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Associations between adverse childhood experiences and contraceptive use among young adults in Honduras

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Abstract

Objective: Research on adverse childhood experiences (ACEs) and use of modern contraception is limited in Honduras. The government has made substantial gains in promoting modern contraception. Young adults experience high rates of violence. The aim of this study was to assess the relationship between ACEs and contraceptive behaviors among young women and men.

Methods: We used data from 810 women and 753 men aged 18–24 years from the 2017 Honduras Violence against Children Survey, a cross-sectional, nationally representative household survey of childhood adversity. We assessed associations between ACEs and three contraceptive use outcomes: use versus nonuse of modern contraceptives; use of methods requiring medium/high or low programmatic support among current contraceptive users; and frequent versus infrequent condom use.

Findings: Exposure to physical or emotional abuse and witnessing violence in the home was not significantly associated with the three contraceptive use outcomes for men or women. Sexual abuse and parental separation reduced odds of contraceptive use among women (Odds Ratio (OR) < 0.60) but not among men. In contrast, orphan status increased odds of modern contraception use among men (OR 1.93) and frequent condom use among women (OR 2.22).

Conclusion: The inconsistent direction and magnitude of associations between ACEs and modern contraceptive use among young men and women suggests divergent relationships between ACEs and sexual and reproductive health behaviors. Results may highlight the strength of norms around contraceptive use and/or widespread access to community-based family planning programs and comprehensive sexuality education, irrespective of exposure to ACEs in Honduras.

Keywords

Adverse childhood experiences; Childhood violence; Childhood abuse; Contraceptive use; Honduras

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1. Introduction

In low- and middle-income countries (LMICs), adverse childhood experiences (ACEs) (i.e., potentially traumatic events that occur before age 18 years (Felitti et al., 1998) are common (Hillis et al., 2016), but preventable (Metzler et al., 2017). ACEs include physical abuse, sexual abuse, emotional abuse, witnessing violence, and other household challenges (Le et al., 2018). In LMICs, many children experience concurrent exposure to multiple ACEs (Le et al., 2018), which can have lasting effects on health, behaviors, and opportunity through changes in brain development and how individuals respond to stress (Felitti et al., 1998; Metzler et al., 2017).

A developing body of evidence suggests that ACEs may have far reaching effects on sexual and reproductive health (Hillis et al., 2001; Hughes et al., 2017). Adults exposed to childhood violence more often report high-risk sexual behaviors, such as multiple sexual partners (Annor et al., 2020; Dube et al., 2003; Felitti et al., 1998; Hillis et al., 2001; Hughes et al., 2017), early sexual initiation (Hillis et al., 2001; Hughes et al., 2017), and infrequent condom use (Annor et al., 2020; Mosack et al., 2010; VanderEnde et al., 2018). Exposure to ACEs is also associated with adolescent pregnancy (Hillis et al., 2004; Hughes et al., 2017), unintended pregnancy (Dietz et al., 1999), repeat induced abortion (Bleil et al., 2011), and history of sexually transmitted infections (STIs) (Dube et al., 2003; Felitti et al., 1998; Hillis et al., 2000; Hughes et al., 2017; Norman et al., 2012). There are multiple theorized mechanisms linking ACEs to sexual and reproductive health outcomes. Some studies indicate that community violence, for example, may influence sexual behaviors broadly through aggression, negative peer norms (Voisin et al., 2008; Voisin et al., 2018), and gang membership (Voisin et al., 2008), highlighting the role of structural forms of violence on reproductive health. Additionally, any form of violence may influence reproductive decisions through an individual's perceived ability to communicate about sexuality and contraception (Hovsepian et al., 2010). It is also possible that ACEs could impact sexual and reproductive health through alternative pathways such as depression, anxiety, and substance use (Mair et al., 2012; Strine et al., 2012).

Less studied are associations between ACEs and use of contraception in young adulthood, with the exception of male condoms. Evidence from two studies in the U.S. suggest that for women and girls, childhood physical, sexual, and/or emotional abuse are associated with quicker discontinuation of hormonal contraception (Allsworth et al., 2013), inconsistent contraceptive use (Nelson & Lepore, 2015), and difficulty obtaining a contraceptive prescription (Nelson & Lepore, 2015). Young women and girls exposed to abuse at any point in their lives may also be more likely to choose methods that can be used covertly (Allsworth et al., 2013), such as injectables. Outside of the U.S., we found only one study examining the relationship between sexual violence (occurring both in childhood and early adulthood) and modern contraceptive use; youth who ever experienced sexual violence were less likely to use modern contraception and more likely to have unmet need for contraception in Colombia (Gomez, 2011). ACEs may influence contraceptive behaviors through similar pathways as those of other sexual and reproductive health outcomes. Additionally, exposure to ACEs may reduce contraceptive self-efficacy (Hovsepian et al., 2010) and increase exposure to other risk-factors, such as intimate partner violence

(Abramsky et al., 2011), that may have negative implications for contraceptive use (Gee et al., 2009; Miller et al., 2010). To our knowledge, no studies have assessed the relationship between exposure to multiple ACEs and modern contraceptive use in a LMIC and/or included the experiences of men.

The relationship between family planning behaviors and childhood exposure to adversity may differ by context and by gender. How individuals obtain contraception is different by setting, and method use is constrained by access to and quality of family planning services within one's environment (Downing et al., 2007; Grindlay & Grossman, 2016). In the U.S., for example, women require a prescription for oral contraceptives, while in South America, women are able to obtain pills informally or legally without a prescription (Grindlay et al., 2013). ACEs have been linked to poor health care utilization (Hargreaves et al., 2019), and Nelson and Lepore (2015) found that U.S. women who experienced childhood abuse had more difficulty obtaining a contraceptive prescription. However, in settings where pills and condoms dominate the contraceptive method mix and do not require a prescription, this finding may not be generalizable. Between women and men, differences in the prevalence of ACEs (Cunningham et al., 2014) and in the impact of certain ACEs on health outcomes (Cunningham et al., 2014; Haatainen et al., 2003) have been observed. With regards to family planning, most services are geared towards women, and men are limited in their choices for personally using contraception. However, male partner approval and partner communication may be key factors in family planning decision making (Kimuna & Adamchak, 2001), and men and women may differ in their preferences for methods and how they make contraceptive decisions (Grady et al., 1999; Huber-Krum & Norris, 2020). Given these gendered differences in contraceptive use, how exposure to ACEs influences family planning behaviors may be different between women and men.

The aim of this study was to assess the relationship between ACEs and contraceptive behaviors among young women and men in Honduras. We hypothesized that ACEs would be negatively associated with contraceptive use outcomes of interest, for both women and men. Honduras experiences high rates of violence against children: in 2015, the estimated number of homicides among children and adolescents aged 0–19, per 100,000, was over 35 (United Nations Children Fund, 2017). NGOs report that this violence is in due part to gang violence and other organized crime which primarily targets children, and lack of educational and economic opportunities further places children at risk to exposure to violence (KIND Kids in Need of Defense, 2019).

Additionally, many girls marry (legally or informally) and begin childbearing before age 18 years in Honduras (UNICEF, 2020), despite the minimum age of marriage of 18 years for both boys and girls. Across Latin America and the Caribbean, many girls enter into sexual relationships at early ages, then enter into early unions, and begin childbearing quickly after that (Heaton et al., 2002). Qualitative studies report that while girls may marry early due to their own personal desires for intimate relationships and motherhood, strict control over female sexuality and relationships with boys and men often pushes girls into early sexual relationships (Murphy-Graham & Leal, 2015; Taylor et al., 2019) that could have implications for early childbearing and adult sexual and reproductive health. In 2018, Honduras experienced a rate of adolescent births of 71.8 births per 1000 women aged

15–19 years (The World Bank Group, 2020); 45% of adolescents' births are unplanned (Guttmacher Institute & International Planned Parenthood Federation, 2014).

The context of violence in Honduras and early childbearing may be linked. Increased exposure to violence and other ACEs may increase risk of early marriage and subsequent childbearing behaviors. For example, girls may enter into marriages or intentionally become pregnant to escape childhood violence and/or increased household responsibilities as a result of parental abandonment and/or parental migration in Honduras (UNFPA, 2019). Further, childhood sexual abuse may be normalized in the context of adult male and adolescent female relationships and may viewed as a marker of masculinity for men (Taylor et al., 2019; UNFPA, 2019).

Honduras has made gains in use of modern contraceptive methods among youth, partially attributable to the ministerial declaration "Preventing through Education" signed in 2010 (First Meeting of Ministers of Health and Education to Stop HIV and STIs in Latin America and the Caribbean, 2010). Between 2010 and 2015, the Honduran Government and private sector continued to prioritize family planning programs in an effort to reduce maternal and child mortality and promote individuals' reproductive goals (USAID, 2016). As a result of strategic efforts and partnerships with international organizations (USAID, 2016), public facilities provide female sterilization, implants, condoms, pills, and injectables at no cost. However, many women continue to pay high out-of-pocket costs (Health Policy Plus, 2016), and emergency contraception and induced abortion for any reason are banned (Guttmacher Institute & International Planned Parenthood Federation, 2014). Prevalence of modern contraception is low to moderate: 44% of all women and 66% of married women used modern contraception in 2019 (Family Planning 2020, 2019). Among women aged 15–24 years, the most common methods are pills, injectables, and condoms (Secretaría de Salud [Honduras], Instituto Nacional de Estadística (INE), & ICF International, 2013), which are typically the most accessible methods in LMICs. Despite low to moderate use of modern contraception, 87% of women aged 15–19 years reported that they know where to obtain a condom and reported that, on average, they have heard about six modern contraceptive methods (Guttmacher Institute & International Planned Parenthood Federation, 2014).

2. Methods

2.1. Data

We used data from the 2017 Honduras Violence Against Children Survey (VACS) (Government of Honduras, 2019), a cross-sectional, nationally representative household survey of non-institutionalized girls and boys aged 13–24 years. The research team utilized a three-stage cluster sampling design and split sample approach to randomly select eligible girls and boys. The research team randomly selected primary sampling units (enumeration areas) were from the latest population census data and an additional stratum was selected to include five urban areas: Tegucigalpa, San Pedro Sula, Choloma, Tela, and La Ceiba. To protect confidentiality and ensure safety, the research team used a split sample approach so that enumeration areas were randomly assigned for female or male interviews only. To be included in the survey, a participant had to be living in a selected household, be between the ages of 13 to 24 years at the time of the survey and be fluent in Spanish. Females and males

who did not have the capacity to understand and/or respond to the survey questions due to a cognitive impairment or significant physical disability were ineligible to participate.

The interviews were administered face-to-face in Spanish by local trained field staff. Interviewers and team leaders underwent considerable training by local trainers with direct involvement from the National Statistics Institute who conduct all surveys in the country and international colleagues. Trainers conducted employed a combination of theory and practical assessments throughout the training period. Interviewers and team leaders were identified by the National Statistics Agency and drawn from a pool of subjects who had previous experience in Honduras conducting other surveys.

The overall response rate was 83.8% for females and 74.6% for males (Government of Honduras, 2019). The total sample size was 5196 (females = 2537, males = 2659). The survey was approved by the Ethics Committee of the National Autonomous University of Honduras and the Centers for Disease Control and Prevention (CDC) Institutional Review Board. Ethical and safety procedures adapted from World Health Organization and UNICEF guidelines for research on violence were implemented at all stages of the study (Nguyen et al., 2019; World Health Organization, 2001).

2.2. Measures

2.2.1. Outcomes—Participants were asked to list the contraceptive methods they used to avoid pregnancy with the most recent sexual partner in the past year, if they responded that they had being doing something or using any method to delay or avoid pregnancy. Participants could select multiple methods and were able to refuse to answer or could respond, “Don’t know”. We counted use of the most effective method, based on 12 month failure rates (Bradley et al., 2019). For example, if a participant indicated that they used withdrawal (failure rate = 17.3) and pills (failure rate = 6.3), then they were categorized as using pills. Twelve-month failure rates of contraceptive methods are: implant = 0.3; IUD = 1.2; injectable = 2.0; pill = 6.3; condom = 8.6; withdrawal = 17.3; periodic abstinence = 19.0 (Bradley et al., 2019).

2.2.1.1. Modern contraceptive use.: The first outcome was a binary variable indicating use or nonuse of modern contraception. Modern contraception was defined as lactational amenorrhea method (LAM), diaphragm, female condom, male condom, pill, injectable, implant, intrauterine device (IUD), male sterilization, and female sterilization (Festin et al., 2016).

2.2.1.2. Use of methods requiring high/medium or low programmatic support.: The second outcome was a binary variable indicating use of methods that require either high/medium or low programmatic support. In recognition that other contraceptive attributes are important in contraceptive decisions and in national family planning programs (Festin et al., 2016), we sought to understand how the level of need for program support was associated with ACEs. Methods that require high/medium programmatic support are those that may require a clinical visit but must be provided with a trained and skilled provider, including male and female sterilization, implants, IUDs, injectables, and LAM (Festin et al., 2016). Methods that require low programmatic support are those that can be provided in informal

settings, over the counter, or in community distribution programs, including pills, male and female condoms, and diaphragms (Festin et al., 2016).

2.2.1.3. Frequent condom use.: The third outcome was a binary variable indicating frequent versus infrequent condom use. Participants were asked, “In the past 12 months when you had sex with this person, how often did you use a condom? Would you say always, sometimes, or never?” Participants who responded “sometimes” or “never” were categorized as infrequent condom users. Condom use could have included male or female condoms.

2.2.2. Exposures—The primary exposures included in the analysis were six ACEs indicators before age 18 years. Childhood abuse items included whether the participant retrospectively reported that they had experienced physical abuse perpetrated by anyone; emotional abuse perpetrated by a parent, adult caregiver, or other adult relative; or sexual abuse perpetrated by anyone. The household challenge indicators included were whether the participant reported witnessing physical violence in their home, being separated from either biological parent for six months or more or becoming an orphan (either biological parent died).

Three variables were computed to summarize ACEs exposures. First, we created a continuous variable measuring the number of ACEs experienced. Next, we created a categorical summative scale for ACEs experienced (categorized as 0, 1, 2, or 3 or more ACEs). Finally, we created a binary variable indicating whether a participant had experienced any ACE.

2.2.3. Covariates—We included demographic covariates in the multivariable regression models, including: age in years, education (none, less than primary, primary, secondary, higher than secondary), work status (worked or not), household economic status (low, middle, high), ever married (ever married or not), ever pregnant (ever pregnant or not; asked only for females), and number of sexual partners in the past year. Household economic status was created using a modified version of the Simple Poverty Scorecard™ Honduras (Schreiner, 2010). Six indicators were used (number of household members ≤ 14 years; number of bedrooms; construction material of floors; source of water; refrigerator ownership; television ownership) to tally a household score. Household economic status was assigned as lowest, middle, or highest tertile based on the overall score distribution.

2.3. Analysis

We limited the analysis to participants aged 18–24 years who reported having sex within the past year, resulting in a total sample size of 810 women and 753 men. We calculated descriptive statistics and used chi-square tests to assess statistical differences in characteristics and contraceptive use among women and men. We accounted for sample design, non-response, and within-country clustering (Nguyen et al., 2019 provides a full description of weighting methodology (Nguyen et al., 2019).

Next, we conducted multivariable regression analysis to assess the relationship between ACEs and contraceptive use, with separate models for women and men. We used logistic

regression with listwise deletion to examine the relationships between ACEs and use of modern contraception, use of high/medium programmatic methods, and frequent condom use. We controlled for the relationship between selected demographic characteristics – age, education, ever married, household economic status, work status, and number of sexual partners in the past year – and contraceptive outcomes. Multivariable regression models for women included a control for ever pregnant. Fertility history was not collected for men. Statistical significance was set at $p < 0.05$, with 95% confidence intervals. Data analysis was conducted using Stata SE version 16 (StataCorp, 2019).

3. Results

3.1. Background characteristics

On average, women were 21.2 years of age and men were 21.0 years of age (Table 1). Many participants had completed primary school (44.5% of women and 42.2% of men). Approximately 49% of men had ever been married, while 84.1% of women had ever been married. Many women were classified as having a low household economic status (41.4%), while 46.8% of men were classified as having a high household economic status. Only 38.9% of women were employed in the past year compared to 84.4% of men. Twenty-one percent of women had ever been pregnant. Most participants had either one or two sexual partners in the past year.

Modern contraceptive use was high: 76.3% of women and 77.1% of men reported using a modern method. The most used method for women was injectables (33.0%) followed by male condoms (17.5%) and pills (16.2%). For men, the most used method was male condoms (53.1%) followed by injectables (12.0%) and pills (7.8%). Few participants reported using male or female sterilization, long-acting reversible methods, such as implants and IUDs, or traditional methods, such as rhythm and withdrawal.

Large differences in women's and men's reports of frequent condom use were observed. Only 11.4% of women, compared to 45.5% of men, reported frequent condom use. Further, most men relied on methods that do not require clinical visits or provision by trained and skilled providers (79.2%), while most women used methods that require provision by trained and skilled providers (55.6%).

3.2. Exposure to ACEs

Overall, 75.5% of women and 65.3% of men reported exposure to any ACE (Table 2). Parental separation was a common ACEs type: 49.3% of women and 40.1% of men reported that they had been separated from either biological parent for six or more months during childhood. Although childhood abuse was common for both women and men, larger proportions of women were exposed to the various forms of ACEs. Exactly 35.7% of women and 32.1% of men reported that they had experienced physical abuse. Compared to men, almost double the proportion of women reported exposure to sexual abuse (men = 11.1%, women = 18.4%) or emotional abuse (men = 7.0%, women = 13.9%).

3.3. Multivariable results

In the multivariable analyses, after adjusting for age, education, ever married, household economic status, work status, and number of sexual partners in the past year (and ever pregnant for women), physical and emotional abuse and witnessing violence in the home were not significantly associated with the three contraceptive outcomes (Table 3). Exposure to sexual abuse, orphan status, and parental separation displayed some significant, albeit inconsistent, relationships across the outcomes and by sex.

Among women, sexual abuse was significantly associated with lower odds of modern contraceptive use but was not significantly associated with frequent condom use or use of a medium/high programmatic method. Women who reported exposure to sexual abuse in childhood had 44% lower odds (OR 0.56; 95% Confidence Interval (CI): 0.34, 0.91) of using modern contraception than women who did not report sexual violence. Among men, sexual abuse was not related to any contraceptive outcomes.

Among men, orphan status was significantly associated with higher odds modern contraceptive use (OR 1.93; 95% CI: 1.04, 3.58) but was not significantly associated with frequent condom use or use of a medium/high programmatic method among current modern method users. Among women, orphan status was not associated with modern contraceptive use or use of a medium/high programmatic method. However, orphan status was significantly associated with increased odds of frequent condom use (OR 2.22; 95% CI: 1.09, 4.51).

Parental separation was unrelated to modern contraceptive use and frequent condom use for both men and women. However, women who were separated from their biological parents for six months or more as children had 41% lower odds (OR 0.59; 95% CI: 0.39, 0.92) of using methods that require medium/high rather than low programmatic support, compared to women who did not experience parental separation.

There were no graded relationships between number of ACEs and modern contraceptive use or frequent condom use. However, we observed a relationship between number of ACEs experienced and use of a medium/high programmatic method among women who were current modern contraceptive users. Women who experienced any ACE had 61% lower odds (OR 0.39; 95% CI: 0.24, 0.63) of using a medium/high programmatic method versus a low programmatic method compared to women who did not experience any ACE. The greater number of ACEs that a woman was exposed to the lower the odds she had of using a medium/high programmatic method (OR 0.77, 95% CI: 0.65, 0.91).

4. Discussion

The evidence base on ACEs and sexual and reproductive health outcomes is nascent in LMICs (Grose et al., 2021). This study fills two important gaps in the literature by investigating the relationships between ACEs and contraceptive use in Honduras and by understanding how these relationships differ between young women and men.

In this sample of young adults, the majority experienced ACEs, with women bearing a larger burden of exposure to violence and household challenges. Modern contraceptive use was high; although, among women, method mix was slightly skewed towards injectables. We found that sexual abuse in childhood was predictive of lower use of modern contraceptive use among women, similar to a past study carried out in Colombia (Gomez, 2011) and consistent with results of a recently conducted systematic review of gender-based violence and sexual and reproductive health among women in LMICs (Grose et al., 2021). Childhood sexual abuse is positively associated with general sexual dysfunction and negatively associated with sexual pleasure (Grose et al., 2021), which may affect individuals' contraceptive preferences and choices. Further, mental health, substance use, and social networks, risk factors for adverse sexual and reproductive health outcomes, may be associated with childhood sexual abuse and disrupt normal developmental pathways (Miller, 1999). Research into the effects of sexual abuse on contraceptive use tends to focus on violence within intimate partnerships in adulthood (Maxwell et al., 2015). Our results suggest that the effects of sexual abuse in childhood are long-lasting, and childhood exposure is relevant to contraceptive use among young adult women.

In general, however, we found inconsistent direction and magnitude of associations between ACEs and contraception, suggesting divergent relationships between ACEs on various sexual and reproductive health behaviors. Given that self-reported contraceptive use was high, the lack of consistent associations between ACEs and contraceptive use may highlight the greater salience of structural and/or social factors on contraceptive use among young women and men. For example, community norms around gender and power, fertility preference and practices, and perceptions of contraceptive technologies may have informed women and men's contraceptive behaviors (Dynes et al., 2012; Hall et al., 2014). In a qualitative study, women in rural Honduras were knowledgeable about and approved of contraceptive methods, and community norms appeared to be shifting in favor of contraceptive use, even as gender norms lagged behind (Hall et al., 2014). Social network analyses among women in Honduras found village-level norms within cohesive social networks influence individual reproductive outcomes (Shakya et al., 2019). Further research on the effect of community norms on women's and men's contraceptive use in LMICs, and Honduras specifically, is warranted (Costenbader et al., 2017).

It may also be that structural access or barriers to community-based family planning programs and comprehensive sexuality education are more salient predictors of contraceptive use among young adults in low-resource settings with high baseline levels of violence, irrespective of childhood experiences (Hall et al., 2014). The high levels of women's and men's reported contraceptive use in this study provide little evidence of unmet need for short-acting contraceptive methods, although youth in rural areas may face greater barriers to care (Hall et al., 2014). Many modern contraceptive users were using methods that required low programmatic support, suggesting that young women may face barriers obtaining highly effective methods, such as long-acting reversible contraception, or prefer short-acting/non-hormonal methods, due to fertility preferences. It is also possible that exposure to ACEs has a direct impact on fertility desires and distal determinants of fertility, such as education and opportunity, that mediate these relationships. Understanding

these mechanisms is critical to identifying points of interventions and modifiable risk-factors so that women's and men's contraceptive needs are met.

We note that most men in our sample reported use of low programmatic methods, and this is due to the majority of men reporting use of the male condom. Men have been shown to underreport their female partner's contraceptive use and overreport male condom use – even when married (Becker et al., 2006; Koffi et al., 2012). Overreporting of condom use by men may be due to social desirability bias because male condoms are a male-controlled method of contraception and many other methods (e.g., IUD, implant, pills, injectables) are female-controlled. Men may also overreport condom use because the method is coital dependent; thus, when asking about current use of contraception or if any contraception was used to avoid pregnancy, frequency is not often taken into consideration. Finally, many female-controlled methods can be used without the knowledge of male partners. Thus, men in our sample may not have been aware that their female partner was using contraception or which method she was using. High-quality data on couple's contraceptive use would be beneficial to better understanding choices in method use, and how distal factors are related to use of family planning broadly and of methods specifically.

4.1. Limitations

The VACS do not include data on children and youth living outside of family care (e.g., youth who are experiencing homelessness). Thus, the sample potentially excludes youth who are most-at-risk for violence victimization and having unmet need for modern contraception. Additionally, the survey was cross-sectional and retrospectively asked participants about their exposure to ACEs. Thus, causality cannot be determined, and reports are subject to recall and social desirability bias. Further, some potential confounders were not asked about in the survey, such as fertility desires, past contraceptive use, fertility history, and relevant social and cultural factors (e.g., religiosity, machismo, and monogamy), which may bias the results. We also did not have data about frequency of contraceptive use (with the exception of male condoms) or correct use of contraception. Thus, we could have overestimated level of protection from pregnancy. Finally, results cannot be generalized to youth who have not had sex in the past year. However, these youth are not at-risk for pregnancy and may be less likely to use contraception.

4.2. Conclusions

Our study expands the evidence base on the relationships between ACEs and sexual and reproductive health among young women and men in LMICs. No other studies, to our knowledge, have investigated how multiple ACEs are related to contraceptive use among male and female youth in a LMIC – where young women are at increased risk for unmet contraceptive need and unintended pregnancy (AbouZahr, 2003; Tsui et al., 2010). Further, family planning behaviors among males, especially boys and young men, are often overlooked (Hardee et al., 2017a). Thus, it is often unclear how childhood adversity may influence their use of contraception. Understanding how ACEs influence key health issues across the lifespan helps inform programs and policies that can work to simultaneously prevent ACEs and improve adolescent sexual and reproductive health, such as the seven

INSPIRE Strategies for Ending Violence Against Children (World Health Organization, 2016).

Programs and policies could better support women, men, and couples achieve their reproductive desires by addressing systemic and structural issues, like ACEs and childhood abuse, that can have lasting influence on contraceptive decision-making. Further, family planning programs should consider how to make services more accessible to populations of women and men who might have experienced ACEs, like childhood sexual abuse, that may result in adverse sexual and reproductive health outcomes. Providers can also support patients by screening for abuse, providing positive and empowering messages, providing referrals for counseling, and practicing empathic care (American College of Obstetricians and Gynecologists, 2011). Further, patient-centered family planning care is critical to meeting the needs diverse groups of women and men and promoting patient autonomy and full and free choice of methods. Patient-centered counseling should be utilized to elicit patient preferences and values about contraceptive methods and integrate evidence-based recommendations.

Programmatic approaches to reducing unintended pregnancy have generally focused on women, and men may not be well served by programs (Hardee et al., 2017b). Often, men have been engaged in family planning efforts as the “supportive partner” role, and less programs have focused on men’s own reproductive health or the context-dependent ways in which women and men collaborate to make decisions about reproductive health (Wentzell & Inhorn, 2014). Future development of programs should provide information to men about all available contraceptive methods (particularly at facilities that men frequent for contraception, such as pharmacies), incorporate messages reflecting gender equity and men as engaged partners and fathers, promote dialogue about contraception between couples and within communities, teach men and boys about healthy sexuality and relationships, and create more contraceptive options for men (Hardee et al., 2017a). Strategies that incorporate men into family planning, such as male motivators, social marketing, comprehensive sexuality education, and community dialogues, have proven or are promising to improve sexual and reproductive health outcomes (Hardee et al., 2016). Understanding men’s contraceptive use, and the context surrounding use, will help inform these programs and promote policies that more deeply engage men in family planning.

4.3. Disclaimers and acknowledgements

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Table 1

Selected characteristics of sexually active women and men aged 18–24 years in Honduras, Violence Against Children Survey, 2017.

	Women (*n* = 810) Weighted % (95% CI)		Men (*n* = 753) Weighted % (95% CI)	
Demographic				
Age, weighted mean	21.2	(21.0, 21.3)	21.0	(20.9, 21.2)
Education				
None	1.4	(0.7, 2.8)	1.7	(0.9, 3.1)
Less than primary	11.5	(8.6, 15.1)	4.6	(3.0, 7.1)
Primary	44.5	(40.0, 49.2)	42.2	(37.5, 47.0)
Secondary	32.2	(28.5, 36.2)	38.7	(34.0, 43.6)
Higher than secondary	10.4	(8.0, 13.5)	12.8	(10.0, 16.2)
Ever married				
No	15.9	(13.0, 19.2)	51.5	(46.7, 56.3)
Yes	84.1	(80.8, 87.0)	48.5	(43.7, 53.2)
Household economic status				
Low	41.4	(36.2, 46.8)	26.8	(22.5, 31.6)
Middle	34.6	(30.5, 38.8)	26.5	(23.1, 30.2)
High	24.0	(20.4, 28.1)	46.8	(42.0, 51.5)
Employed in the past year				
No	61.1	(56.9, 65.1)	15.6	(12.5, 19.3)
Yes	38.9	(34.9, 43.1)	84.4	(80.7, 87.5)
Number of sexual partners in the past year, weighted mean	1.0	(1.0, 1.1)	1.6	(1.5, 1.8)
Ever pregnant[a]				
No	78.7	(75.3, 81.7)		
Yes	21.3	(18.3, 24.7)		
Contraceptive				
Current family planning use				
None	21.7	(18.7, 25.2)	20.7	(16.8, 25.2)
Female sterilization	0.8	(0.4, 1.6)	0.6	(0.3, 1.2)
Male sterilization	-	-	0.1	(0.0, 1.0)
Intrauterine device	4.9	(3.5, 6.8)	2.5	(1.5, 4.2)
Injectable	33.0	(29.0, 37.2)	12.0	(9.7, 14.8)
Implant	3.3	(2.2, 4.9)	0.8	(0.4, 1.7)
Oral contraceptive pills	16.2	(13.2, 19.8)	7.8	(6.1, 10.0)
Male condom	17.5	(14.7, 20.8)	53.1	(48.5, 57.7)
Diaphragm	0.2	(0.0, 1.3)	0.1	(0.0, 0.9)
Lactational amenorrhea method	0.4	(0.1, 1.5)	-	-
Rhythm method	1.5	(0.8, 2.7)	0.7	(0.2, 1.9)
Withdrawal	0.5	(0.2, 1.1)	1.6	(0.7, 3.4)
Modern contraceptive use				

	Women (*n* = 810) Weighted % (95% CI)		Men (*n* = 753) Weighted % (95% CI)	
No	23.7	(20.6, 27.1)	22.9	(18.9, 27.5)
Yes	76.3	(72.9, 79.4)	77.1	(72.5, 81.2)
Frequent condom use				
No	88.6	(85.8, 90.9)	54.5	(50.2, 58.7)
Yes	11.4	(9.1, 14.2)	45.5	(41.3, 49.8)
Need for program support[b]				
Low	44.4	(39.7, 49.3)	79.2	(75.2, 82.7)
High/medium	55.6	(50.7, 60.3)	20.8	(17.3, 24.8)

[a]Men were not asked about pregnancy history.

[b]Among participants using modern contraception; sample size for women is 615 and men is 575.

Table 2

Prevalence of ACEs among sexually active 810 women and 753 men aged 18–24 years in Honduras, Violence Against Children Survey, 2017.

Type of ACE indicators		Women Weighted % (95% CI)	Men Weighted % (95% CI)
Childhood abuse			
Physical abuse before age 18 years		35.7 (31.6, 40.1)	32.1 (28.0, 36.6)
A.	Has a parent/adult caregiver/other adult relative ever: (1) slapped, pushed, shoved, shook, or intentionally threw something at you to hurt you? (2) punched, kicked, whipped, or beat you with an object? (3) choked, smothered, tried to drown you, or burned you intentionally? (4) used or threatened you with a knife, gun or other weapon?[a]		
B.	Has a girlfriend/boyfriend, romantic partner or spouse ever: (1) slapped, pushed, shoved, shook, or intentionally threw something at you to hurt you? (2) punched, kicked, whipped, or beat you with an object? (3) choked, smothered, tried to drown you, or burned you intentionally? (4) used or threatened you with a knife, gun or other weapon?[a]		
C.	Has a person your own age ever: (1) slapped, pushed, shoved, shook, or intentionally threw something at you to hurt you? (2) punched, kicked, whipped, or beat you with an object? (3) choked, smothered, tried to drown you, or burned you intentionally? (4) used or threatened you with a knife, gun or other weapon?[a]		
D.	Has an adult in your community ever: (1) slapped, pushed, shoved, shook, or intentionally threw something at you to hurt you? (2) punched, kicked, whipped, or beat you with an object? (3) choked, smothered, tried to drown you, or burned you intentionally? (4) used or threatened you with a knife, gun or other weapon?[a]		
Emotional abuse before age 18 years		13.9 (11.3, 17.0)	7.0 (5.0, 9.5)
A.	Has a parent/adult caregiver/other adult relative often: (1) told you that you were not loved, or did not deserve to be loved? (2) said they wished you had never been born or were dead? (3) ever ridiculed you or put you down, for example said that you were stupid or useless?[b]		
Sexual abuse before age 18 years		18.4 (15.7, 21.5)	11.1 (9.0, 13.6)
A.	Has anyone ever touched you in a sexual way without your permission, but did not try and force you to have sex?[a]		
B.	(1) Has a romantic partner, ex-romantic partner, spouse, or ex-spouse ever tried to make you have sex against your will but did not succeed? (2) Has anyone else ever tried to make you have sex against your will but did not succeed?[a]		
C.	(1) Has a romantic partner, ex-romantic partner, spouse, or ex-spouse ever physically forced you to have sex and did succeed? (2) Has anyone else ever physically forced you to have sex and did succeed?[a]		
D.	(1) Has a romantic partner, ex-romantic partner, spouse, or ex-spouse ever pressured you to have sex, through harassment, threats or tricks and did succeed? (2) Has anyone else ever pressured you to have sex, through harassment, threats or tricks and did succeed?[a]		
Household challenges			
Orphan status (either parent) before age 18 years		13.4 (10.4, 17.0)	10.3 (8.0, 13.1)
A.	Is your biological mother still alive?[c]		
B.	Is your biological father still alive?[c]		

Type of ACE indicators	Women Weighted % (95% CI)	Men Weighted % (95% CI)
Parental separation (either parent) before age 18 years	49.3 (45.2, 53.5)	40.1 (35.7, 44.6)
A. Has your biological mother ever lived away from you for 6 months or more?[d]		
B. Has your biological father ever lived away from you for 6 months or more?[d]		
Witnessed violence in the home before age 18 years	26.4 (23.0, 30.1)	16.7 (14.0, 19.9)
A. How many times did you see or hear your parent punched, kicked or beaten up by your other parent, or their boyfriend or girlfriend? Would you say never, once, or more than once?[e]		
B. How many times did you see or hear a parent punch, kick, or beat your brothers or sisters?		
Never, once, more than once or I have no brothers or sisters?[e]		
ACE indicators		
Experienced any ACE	75.5 (71.6, 79.0)	65.3 (60.9, 69.5)
Categories of ACEs	24.5 (21.0, 28.4)	34.7 (30.5, 39.1)
1	28.8 (25.7, 32.2)	32.5 (29.3, 35.9)
2	22.8 (19.8, 26.1)	18.8 (15.8, 22.3)
3 or more	23.8 (20.2, 26.1)	13.9 (11.3, 17.1)
Number of ACEs, weighted mean	1.6 (1.5, 1.7)	1.2 (1.1, 1.3)

Abbreviations: ACE = Adverse childhood experience.

[a]Participants who responded that any of these events occurred were asked, "How old were you the first time this happened?" If participants reported that the event occurred before age 18 years, then we categorized them as experiencing the violence.

[b]Participants who reported that any of these events occurred were asked, "Did this happen before age 18?" If participants responded "yes", then we categorized them as experiencing emotional violence.

[c]Participants who reported that their biological parent was not still alive were asked "How old were you when she/he died?" If participants reported that the death occurred before age 18 years, then we categorized them as experiencing parental death.

[d]Participants who reported that their biological parent lived away from them were asked, "How old were you when she left for the first time?" If participants reported that the event occurred before age 18 years, then we categorized them as experiencing parental separation.

[e]Participants were asked to recall events only prior to age 18 years. Participants who responded that they witnessed violence once or more than once were categorized as having witnessed violence.

Table 3

Odds ratios (and 95% confidence intervals) from multivariable regression analyses examining the associations between ACEs and contraceptive use with last sexual partner among sexually active women and men aged 18–24 years in Honduras, Violence Against Children Survey, 2017.

	Modern contraceptive use versus nonuse		Medium/high versus low programmatic method use		Frequent versus infrequent condom use	
	Women (n = 810)	Men (n = 753)	Women (n = 615)	Men (n = 575)	Women (n = 810)	Men (n = 753)
Childhood abuse						
Physical Abuse	1.05 (0.74, 1.1)	1.24 (0.77, 1.99)	0.77 (0.51, 1.16)	1.25 (0.72, 2.18)	0.77 (0.43, 1.39)	0.89 (0.56, 1.40)
Emotional Abuse	0.98 (0.59, 1.64)	0.78 (0.35, 1.76)	0.96 (0.53, 1.73)	1.13 (0.51, 2.52)	0.64 (0.28, 1.47)	0.79 (0.35, 1.80)
Sexual Abuse	0.56 * (0.34, 0.91)	1.61 (0.74, 3.51)	0.69 (0.40, 1.19)	1.13 (0.50, 2.59)	1.17 (0.55, 2.47)	0.91 (0.46, 1.79)
Household challenges						
Orphan status	1.62 (0.91, 2.90)	1.93 * (1.04, 3.58)	0.67 (0.38, 1.16)	0.98 (0.39, 2.42)	2.22 * (1.09, 4.51)	1.02 (0.54, 1.94)
Parental separation	0.96 (0.65, 1.43)	1.24 (0.82, 1.86)	0.59 * (0.39, 0.92)	1.23 (0.70, 2.16)	1.23 (0.70, 2.13)	0.95 (0.64, 1.41)
Witnessed violence in home	0.90 (0.58, 1.39)	0.80 (0.42, 1.52)	1.06 (0.66, 1.70)	1.66 (0.81, 3.41)	1.13 (0.60, 2.12)	0.65 (0.37,1.14)
Experienced any ACE	0.98 (0.64, 1.49)	1.40 (0.93, 2.11)	0.39 ** (0.24, 0.63)	1.15 (0.65, 2.04)	1.81 (0.90, 3.65)	1.02 (0.70, 1.48)
Categories of ACEs (ref = 0)						
1	1.03 (0.60, 1.77)	1.26 (0.79, 1.99)	0.47 ** (0.27, 0.83)	0.87 (0.45, 1.68)	2.30 * (1.03, 5.15)	1.27 (0.84, 1.91)
2	1.40 (0.80, 2.47)	1.67 (0.86, 3.24)	0.31 ** (0.18, 0.53)	1.15 (0.58, 2.29)	1.38 (0.59, 3.24)	0.92 (0.53, 1.61)
3 or more	0.66 (0.41, 1.05)	1.48 (0.79, 2.76)	0.39 ** (0.21, 0.74)	2.01 (0.87, 4.65)	1.75 (0.79, 3.90)	0.68 (0.37, 1.22)
Number of ACEs	0.92 (0.81, 1.05)	1.15 (0.95, 1.39)	0.77 ** (0.65, 0.91)	1.25 (0.99, 1.58)	1.04 (0.85, 1.27)	0.88 (0.75, 1.03)

Abbreviations: ACE = Adverse childhood experience.

Note: All models control for age, education, ever married, household economic status, work status, and number of sexual partners in the past year. Models for women also include an additional control for ever pregnant. All models include sample weights and account for clustering at the primary sampling unit and stratification. The variable, number of ACEs, is continuous.

* $p < 0.05$.

** $p < 0.01$.