Padilla 2014).

Young people involved with the child welfare system (i.e. those who have been referred to child protection services) in the USA are one group of adolescents who experience worse sexual health outcomes compared to young people not involved with the child welfare system (Dworsky and Courtney 2010; James et al. 2009). For example, youth in foster care have at least three times the risk of a diagnosed STI compared to other youth (Ahrens et al. 2010). Furthermore, rates of pregnancy are higher among youth in foster care, with as many as 48% of girls in foster care becoming pregnant before the age of 19 – more than double that of their same-age peers (Amy and Courtney 2010). A critical part of fulfilling adolescents' human rights related to sexual health involves providing youth involved with the child welfare system with access to sexual health education to empower them to make informed choices about their sexual health (World Association of Sexology 2014). Given the imperative of sex education coupled with the adverse sexual health outcomes experienced by youth involved with the child welfare system, this study aimed to fill a gap in knowledge to understand whether youth involved with the child welfare system have access to sex education[1] and knowledge of where to access family planning services.

Trends in Sex Education among Youth in the USA

Comprehensive sexuality education empowers youth with knowledge, skills, and attitudes to advocate for their sexual health, well-being, and dignity (UNESCO 2018). Sex education can promote safer sexual behaviours among youth (CDC 2021). For example, good quality sex education can strengthen adolescents' intentions, attitudes and behaviours with respect to preventing pregnancy and STIs (Albarracín et al. 2001; Widman et al. 2018). When adolescents know where to access sexual health services, they are more likely to seek out these services and use them (Parkes, Wight, and Henderson 2004). Yet, sex education has historically been and continues to be insufficient and inequitably accessed among youth in the USA. For example, as of 2019, only 16 states required instruction on condoms or contraception when sex education is provided (SIECUS 2020). Using population data from the National Survey of Family Growth, Lindberg and colleagues found that adolescents' access to all formal sex education about topics such as birth control, abstinence, STIs, and HIV via schools and other community institutions declined between 2006–2010 and 2011–2013 (Lindberg, Maddow-Zimet, and Boonstra 2016). In addition, this national study noted inequities with some groups receiving disproportionately less sex education than others, including greater declines among boys compared to girls, lower rates among poor adolescents, and rural-urban disparities (Lindberg, Maddow-Zimet, and Boonstra 2016). Furthermore, many adolescents did not receive sex education until after they became sexually active, which is mistimed if the purpose is to provide adolescents with information and resources to prevent adverse sexual health outcomes.

Sex Education among Youth Involved with the US Child Welfare System

Studies on sex education among youth involved with the child welfare system in the USA are limited. The handful of studies in this area indicate that youth in foster care do not receive sufficient sex education from formal sources (e.g., education offered in schools, classes through foster care) and informal sources (e.g., parents and the Internet; Ramseyer Winter et al. 2016; Robertson 2013; Constantine, Jerman, and Constantine 2009; Hudson 2012). Regarding more formal sources, youth in foster care often miss out on the sex education that may be offered in schools due to transient care placements (Constantine, Jerman, and Constantine 2009). Foster care agencies are another possible avenue for youth to receive formal sex education. While some sex education may be provided through independent living programmes, it is not always provided (Johnson 1999; Dworsky 2018). For example, most US states lack clear policies that: 1) require caregivers and foster care staff to be trained on how to talk to youth about sexual health, and 2) require that youth within the child welfare system are provided with medically accurate information about sexual and reproductive health (Constantine 2009; Dworsky 2018). This lack of legislation and formal policy means that neither foster care staff nor caregivers prioritise educating youth involved with the child welfare system about sexual development and sexual health (Dworsky 2018).

Informal sources – such as parents/foster parents, peers and the Internet – are another important route through which young people may learn about sexual health. In fact, some research indicates that young people in foster care rely more on informal sources of sex education compared to formal sources (Diamant-Wilson and Blakey 2019). Caregivers of youth in care have an important role in teaching youth about sexual health topics (Albertson et al. 2020). Yet, caregivers often do not feel confident talking about sexual health and desire additional training and practical skills on how to tailor communication to fit the needs of youth in their care (Harmon-Darrow, Burruss, and Finigan-Carr 2020; Brasileiro et al. 2021). Young people themselves express a desire for foster caregivers to receive training on sexual health information in addition to demonstrating vulnerability and engaging in open conversations around these topics (Ahrens et al. 2016; Ross, Kools, and Laughon 2020). Furthermore, some youth may not receive permission to participate in sex education classes due to the religious views of their foster parents or the foster care agency (Serrano et al. 2018; Dworsky 2018). The Internet is another informal source of sexual health information for young people, and youth in one study indicated that they turn to the Internet for information out of fear of caregiver judgement (Ross, Kools, and Laughon 2020).

This lack of research on sex education among youth involved with the child welfare system is an important gap to address given the adverse sexual health outcomes experienced by members of this population. Additionally, one comprehensive review of the sexual health of youth involved with the child welfare system noted that most studies have methodological limitations; specifically studies rely on data from a single county or state (Virginia, Brandon-Friedman, and Ely 2016). To our knowledge, no study using a nationally representative sample of youth involved with the child welfare system has examined the state of sex education and knowledge regarding family planning access among this population.

Purpose of Current Study

To fill these important gaps in the literature, this study aimed to provide national level data on the percentage of youth involved with the child welfare system in the USA who reported receiving information about abstinence and birth control and had knowledge of where to access family planning services. In line with other research among general populations of youth documenting disparate access to sex education (Lindberg, Maddow-Zimet, and Boonstra 2016), the study also examined whether there is differential access to sex education based on biological sex, age, sexual activity status, pregnancy history, sexual orientation, and race/ethnicity. The purpose of these descriptive analyses was to provide the ongoing national monitoring needed to inform research and policy related to sex education for youth involved with the child welfare system.

Method

Study Design

We analysed data from the Second National Survey of Child and Adolescent Well-Being (NSCAW-II). The NSCAW-II is a longitudinal dataset comprised of a nationally representative sample of 5,872 children and young people aged birth to 17.5 years who had been referred for a child protective services investigation over a fifteen-month period between 2008 and 2009.

The NSCAW-II sample was drawn using a two-stage cluster design with data collected within 81 sampling units representing 30 states and 83 counties across the USA. Data were collected from young people using audio computer-assisted self-interviews in three waves spanning from April 2008 through December 2012. In this study, we only used data from Wave 3, collected between August 2011 and December 2012, as we wanted to use the most recent data available on receipt of sex education and family planning knowledge.

Observations were selected with unequal probabilities; thus, sample weights were needed to correct the unequal probabilities of selection. Data were weighted to account for nonresponse, and then the nonresponse Wave 3 weight was post-stratified to Wave 1 weight totals. A data protection plan – which entailed security measures such as storing the data on a hard drive in a securely locked campus office and using a password to access data on the hard drive – was approved by the North Carolina State University's Institutional Review Board.

Analytic Sample

Access to sex education was assessed only among young people aged 11 and older (n = 1,309). Data were missing for 216 of these youth; thus, our final analytic sample was 1,093 young people. Similarly, knowledge of where to access family planning was only assessed among youth between the ages of 14 and 18 (n = 651). Data were missing for 218 of these youth; thus, our final analytic sample was 433 young people.

Measures

Sociodemographic Characteristics

Participants self-reported their biological sex (male or female), age, race/ethnicity, and care setting including in-home (i.e., living with a biological or adoptive parent) and out-of-home (i.e., foster care, kin care, group home, residential facility, or some other out of home care arrangement).

Access to Sex Education

Access to sex education was assessed by means of one question: 'Now I'm interested in knowing about any classes or special programmes you might have taken part in that talked about sexual activity and health. Have you ever taken part in any classes or special programmes at school, church, a community centre or some other place about . . . ' Response options included: 1) Saying no to sex (Abstinence); 2) Ways people who have sex can prevent pregnancy (Contraception); 3) Condoms; and 4) None of above. Participants could select all options that applied. From this item, we created four categories of sex education for analyses: 1) no sex education; 2) abstinence only; 3) contraception and/or condom but not abstinence (i.e., contraception/condoms only); 4) abstinence and contraception and/or condoms (i.e., abstinence and contraception/condoms). We decided to collapse across condoms and contraception to create a more comprehensive safe sex education variable.

Knowledge of Where to Access Family Planning

Knowledge about where to access family planning services was assessed by responses to one question: 'Do you know where to get family planning services to prevent pregnancy or prevent sexually transmitted diseases?' with answer choices 'Yes' or 'No.' Participants responded to a follow-up question that asked where they learned to get family planning services with answer choices: 1) Teacher/school, 2) Relative, 3) Peer/friend, 4) Class, 5) Foster parent, 6) Caseworker, 7) Mentor, 8) Other. Participants could select all the options that applied.

Sexuality/Sexual Health Characteristics

Participants self-reported their sexual orientation by answering the question, 'Which of these best fits how you think of yourself?' 1) 'Totally straight (heterosexual),' 2) 'Mostly straight but kind of attracted to people of your own sex,' 3) 'Bisexual – that is attracted to males and females equally,' 4) 'Mostly gay (homosexual) but kind of attracted to people of opposite sex,' 5) 'Totally gay (homosexual),' 6) 'Not sexually attracted to either males or females.' For the chi square analyses, we combined data on sexual orientation into two categories with responses to answer choice 1 coded as heterosexual and responses to answer choices 2–6 coded as sexual minority (Buspavanich et al. 2021). Participants also self-reported whether they had ever had vaginal sexual intercourse, had vaginal sexual intercourse anytime in the past 12 months, the method they or their partner used to prevent pregnancy at last sex, and number of times they had been or had got someone else pregnant.

Data Analysis

We analysed the NSCAW II data in five steps using SPSS Complex Samples package. First, as recommended by the NSCAW II, NANALWT3 was used for weighting variables for analyses involving only Wave 3. Second, we deleted missing data listwise with SPSS Complex samples. Third, we analysed the remaining complete data using descriptive statistics to understand the demographics and sexual health characteristics of the analytic sample. Fourth, we conducted Chi-Square Tests of Independence to ascertain whether there were differences in access to the four categories of sex education (i.e., None; Abstinence only; Contraception/condoms only; Abstinence and contraception/condoms) based on sex, age, sexual activity status, pregnancy history, sexual orientation, and race/ethnicity. Since these Chi-Square Tests took the form of 2×4 tables, we ran adjusted standardised residuals (a z score) to identify which cells contributed towards significant results (Field 2009). Fifth, we conducted Chi-Square Tests of Independence to ascertain whether there were differences in knowledge of where to access family planning based on sex, age, sexual activity status, pregnancy history, sexual orientation, race/ethnicity, and whether participants had received sex education related to contraception/condoms and abstinence.

Results

Participants

Table 1 presents data on demographics and the sexual health characteristics of the sample. The sample had slightly more female than male adolescents and was approximately evenly split between the three age groups, with most participants in the 14–17 age range. The sample was racially/ethnically diverse: 44% White/Non-Hispanic, 30% Hispanic, 21% Black/Non-Hispanic, and 6% Other/Non-Hispanic. Most of the participants (84%) were living in in-home care with a biological or adoptive parent. Approximately three-quarters (77%) of young people identified their sexual orientation as 'totally straight.' Almost half (42%) of the sample reported ever having had sexual intercourse. Significantly more females reported having had sexual intercourse (n = 293, 66%) than males (n = 183, 34%), X^2 (1) = 25.63, p = .002. These findings may be due to the fact that females who answered this question were significantly older than males. Similarly, more females reported ever being pregnant (n = 111, 80%) compared to males having got someone pregnant (n = 39, 20%), X^2 = 22.68, p = .003.

Access to Sex Education

As shown in Table 2, 49% percent of the sample had received any sex education. This included 19% who received abstinence-only, 20% who received contraceptives/condoms only, and 10% who received both.

Table 3 presents Chi-Square Tests of Independence results for sex education by socio-demographic factors. There was a significant association between sex education and age (X^2 (2.8) = 43.17, p = .006): younger youth (age 11–15) were more likely to receive abstinence-only sex education and less likely to receive contraception/condoms only education, compared to older youth (age 16–21). Additionally, there were significant

Table 1. Participant demographics and characteristics related to sexual health and sexuality.

Demographics	Unweighted Count	Weighted Percent	Standard Error
Participant Sex (n = 1,093)			
Male	492	43.0%	1.9%
Female	601	57.0%	1.9%
Age (n = 1,093)			
11–13	376	33.8%	2.0%
14–17	408	36.9%	2.8%
18–21	309	29.3%	2.5%
Race/Ethnicity (n = 1,075)			
White/Non-Hispanic	399	44.3%	4.2%
Black/Non-Hispanic	316	20.6%	3.1%
Hispanic	296	29.5%	3.4%
Other (non-Hispanic)	64	5.5%	1.3%
Care setting of youth (n = 783)[a]			
Out-of-home care	204	16.5%	2.1%
In-home care	579	83.5%	2.1%
Sexual Orientation (n = 1,074)			
Totally straight	825	76.5%	2.2%
Mostly straight	74	8.4%	1.5%
Bisexual	60	5.1%	1.0%
Mostly gay	7	0.3%	0.1%
Totally gay	15	1.7%	0.8%
Not sexually attracted to males or females	93	7.9%	1.2%
Ever had sex/sexual intercourse (n = 1,090)			
Yes[b]	476	41.5%	2.0%
No	614	58.5%	2.0%
Have you had sex anytime in the past 12 months? (n = 474)			
Yes	394	86.1%	2.5%
No	80	13.9%	2.5%
The most recent time of sex, what method did you or your partner use to prevent pregnancy? (n = 470)			
None	106	28.9%	3.2%
Condom	255	43.6%	2.9%
Withdrawal	80	15.5%	1.5%
Birth control Pill/Injection/patch	92	23.2%	2.9%
Other methods	33	6.4%	1.4%
How many times have you ever been/gotten someone pregnant? (n = 475)[c]			
Never	325	64.6%	4.0%
Once	103	24.5%	3.3%
Two times	35	8.6%	2.2%
Three times	9	1.9%	0.9%
Four or more times	3	0.5%	0.3%

Notes. All figures represent weighted percentages from NSCAW II wave III data. Ns are unweighted and, therefore, direct percentages cannot be calculated from Ns. Reported Ns vary slightly due to missing data in some variable categories. [a]Out of home care setting refers to foster care, kin care setting, group home or residential facility, or some other out of care arrangement. In home care refers to either living with a biological parent or an adoptive parent. [b]Among the 42% who had ever had sexual intercourse, 66% (n = 293) were females and 34% (n = 183) were males.[c]Among the 36% of participants who had been or got someone pregnant, 80% (n = 111) were females and 20% (n = 39) males.

differences in sex education between youth who had ever been or got someone pregnant compared to those with no pregnancy history, X^2 (2.8) = 22.85, p = .045. Youth who had ever been pregnant were less likely to have received any sex education, compared to youth who had never been pregnant. Finally, there were significant differences in sex education based on sexual activity status, X^2 (2.5) = 91.36, p < .001: sexually active youth were less likely to have received abstinence-only sex education and more likely to receive one of the other two categories: 1) contraceptive/condoms only or 2) abstinence and contraceptive/condoms, compared to youth who were not sexually active. We did not

Table 2. Access to sex education and knowledge of family planning among youth involved with the child welfare system.

Variable	Unweighted Count	Weighted Percentage	Standard Error
Received Sex Education (n = 1,093)[a,b]			
Abstinence only	224	19.2%	1.9%
Contraceptive/Condoms only	225	20.3%	2.2%
Abstinence and Birth Control/Condoms	117	9.5%	1.3%
None of the above	527	51.1%	2.7%
Knowledge of where to access family planning services (n = 433)[c]			
Yes	244	53.4%	3.8%
No	189	46.6%	3.8%
Where learned family planning access (n = 244)[c,d]			
Teacher/school	110	47.9%	5.7%
Relative	105	43.2%	5.8%
Peer/friend	18	7.0%	2.5%
Class	12	5.1%	3.1%
Foster parent	8	0.4%	0.2%
Caseworker	7	1.1%	0.6%
Mentor	5	1.3%	0.7%
Other	40	12.2%	3.0%

Notes. All figures represent weighted percentages from NSCAW II wave III data. *N*s are unweighted and, therefore, direct percentages cannot be calculated from *N*s. Reported *N*s vary slightly due to missing data in some variable categories. [a]Asked to youth ages 11 and older[b]Only 6.1% (n = 78) of youth received sex education about condoms only. [c]Asked to youth ages 14-18[d]Among youth who did know where to access services, 43% (n = 87) learned from informal sources only (i.e., relative, peer/friend, foster parent, caseworker or mentor); 34% (n = 69) learned from formal sources only; and 24% (n = 48) learned from both formal and informal sources.

find any significant differences between receipt of sex education and sex, sexual orientation, and race/ethnicity.

Knowledge of Where to Access to Family Planning

As shown in the bottom of Table 2, just over half of infomants (53%) reported that they knew where to access family planning services to prevent pregnancy or sexually transmitted diseases. Among youth who did know where to access services, 43% had learned from informal sources only (i.e., relative, peer/friend, foster parent, caseworker, or mentor), 34% had learned from formal sources only; and 24% had learned from both formal and informal sources.

Table 4 presents Chi-Square Tests of Independence results for knowledge of how to access family planning by sociodemographic factors. There was a significant association between knowledge of how to access family planning and age, X^2 (1) = 16.41, p = .009: older youth were more likely to know where to access family planning compared to younger youth. There was also a significant association between knowledge of where to access family planning and sexual activity status, X^2 (1) = 43.11, p < .001: sexually active youth were more likely to know where to access family planning than those who were not sexually active. Whether youth had received sex education about contraception/condom use was also significantly associated with knowledge of how to access family planning, X^2 (1) = 17.37, p = .014: youth who had received sex education about contraception/condoms were more likely to know how to access family planning services compared to youth who had not. We did not find any significant differences between knowledge of family planning access and sex, pregnancy history, sexual orientation, race/ethnicity, and youths' receipt of abstinence-only sex education.

Table 3. Differences in access to sex education by sociodemographic factors among youth involved with the child welfare system.

	n	None *n* (%)	Abstinence Only *n* (%)	Contraceptives/ Condoms *n* (%)	Abstinence and Condoms/ Contraceptives *n* (%)
Sex					
Male	492	249 (52.3%)	91 (19.4%)	118 (22.8%)	34 (5.6%)
Female	601	278 (50.2%)	133 (19.1%)	107 (18.4%)	83 (12.4%)
Chi Square			15.91		
p-value			$p = .097$		
Age					
11–15	583	311 (53.1%)	152 (24.6%)*	84 (15.2%)*	36 (7.1%)
16–21	510	216 (48.7%)	72 (13.1%)*	141 (26.0%)*	81 (12.2%)
Chi Square			43.17		
p-value			$p = .006$		
Sexually Active					
No	614	323 (54.3%)	167 (26.0%)*	78 (13.3%)*	46 (6.4%)*
Yes	476	203 (46.4%)	57 (9.7%)*	147 (30.1%)*	69 (13.7%)*
Chi Square			91.36		
p-value			$p < .001$		
Ever Pregnant					
No	325	127 (40.3%)*	42 (9.4%)	109 (37.4%)*	47 (12.9%)
Yes	150	75 (57.6%)*	15 (10.4%)	38 (16.8%)*	22 (15.3%)
Chi Square			22.85		
p-value			$p = .045$		
Sexual Orientation					
Heterosexual	825	397 (49.6%)	165 (20.0%)	176 (21.2%)	87 (9.2%)
Sexual Minority	249	120 (56.9%)	53 (15.1%)	47 (18.3%)	29 (9.7%)
Chi Square			5.34		
p-value			$p = .487$		
Race/Ethnicity					
White/Non-Hispanic	399	210 (52.9%)	72 (18.0%)	72 (18.8%)	45 (10.3%)
Black/Non-Hispanic	316	126 (39.9%)	85 (26.2%)	77 (21.9%)	28 (12.1%)
Hispanic	296	144 (50.5%)	56 (18.7%)	60 (23.4%)	36 (7.5%)
Chi Square			15.91		
p-value			$p = .461$		

Notes. All figures represent weighted percentages from NSCAW II wave III data. Participants who refused to answer the question about sex education classes or indicated that they didn't know if they had attended were removed from analyses. The analytic sample is significantly more likely to be female and older. Ever pregnant is defined as ever been or got someone pregnant. The overall pattern of results in this table did not change when we included age as a control variable in models. *Identifies which cells were contributing towards significant results. Adjusted standardised residuals (a *z* score) were run to identify which cells were contributing towards significant results (a *z* score value lying outside of ± 1.96 at $p < .05$).

Discussion

Access to information about sexual health is a basic human right for all young people (UNPFA 2019; Lowe 2018). Given the significant sexual health problems experienced by youth involved with the child welfare system in the USA, it is especially important that they have access to sexual health information and resources (Amy and Courtney 2010; James et al. 2009; Ahrens et al. 2010). This study provides national-level data on the percentage of young people involved with the child welfare system who are receiving formal sex education and have knowledge of where to access family planning. We found that approximately half of the young people surveyed had received formal sex

Table 4. Differences in knowledge of where to access family planning services by sociodemographic factors among youth involved with the child welfare system.

		No Knowledge of FP Access		Has Knowledge of FP Access
	n	*n* (%)		*n* (%)
Sex				
Male	192	99 (51.1%)		93 (48.9%)
Female	241	90 (43.8%)		151 (56.2%)
Chi Square			2.20	
p-value			$p = .384$	
Age				
14–15	224	125 (55.9%)		99 (44.1%)
16–21	209	64 (36.5%)		145 (63.5%)
Chi Square			16.41	
p-value			$p = .009$	
Sexually Active				
No	236	132 (59.7%)		104 (40.3%)
Yes	182	49 (27.0%)		133 (73.0%)
Chi Square			43.11	
p-value			$p < .001$	
Ever Pregnant				
No	149	42 (30.3%)		107 (69.7%)
Yes	32	6 (10.5%)		26 (89.5%)
Chi Square			7.17	
p-value			$p = .064$	
Sexual Orientation				
Heterosexual	318	135 (43.9%)		183 (56.1%)
Sexual minority	94	41 (50.3%)		53 (49.7%)
Chi Square			1.33	
p-value			$p = .464$	
Race/Ethnicity				
White/Non-Hispanic	161	80 (53.3%)		81 (46.7%)
Black/Non-Hispanic	125	49 (41.8%)		76 (58.2%)
Hispanic	114	43 (41.2%)		71 (58.8%)
Chi Square			5.47	
p-value			$p = .278$	
Contraceptive/Condoms Sex Ed				
No	169	92 (53.7%)		77 (46.3%)
Yes	105	31 (27.8%)		74 (72.2%)
Chi Square			17.37	
p-value			$p = .014$	
Abstinence only Sex Ed				
No	169	92 (53.7%)		77 (46.3%)
Yes	85	36 (55.4%)		49 (44.6%)
Chi Square			.07	
p-value			$p = .857$	

Notes. All figures represent weighted percentages from NSCAW II wave III data. Participants who refused to answer the question about family planning or indicated that they did not know if they had this knowledge were removed from analyses. The analytic sample is significantly more likely to be younger. Ever pregnant is defined as ever been or got someone pregnant. The overall pattern of results in this table did not change when we included age as a control variable in models.

education that provided information on abstinence, condoms or contraception. Just over half of youth had knowledge of where to access family planning services. These findings indicate that youth involved with the child welfare system report less access to sexual health information compared to more general populations of youth. For example, in a general population national sample of adolescents who were asked a similar

survey question about the receipt of any formal sex education instruction, a higher percentage of adolescents had received instruction about almost all possible topics [e.g., abstinence-only (>80%), condom skills (>50%), STD/HIV instruction (>90%)], compared to youth involved with the child welfare system. The one exception was knowledge of where to access birth control, which yielded similar percentages nationally as in this study. Although response options and age ranges of participants in this national survey are slightly different compared to this study among youth involved with the child welfare system, the comparison helps situate the results of this study within the national context (Lindberg and Kantor 2021).

Implications of Differential Access to Sex Education

Formal sexuality education is one important way for young people to learn the skills they need to navigate romantic and sexual relationships and information on how to access sexual health services (CDC 2021). We found that of those youth who are receiving sex education, almost a quarter (19%) had received abstinence-only sex education – this means that almost three-quarters of youth involved with the child welfare system received no sex education or abstinence-only sex education. The absence of sex education and focus on abstinence-only sex education is both a disservice to youth, as young people likely fail to learn the developmentally-appropriate skills and knowledge they need to reduce sexual risk behaviours (Chin et al. 2012). This lack of sex education is even more pronounced among younger youth (ages 11–15), youth who are not sexually active, and young people who have ever been pregnant. Ensuring that younger youth and young people who are not sexually active receive access to sex education about condoms and contraception is critical. Almost 40% of youth involved with the child welfare system reported having sex at or before the age of 13 (James et al. 2009), indicating a clear need for these services during early adolescence. Further, the fact that 58% of youth with a pregnancy history received no sex education compared to 40% of youth who had never been pregnant is noteworthy. This outcome may have been influenced by disparate access to sexual health information/resources. One possible interpretation of these results is that increasing rates of sex education among youth involved with the child welfare system may improve birth control use (Demissie et al. 2019; Aparicio et al. 2021).`

It is worth noting that our measure of sex education was not limited to school-based sex education – it included the receipt of any classes or special programmes on sexual health at a range of locations including schools, churches, or community centres. This indicates that these formal sources of sex education, even when offered in a variety of locations, were not reaching most youth involved with the child welfare system. Possible reasons that many youth did not access these formal sources of sex education include their multiple placements; caregivers' and social workers' limited skills in talking to youth about sex; varied perspectives about whether sex education is appropriate; and lack of policy on who is responsible for providing this education (Constantine, Jerman, and Constantine 2009; Sepulveda and Williams 2019; Harmon-Darrow, Burruss, and Finigan-Carr 2020; Dworsky 2018).

Implications of Differential Knowledge of Family Planning Access

Access to family planning is critical for preventing unintended pregnancies among youth (Todd and Black 2020). In this study, almost half of the young people sampled did not know where to access family planning, and without this knowledge it is difficult to access family planning services (Hudson 2012). The majority (43%) of youth involved with the child welfare system in this study learned about where to access family planning from informal sources only (e.g., relatives, peers, foster, parents) compared to 34% who learned from formal sources only and 24% who learned from both sources. In comparison, a national study among youth not involved with the child welfare system found that over 70% of youth reported learning about sexual and reproductive health topics from an informal source, specifically their parents (Lindberg, Maddow-Zimet, and Boonstra 2016). In addition, 72% of adolescents who received sex education about contraceptives/condoms reported knowing where to access family planning services compared to less than half of adolescents who had not received sex education about contraceptives/condoms.

This finding echoes other research among general populations of youth and suggests that increasing rates of sex education among youth involved with the child welfare system may improve overall knowledge and use of family planning (Zewditu, Clayton, and Dunville 2019). We also found that participants who were sexually active and older were more likely to know where to access family planning services compared to those who were not yet sexually active and younger. This may be because sexually active youth and older youth are in the most immediate need of family planning services (Szucs et al. 2020), or because adults do not talk to youth about family planning services until they are older (Widman et al. 2014). However, it is important that younger youth and those who are not yet sexually active also have family planning knowledge so that they have the information they need prior to becoming sexually active (Guttmacher Institute 2016).

Limitations and Future Directions

Several study limitations should be recognised. First, information about the quality, quantity and details of the sex education content received are lacking. Based on variables available in the dataset, we utilised a bare minimum, risk-reduction definition of sex education. For example, the questions asked were specific to pregnancy prevention, thus missing other forms of sexual activity and STI prevention. Furthermore, some of the terms used in the survey were outdated, such as 'family planning clinic,' and the language used in the question assessing biological sex and sexual identity. In line with calls for more comprehensive sexuality education, a critical future direction is to examine and ensure that sexuality education offered to youth involved with the child welfare system is evidence-based, LGBTQ+ inclusive, trauma-informed, and covers sex-positive in addition to risk reduction topics (Fava and Bay-Cheng 2013; Kantor and Lindberg 2020). To our knowledge there is only one sexual health programme specifically for youth in foster care that has been tested in a randomised controlled trial with promising results (Oman et al. 2016; Green et al. 2017). In addition, Aparicio and co-authors recently proposed a theoretical model that could be drawn from to guide the development of multilevel sexual health interventions for youth involved with the child welfare system. This model indicated that core content areas of sexuality education

should include reproductive health systems (e.g., HIV/STIs, birth control, pregnancy), relationship health (e.g., family, intimate partners), and mental health (e.g., trauma, mental health; Aparicio et al. 2021). Furthermore, recent research with child welfare workers indicates that increasing caseworkers' self-efficacy and changing agency norms around addressing sexual health topics with youth is a promising area of future intervention work (Combs and Taussig 2021b, 2021a). Future efforts should ensure that evidence-based sexual health programmes are developed to reach young people involved with the child welfare system.

Further, while we could not find any eHealth sexual health programmes specifically for youth involved with the child welfare system, this may be a promising avenue to explore for this mobile population of youth. For example, eHealth programmes offer a host of benefits, including increased fidelity to intervention delivery, opportunities for amplified user interactivity, and customisation (Maloney et al. 2020).

Second, though a strength of the study was the use of a large, national dataset, a limitation derives from the fact that these data are old, coming from 2012. Research from other national data among general populations of youth indicates that there has been limited change in adolescents' receipt of sex education between 2011–2015 and 2015–2019 (Lindberg and Kantor 2021), indicating that findings from these data are likely still relevant. In addition, despite the use of survey weights, the missing data (Sex education question missingness = 16.5%; Family planning question missingness = 33.5%) for both survey questions are a limitation that may cause bias. Furthermore, the sex education analytic sample is more likely to be female and older, and the family planning sample younger. There could be unobserved differences between the two samples. Finally, we were not able to comprehensively assess whether young people received sex education from other sources, such as online sexual health resources, peers, caregivers and/or social workers. Elucidating nationally where and how youth are receiving sex education from a broad range of formal and informal sources would provide a more comprehensive understanding of the state of sexuality education among youth involved with the child welfare system.

Conclusion

There is a pressing need for sex and sexuality education, including resources on where to access family planning, for youth involved with the child welfare system in the USA. Younger youth and youth who have ever been pregnant, in particular, may be missing out on sex education about condoms and contraception. Young people who receive sex education about contraceptives and condoms are more likely to have knowledge of family planning services. Future intervention efforts should provide youth involved with the child welfare system with access to sex education to empower them to make informed choices about their sexual health.

Note

1. Sex education in this study refers narrowly to whether youth received information about abstinence, contraceptive/condoms, or nothing. This is a limited measure and did not capture whether youth had received comprehensive sexuality education.

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References

Ahrens, K. R., L. P. Richardson, M. E. Courtney, C. McCarty, J. Simoni, and W. Katon. 2010. "Laboratory-Diagnosed Sexually Transmitted Infections in Former Foster Youth Compared with Peers." *Pediatrics* 126 (1): e97–103. doi:10.1542/peds.2009-2424.

Ahrens, K. R., R. Spencer, M. Bonnar, A. Coatney, and T. Hall. 2016. "Qualitative Evaluation of Historical and Relational Factors Influencing Pregnancy and Sexually Transmitted Infection Risks in Foster Youth." *Children and Youth Services Review* 61 (1): 245–252. doi:10.1016/j.childyouth.2015.12.027.

Albarracín, D., B. T. Johnson, M. Fishbein, and P. A. Muellerleile. 2001. "Theories of Reasoned Action and Planned Behavior as Models of Condom Use: A Meta-Analysis." *Psychological Bulletin* 127 (1): 142–161. doi:10.1037/0033-2909.127.1.142.

Albertson, K., J. M. Crouch, W. Udell, A. Schimmel-Bristow, J. Serrano, and K. R. Ahrens. 2020. "Caregiver-endorsed Strategies to Improving Sexual Health Outcomes among Foster Youth." *Child & Family Social Work* 12726. doi:10.1111/cfs.12726.

Amy, D., and M. E. Courtney. 2010. "The Risk of Teenage Pregnancy among Transitioning Foster Youth: Implications for Extending State Care beyond Age 18." *Children and Youth Services Review* 32 (10): 1351–1356. doi:10.1016/j.childyouth.2010.06.002.

Aparicio, E. M., O. N. Kachingwe, J. P. Salerno, M. Geddings-Hayes, and B. O. Boekeloo. 2021. "Addressing Sexual Health among Youth in Foster Care Group Homes: A Community-Engaged Grounded Theory Study." *Sexuality Research and Social Policy* 18 (4): 1136–1147. doi:10.1007/s13178-020-00519-w.

Brasileiro, J., L. Widman, S. Spiva, and K. Norwalk. 2021. "Identifying Gaps in Training on Sexual Health for Caregivers of Adolescents in Foster Care." *Vulnerable Children and Youth Studies* 1 (1): 1–11. doi:10.1080/17450128.2021.1975859.

Buller, A. M., and M. Celine Schulte. 2018. "Aligning Human Rights and Social Norms for Adolescent Sexual and Reproductive Health and Rights." *Reproductive Health Matters* 26 (52): 38–45. doi:10.1080/09688080.2018.1542914.

Buspavanich, P., S. Lech, E. Lermer, M. Fischer, M. Berger, T. Vilsmaier, T. Kaltofen, et al. 2021. "Well-Being during COVID-19 Pandemic: A Comparison of Individuals with Minoritized Sexual and Gender Identities and Cis-Heterosexual Individuals." *PLOS ONE* 16 (6): e0252356. doi:10.1371/journal.pone.0252356.

CDC. 2021. "What Works: Sexual Health Education." 27 January 2021. https://www.cdc.gov/healthyyouth/whatworks/what-works-sexual-health-education.htm

Centers for Disease Control and Prevention. 2020. "Health Disparities in HIV/AIDS, Viral Hepatitis, STDs, and TB." 14 September 2020. https://www.cdc.gov/nchhstp/healthdisparities/africanamericans.html

Centers for Disease Control and Prevention. 2021. "STD Health Equity." Accessed 5 May 2021. https://www.cdc.gov/std/health-disparities/default.htm

Chin, H. B., T. Ann Sipe, R. Elder, S. L. Mercer, S. K. Chattopadhyay, V. Jacob, H. R. Wethington, et al. 2012. "The Effectiveness of Group-Based Comprehensive Risk-Reduction and Abstinence Education Interventions to Prevent or Reduce the Risk of Adolescent Pregnancy, Human Immunodeficiency Virus, and Sexually Transmitted Infections: Two Systematic Reviews for the Guide to Community Preventive Services." *American Journal of Preventive Medicine* 42 (3): 272–294. doi:10.1016/j.amepre.2011.11.006.

Combs, K. M., and H. Taussig. 2021a. "A Quasi-Experimental Study on Training Child Welfare Workers on Youth Sexual Health." *Research on Social Work Practice* 31 (3): 267–277. doi:10.1177/1049731520979796.

Combs, K. M., and H. Taussig. 2021b. "Child Welfare Workers' Knowledge, Attitudes, and Communication about Sexual Health with Youth Involved in Child Welfare." *Journal of the Society for Social Work and Research* 12 (2): 327–347. doi:10.1086/714436.

Constantine, W. L., P. Jerman, and N. A. Constantine. 2009. "Sex Education and Reproductive Health Needs of Foster and Transitioning Youth in Three California Counties." *Public Health Institute*, 46, 12–39.

Diamant-Wilson, R., and J. Blakey. 2019. "'Stap Up:' Sexual Socialization and Safer Sex Practices among African American Youth in Foster Care." *Child Abuse & Neglect* 88: 466–477. doi:10.1016/j.chiabu.2018.08.007.

Dworsky, A. 2018. "The Sexual and Reproductive Health of Youth in Foster Care." In *Handbook of Foster Youth*, 133–154. 1st ed. New York, NY: Routledge.

Fava, N., and L. Bay-Cheng. 2013. "Trauma-Informed Sexuality Education: Recognising the Rights and Resilience of Youth." *Sex Education* 13 (4): 383–394. doi:10.1080/14681811.2012.745808.

Field, A. 2009. "Categorical Data." In *Discovering Statistics Using SPSS*, 686–700. 3rd ed. Thousand Oaks, California: Sage Publications.

Graham, L. F., and M. Padilla. 2014. "Sexual Rights for Marginalized Populations." In *APA Handbook of Sexuality and Psychology, Vol. 2: Contextual Approaches*, edited by D. L. Tolman, L. M. Diamond, J. A. Bauermeister, W. H. George, J. G. Pfaus, and L. M. Ward, 251–266. Washington: American Psychological Association. doi:10.1037/14194-008.

Green, J., R. F. Oman, L. Minggen, and K. D. Clements-Nolle. 2017. "Long-Term Improvements in Knowledge and Psychosocial Factors of a Teen Pregnancy Prevention Intervention Implemented in Group Homes." *Journal of Adolescent Health* 60 (6): 698–705. doi:10.1016/j.jadohealth.2017.01.004.

Guttmacher Institute. 2016. "American Adolescents' Sources of Sexual Health Information." Guttmacher Institute. 12 April 2016. https://www.guttmacher.org/fact-sheet/facts-american-teens-sources-information-about-sex

Harmon-Darrow, C., K. Burruss, and N. Finigan-Carr. 2020. "'We are Kind of Their Parents': Child Welfare Workers' Perspective on Sexuality Education for Foster Youth." *Children and Youth Services Review* 108 (January): 104565. doi:10.1016/j.childyouth.2019.104565.

Hudson, A. L. 2012. "Where Do Youth in Foster Care Receive Information about Preventing Unplanned Pregnancy and Sexually Transmitted Infections?" *Journal of Pediatric Nursing* 27 (5): 443–450. doi:10.1016/j.pedn.2011.06.003.

James, S., S. B. Montgomery, L. K. Leslie, and J. Zhang. 2009. "Sexual Risk Behaviors among Youth in the Child Welfare System." *Children and Youth Services Review* 31 (9): 990–1000. doi:10.1016/j.childyouth.2009.04.014.

Johnson, N. L. 1999. "H.R.3443 - 106th Congress (1999-2000): Foster Care Independence Act of 1999." Legislation. Accessed 14 December 1999. http://www.congress.gov/

Kantor, L. M., and L. Lindberg. 2020. "Pleasure and Sex Education: The Need for Broadening Both Content and Measurement." *American Journal of Public Health* 110 (2): 145–148. doi:10.2105/AJPH.2019.305320.

Lindberg, L. D., and L. M. Kantor. 2021. "Adolescents' Receipt of Sex Education in a Nationally Representative Sample, 2011–2019." *Journal of Adolescent Health*. doi:10.1016/j.jadohealth.2021.08.027.

Lindberg, L. D., I. Maddow-Zimet, and H. Boonstra. 2016. "Changes in Adolescents' Receipt of Sex Education, 2006–2013." *Journal of Adolescent Health* 58 (6): 621–627. doi:10.1016/j.jadohealth.2016.02.004.

Lowe, M. 2018. "Sex Ed Is a Human Right. It's Time We Start Treating It like One." *SIECUS* 2018. https://siecus.org/sex-ed-is-a-human-right-its-time-we-start-treating-it-like-one/

Maloney, K. M., A. Bratcher, R. Wilkerson, and P. S. Sullivan. 2020. "Electronic and Other New Media Technology Interventions for HIV Care and Prevention: A Systematic Review." *Journal of the International AIDS Society* 23 (1): e25439. doi:10.1002/jia2.25439.

Oman, R. F., S. K. Vesely, J. Green, J. Fluhr, and J. Williams. 2016. "Short-Term Impact of a Teen Pregnancy-Prevention Intervention Implemented in Group Homes." *Journal of Adolescent Health* 59 (5): 584–591. doi:10.1016/j.jadohealth.2016.07.002.

Parkes, A., D. Wight, and M. Henderson. 2004. "Teenagers' Use of Sexual Health Services: Perceived Need, Knowledge and Ability to Access." *BMJ Sexual & Reproductive Health* 30 (4): 217–224. doi:10.1783/0000000042177225.

Robertson, R. D. 2013. "The Invisibility of Adolescent Sexual Development in Foster Care: Seriously Addressing Sexually Transmitted Infections and Access to Services." *Children and Youth Services Review* 35 (3): 493–504. doi:10.1016/j.childyouth.2012.12.009.

Ross, C., S. Kools, and K. Laughon. 2020. "it Was Only Me against the World." Female African American Adolescents' Perspectives on Their Sexual and Reproductive Health Learning and Experiences While in Foster Care: Implications for Positive Youth Development" 118. https://www-sciencedirect-com.prox.lib.ncsu.edu/science/article/pii/S0190740920306824?via%3Dihub

Sepulveda, K., and S. Williams. 2019. "Older Youth in Foster Care Need Support to Make a Successful Transition to Adulthood." *Child Trends*. Accessed 7 May 2019. https://www.childtrends.org/blog/older-youth-in-foster-care-need-support-to-make-a-successful-transition-to-adulthood

Serrano, J., J. M. Crouch, K. Albertson, and K. R. Ahrens. 2018. "Stakeholder Perceptions of Barriers and Facilitators to Sexual Health Discussions between Foster and Kinship Caregivers and Youth in Foster Care: A Qualitative Study." *Children and Youth Services Review* 88 (1): 434–440. doi:10.1016/j.childyouth.2018.03.020.

SIECUS. 2020. "The SIECUS State Profiles 2019/2020 - the State of Sex Ed." *SIECUS* 2020. https://siecus.org/state-profiles-2019-2020/

Szucs, L. E., R. Lowry, A. M. Fasula, S. Pampati, C. E. Copen, K. S. Hussaini, R. E. Kachur, E. H. Koumans, and R. J. Steiner. 2020. "Condom and Contraceptive Use among Sexually Active High School Students — Youth Risk Behavior Survey, United States, 2019." *MMWR Supplements* 69 (1): 11–18. doi:10.15585/mmwr.su6901a2.

Todd, N., and A. Black. 2020. "Contraception for Adolescents." *Journal of Clinical Research in Pediatric Endocrinology* 12 (Suppl 1): 28–40. doi:10.4274/jcrpe.galenos.2019.2019.S0003.

UNESCO. 2018. "International Technical Guidance on Sexuality Education: An Evidence-Informed Approach." https://unesdoc.unesco.org/ark:/48223/pf0000260770

UNFPA. 2019. *International Conference on Population and Development*.

Virginia, R. W., R. A. Brandon-Friedman, and G. E. Ely. 2016. "Sexual Health Behaviors and Outcomes among Current and Former Foster Youth: A Review of the Literature." *Children and Youth Services Review* 64 (May): 1–14. doi:10.1016/j.childyouth.2016.02.023.

Widman, L., S. Choukas-Bradley, S. W. Helms, C. E. Golin, and M. J. Prinstein. 2014. "Sexual Communication between Early Adolescents and Their Dating Partners, Parents, and Best Friends." *The Journal of Sex Research* 51 (7): 731–741. doi:10.1080/00224499.2013.843148.

Widman, L., C. E. Golin, K. Kamke, J. L. Burnette, and M. J. Prinstein. 2018. "Sexual Assertiveness Skills and Sexual Decision-Making in Adolescent Girls: Randomized Controlled Trial of an Online Program." *American Journal of Public Health* 108 (1): 96–102. doi:10.2105/AJPH.2017.304106.

World Association of Sexology. 2014. *World Association of Sexology Declaration of Sexual Rights*, 1.
World Health Organization. 2021. "Sexual Health." *Sexual Health*. https://www.who.int/westernpacific/health-topics/sexual-health
Zewditu, D., H. B. Clayton, and R. L. Dunville. 2019. "Association between Receipt of School-Based HIV Education and Contraceptive Use among Sexually Active High School Students — United States, 2011–2013." *Sex Education* 19 (2): 237–246. doi:10.1080/14681811.2018.1501358.