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## Associations Between Endorsement of Inequitable Gender Norms and Intimate Partner Violence and Sexual Risk Behaviors Among Youth in Nigeria: Violence Against Children Survey, 2014

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### Abstract

The purpose of this study was to assess whether the endorsement of inequitable gender norms about intimate partner violence against women (IPVAW) and sexual behavior was associated with intimate partner violence (IPV) victimization, IPV perpetration, and sexual risk behavior. Nigerian youth aged 13–24 ( $n = 4,203$ ) participated in the nationally representative, cross-sectional Nigeria Violence Against Children Survey (VACS) in 2014. Inequitable gender norms about IPVAW were assessed using six items from the Demographic and Health Surveys (DHS), and inequitable gender norms about sexual behavior were assessed using four items adapted from the Gender-Equitable Men (GEM) scale. The number of inequitable gender norms endorsed was summed and associations with having been a victim or perpetrator of IPV and sexual risk behaviors were assessed using logistic regression. Endorsing 3 or more inequitable gender norms about either IPVAW or sexual behavior were both associated with increased odds of IPV victimization, perpetration, and sexual risk behaviors, after adjustment for demographic characteristics, witnessing violence in childhood, and having been a victim of other forms of childhood violence. Demonstrating that endorsement of inequitable gender norms about sexual behavior was associated with violence and that inequitable gender norms about IPVAW were associated with sexual risk behaviors further highlights potential linkages between violence and HIV.

### Keywords

child abuse; cultural contexts; domestic violence

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## Introduction

Intimate partner violence (IPV) is a well-established global public health problem associated with acute injury as well as chronic pain and disease, including gastrointestinal, neurological, cardiovascular, reproductive, infectious and mental health disorders (Campbell, 2002; World Health Organization, 2013). Worldwide, almost one third of all women who have been in a relationship have experienced physical and/or sexual IPV (Garcia-Moreno et al., 2006; World Health Organization, 2013). Given intimate partnerships begin in adolescence, children are also exposed to IPV. Globally, the lifetime prevalence of IPV among adolescent girls and young women aged 15–24 ranged from 19%–66% (Stöckl et al., 2014).

Inequitable gender norms are thought to be a driver of IPV (Abramsky et al., 2011; Heise & Kotsadam, 2015; Malamuth et al., 1991; Murnen et al., 2002). Gender norms are shared expectations of individuals or groups regarding how people should behave, including the perceptions of how men and women are supposed to think and behave within the context of intimate relationships and sexual behavior (Heise, 2011). These norms are passed on to children by their families, peer groups, social institutions, and political contexts, and might be characterized as equitable or inequitable. Pulerwitz et al. point out that “men’s collective and individual attitudes about gender norms as well as the social reproduction of these norms in institutions and cultural practices are directly related to many of men’s behaviors, with health implications for themselves and their partners” (Pulerwitz & Barker, 2007). When aggregated across individuals, attitudinal measures can serve as proxy for norms that prevail in a setting and measure the prevalence rate of societal acceptance of IPV and gender inequity (Heise & Kotsadam, 2015).

There has been a global call for research to assess beliefs, cultural norms, and experiences related to gender roles and their association with violence and negative health outcomes, particularly HIV (Barker et al., 2007, 2011). In fact, two of the most consistent factors that predict differences in prevalence of IPV between countries are the degree to which wife beating is perceived as acceptable and the degree to which society grants men the authority to control female behavior (Heise, 2011; Heise & Kotsadam, 2015).

One commonly used measure in this area is the Gender-Equitable Men (GEM) Scale, which measures attitudes towards inequitable gender norms. It consists of a list of statements about women’s and men’s roles related to domestic life, sexual relationships, reproductive health, and IPV (Pulerwitz & Barker, 2007). Respondents are asked to read each statement and indicate using a three-point scale whether they strongly agree, partially agree, or disagree with each statement. The scale, while developed in Brazil, was devised to be easily administered and culturally relevant in developing countries; measure different domains within the construct of gender norms; and address program goals related to intimate partner relationships and reproductive health (Pulerwitz & Barker, 2007). Since its development, the GEM Scale has been used in several global research studies and program evaluations, including in middle- and low-income countries, and has consistently achieved good internal consistency reliability (Cronbach’s alphas ranging from mid-0.70s to mid-0.80s). Endorsement of gender inequitable statements from the GEM Scale (such as

“There are times a woman deserves to be beaten” or “It is the man who decides what type of sex to have”) has also been significantly associated with behaviors of interest, including IPV and sexual risk taking behavior, among both men and women (Barker et al., 2011; Dasgupta et al., 2018; Gottert et al., 2016; Messersmith et al., 2017; Pulerwitz, 2006; Pulerwitz & Barker, 2007; Pulerwitz et al., 2010; Jewkes et al., 2011; Shattuck et al., 2013). The GEM Scale has become the most common measure of inequitable gender norms used in HIV and violence prevention research and program evaluations in developing country settings (Gottert et al., 2016).

Similar to findings from research utilizing the GEM Scale, Demographic and Health Surveys (DHS) conducted throughout sub-Saharan Africa indicate there is widespread acceptance of IPV, among both women and men (Sardinha & Nájera Catalán, 2018; Tran et al., 2016; Uthman, Lawoko, & Moradi, 2009; Uthman, Moradi, & Lawoko, 2009). The DHS uses hypothetical vignettes to determine if a man is justified in beating his wife in various scenarios such as if she goes out without telling him, neglects the children, if she argues with him, refuses to have sex, or burns the food. Studies utilizing these DHS items have found that endorsement of gender norms justifying intimate partner violence against women (IPVAW) was associated with IPV among the couples surveyed (Heise & Kotsadam, 2015; Hindin et al., 2008).

Findings from the above-mentioned studies informed the inclusion of GEM Scale items pertinent to sexual behavior as well as the DHS questions on the justification of IPV against women on the Violence Against Children Surveys (VACS). The aim of the VACS is to assess the magnitude, nature, and consequences of physical, emotional, and sexual violence against children and youth in order to inform violence prevention programs and policy. The VACS examines experiences of multiple forms of violence in childhood, adolescence, and young adulthood, including IPV victimization and perpetration, as well as experiences that inhibit HIV epidemic control in the President’s Emergency Plan for AIDS Relief (PEPFAR) countries, such as Nigeria.

In Nigeria, the national HIV prevalence among females and males is 1.8% and 1.0% respectively (Nigeria Country Operational Plan (COP), 2020). Important gender gaps are noted beginning with youth aged 15–19, with a higher prevalence among girls than boys, and among youth aged 20–24, HIV prevalence is more than twice as high among young women than young men. This gender-specific inflection point in HIV prevalence aligns with the mean age of sexual debut of young women, highlighting potential risks associated with violence. For example, IPV increases vulnerability to risks associated with HIV transmission (e.g., illicit substance use and risky sexual practices), contributes to HIV transmission (e.g., forced sex), and is a predictor of poor outcomes for those living with HIV (Siemieniuk et al., 2013). As such, this article assessed the relationships between endorsement of inequitable gender norms and IPV victimization, perpetration, and sexual risk behaviors. This article offers an opportunity to inform the literature by including nationally representative data for Nigeria, focusing on youth aged 13–24, and including findings on associations between endorsement of inequitable gender norms from both the GEM Scale and the DHS within the same study. Furthermore, this article examines the experience of IPV amongst males as victims and females as perpetrators, a unique contribution to the literature.

## Method

### Overview of Nigeria VACS

This study used data from 2014 Nigeria VACS. VACS are nationally representative, multistage, cross-sectional household surveys of youth aged 13–24 and implemented in over 23 countries. Details about the VACS methodology have been reported elsewhere (Chiang et al., 2016; Nguyen et al., 2019; UNICEF, 2016). Nigeria was the first country in West Africa to implement a VACS. The 2014 Nigeria VACS was led by the National Population Commission (NPopC) of the Federal Government of Nigeria and supported by the US Centers for Disease Control and Prevention.

Data collection occurred between May and July of 2014. The sampling frame was the 2006 National Population and Housing Census. Enumeration areas (EAs) were drawn from the 2006 census, but excluded 24 local government areas (2% of the population) due to political unrest. A three-stage cluster sample survey design was utilized and in the first stage, 353 EAs were selected with a probability proportional to size. To calculate separate male and female prevalence estimates for violence victimization, a split sample approach was used, meaning that only females were interviewed in female EAs (144) and only males interviewed in male EAs (209). In the next stage of sampling, a cluster of 20 households was randomly sampled from each EA, and in the third stage one eligible respondent aged was selected from each household. To be eligible for the study, respondents had to be between ages 13–24, reside in a household, speak one of the study languages (English, Hausa, Igbo, or Yoruba), and not have a disability that prevented them from understanding the questions or interviewing in a private space. This was a household survey, so youth living in institutions such as hospitals, prisons, orphanages, etc. were not included. The study protocol was approved by both the CDC IRB and the Nigeria Ethics Board. Overall, a nationally representative sample of 1,766 girls and young women and 2,437 boys and young men completed the survey. The combined household and individual response rates provided an overall response rate of 93.7% for females and males. Because the main outcome variables are intimate partner-related measures, all analyses were restricted to 1,131 females and 1,188 males who had ever been in an intimate relationship. This included those who were married or lived together as if married or who had ever had a girl/boyfriend or romantic partner.

### Measures

**IPV victimization.**—IPV victimization included both physical violence and sexual violence perpetrated by an intimate partner. Physical IPV was created from the following items: “Has a romantic partner, girlfriend/boyfriend, or wife/husband ever: punched, kicked, whipped, or beat you with an object; choked, suffocated, tried to drown you, or burned you intentionally; and used or threatened you with a knife, gun, or other weapon?” Sexual IPV was assessed from questions, “Has anyone ever touched you in a sexual way without your permission, but did not try and force you to have sex; tried to make you have sex against your will but did not succeed; physically forced you to have sex and did succeed; or pressured you to have sex, through harassment, threats or tricks and did succeed.” Only those experiencing sexual violence from a girl/boyfriend, wife/husband, or romantic partner

were included in assessing the sexual IPV indicator. Response options for both physical and sexual IPV were “yes” or “no.” Persons answering yes to at least one form of physical or sexual IPV questions were considered to have experienced IPV.

**IPV perpetration.**—IPV perpetration included physical or sexual violence against an intimate partner. Physical IPV perpetration was assessed by asking respondents if they had ever done any of the following to a current or previous boyfriend/girlfriend/romantic partner/husband/wife: “punched, kicked, whipped, or beat them; choked, suffocated, tried to drown, or intentionally burn them; and used or threatened to use a knife, gun, or other weapon against them.” Sexual IPV perpetration was assessed using the question “have you ever forced a current or previous partner/wife/husband to have sex with you when they did not want to?” Respondents who answered yes to any of the physical or sexual violence perpetration questions above were considered to have ever perpetrated IPV.

**Sexual risk behaviors.:** Sexual risk behaviors included: (a) multiple (two or more) sexual partners in the past 12 months; (b) early sexual debut, defined as first sex at or before age 15; and (c) infrequent condom use, defined as sometimes or never used a condom when having sex with partners other than a spouse in the previous 12 months. Sexually transmitted infection (STI) history was defined as answering yes to either ever having been diagnosed with an STI or ever having had a genital sore or ulcer.

**Inequitable gender norms about intimate partner violence against women.**—Endorsement of norms justifying IPVAV were assessed using six items from the DHS: “Do you believe it is right for a man to hit or beat his wife: (a) if she goes out without telling him; (b) if she does not take care of the children; (c) if she argues with him; (d) if she refuses to have sex with him; (e) if she burns the food; (f) for other circumstances.” Response options were coded into 1 (yes) and 0 (no), composite scores were created, and scores grouped into three categories: 0, 1–2, and 3 or more endorsements.

**Inequitable gender norms about sexual behavior.**—Inequitable norms about sexual behavior were assessed using four items from the GEM Scale. Participants were asked, “do you believe: (a) men, not women should decide when to have sex; (b) men need more sex than women; (c) men need to have sex with other women, even if they have good relationships with their wives; and (d) women who carry condoms have sex with a lot of men.” Response options were coded yes (1) or no (0), composite scores were created, and grouped into three categories: 0, 1–2, and 3 or more endorsements.

**Covariates.**—Educational attainment was assessed by asking the respondent the highest level of schooling they had completed (less than secondary school, secondary school graduate, and higher than secondary school). Socioeconomic status was assessed using the Nigeria poverty score card (Schreiner, 2015). Poverty scores were categorized into less than 25%, 25%–50%, and 50% or higher poverty likelihood (the likelihood that a household has consumption that is below a given poverty line) (Schreiner, 2015). Any childhood non-intimate partner (non-IP) violence included the experience of any physical, sexual, or emotional violence by a perpetrator other than an intimate partner before the age of 18.

Witnessed violence in childhood was defined as witnessing violence at home or outside the home before the age of 18.

### Statistical Analyses

Descriptive statistics including prevalence of inequitable gender norm endorsement, demographic characteristics, witnessing violence in childhood, and experiencing any non-IP violence in childhood were examined. Sex differences in the endorsement of the norms were tested using chi-square. Similarly, differences in demographic characteristics between perpetrators and non-perpetrators of IPV and victims and non-victims of IPV were also tested using chi-square. The associations between the endorsement of inequitable gender norms and IPV victimization or IPV perpetration were assessed using logistic regression, yielding unadjusted and adjusted odds ratios. The adjusted models controlled for educational attainment, poverty score, experiencing any non-IP violence in childhood, and witnessing violence in childhood. Because of the documented sex differences in the impact of childhood violence, all analyses were stratified by sex (Iwaniec, 2006). The study used pairwise deletion to handle missing values during data analyses. All statistical analyses took into account the complex survey design of the 2014 Nigeria VACS using the proc survey function in SAS. Data management and analyses were performed using SAS (v9.4) statistical software.

### Results

The mean age for males was 19.9 years (standard error ( $SE$ ) = 0.1219) and for females 19.8 years ( $SE$  = 0.1322). As shown in Table 1, the highest level of educational attainment, more than secondary school, was reported by 18.5% (95% CI = 14.9–22.1) of males and 13.4% (95% CI = 9.4–17.4) of females. Males who were victims or perpetrators of IPV did not differ significantly in their educational attainment when compared to non-victims and non-perpetrators, respectively. Interestingly, having less than a secondary school education was less common among females who had experienced IPV (32.9%, 95% CI = 23.5–42.3) than those who did not experience IPV (46.7%, 95% CI = 39.9–53.6). Poverty score categories were similarly distributed between those who had experienced any IPV victimization and those who had not; and those who had reported any IPV perpetration and those who had not, for both males and females. Among males, 58.0% (95% CI = 53.2–62.9) experienced any childhood non-IP violence and 68.3% (95% CI = 64.5–72.0) witnessed violence in childhood; among females, the prevalence was 55.1% (95% CI = 50.4–59.9) and 73.2% (95% CI = 69.0–77.5), respectively. Among males, witnessing violence in childhood was more common in those who were victims of IPV than those who were not victims of IPV ( $p$  = .0002). Among males, the prevalence of experiencing any childhood non-IP ( $p$  < .0001) and witnessing violence in childhood ( $p$  < .0001) were significantly higher among those who perpetrated IPV compared to those who did not perpetrate IPV. The prevalence of experiencing any childhood non-IP violence was significantly more common among females who experienced IPV ( $p$  < .0001) and those who perpetrated IPV ( $p$  = .0132) compared to their counterparts who did not experience or perpetrate IPV. However, the prevalence of witnessing violence in childhood was not significantly different in females who experienced or perpetrated IPV compared to those who did not.

Significantly more females (61.9%, 95% CI = 57.0–66.9) than males (47.8%, 95% CI = 43.9–51.7) endorsed at least one inequitable gender norm about IPVAV ( $p < .0001$ , Table 2). The least commonly endorsed circumstance justifying IPVAV was “if she burns the food” (8.8%, 95% CI = 6.8–10.8 for males and 9.4%, 95% CI = 7.2–11.6 for females) and the most common was “other” (30.6%, 95% CI = 27.1–34.2 for males and 38.4%, 95% CI = 33.5–43.2 for females). The endorsement of inequitable gender norms about sexual behavior was common as well. There were no differences in the number of males (81.3%, 95% CI = 78.3–84.3) and females (81.7%, 95% CI = 78.4–85.0) endorsing at least one inequitable gender norm about sexual behavior (Table 2).

As shown in Table 3, endorsing 3 or more inequitable gender norms about IPVAV was significantly associated with IPV perpetration among males, IPV victimization among females, and sexual risk behaviors for both sexes, even after controlling for educational attainment, poverty score, experiencing other forms of violence in childhood and witnessing violence in childhood. In the adjusted logistic regression models, males who endorsed 3 or more norms about IPVAV had more than twice the odds of perpetrating any IPV compared to those who endorsed none (adjusted odds ratio,  $AOR = 2.96$ ; 95% CI = 1.81–4.82). Similarly, males endorsing 3 or more norms about IPVAV had significantly higher odds of sexual risk behaviors compared to those who endorsed none, including having multiple sexual partners in the past 12 months ( $AOR = 2.28$ , 95% CI = 1.28–4.07), early sexual debut ( $AOR = 1.99$ , 95% CI = 1.17–3.38), and infrequent condom use ( $AOR = 2.14$ , 95% CI = 1.15–3.97). Amongst females, endorsing 3 or more inequitable gender norms about IPVAV was associated with any IPV victimization ( $AOR = 2.02$ , 95% CI = 1.31–3.10) and a history of sexually transmitted infection ( $AOR = 2.40$ , 95% CI = 1.09–5.27).

Endorsing 3 or more inequitable gender norms about sexual behavior was also associated with IPV victimization among females and IPV perpetration and sexual risk behaviors among both sexes (Table 4). Males who endorsed 3 or more inequitable gender norms about sexual behavior had a significantly higher odds of: IPV perpetration ( $AOR = 2.31$ , 95% CI = 1.04–5.11), having multiple sexual partners in the past 12 months ( $AOR = 2.37$ , 95% CI = 1.20–4.65), and infrequent condom use ( $AOR = 1.99$ , 95% CI = 1.02–3.86) than those endorsing none. Among females, endorsing 3 or more inequitable gender norms about sexual behavior was associated with any IPV victimization ( $AOR = 2.75$ , 95% CI = 1.40–5.41), IPV perpetration ( $AOR = 2.94$ , 95% CI = 1.10–7.86), and early sexual debut ( $AOR = 3.73$ , 95% CI = 1.73–8.06).

## Discussion

Findings from this study suggest that the endorsement of inequitable gender norms is common amongst youth in Nigeria, particularly inequitable gender norms about sexual behavior. Consistent with previous studies in African countries, more females than males endorse norms about IPVAV (Uthman, Lawoko, & Moradi, 2009; Uthman, Moradi, & Lawoki, 2009). Childhood non-IP violence was more common among male and female youth who perpetrate IPV and female youth who were victims of IPV than among non-perpetrators and non-victims having witnessed violence in childhood was more common among boys who were victims or perpetrators of IPV than among non-victims and non-

perpetrators. These findings are consistent with other VACS studies (Chiang et al., 2016; VanderEnde et al., 2016); however, this study examined unique factors for both males and females. Specifically, we included female IPV perpetration and male IPV victimization which are less often included in studies, in addition to the more commonly examined female victimization and male perpetration. Although we did not have any significant findings with respect to male IPV victimization, we did find females endorsing inequitable gender norms about sexual behavior were more likely to perpetrate IPV, although confidence intervals were wide.

Our findings among a nationally representative sample of youth echo similar work suggesting gendered attitudes correlate with violence and sexual risk-taking behaviors (Hindin et al., 2008; Pulerwitz et al., 2010). Even after controlling for demographic characteristics and the experience of other forms of violence, high endorsement (3 or more norms) of inequitable gender norms about IPV and sexual behavior was associated with IPV perpetration among males and victimization among females. As this study and numerous others have noted, patriarchal and pro-violence attitudes are associated with increased IPV perpetration and victimization (Abramsky et al., 2011; Heise, 2011; Hindin et al., 2008). IPV is viewed as a manifestation of gender inequality in relationships, and violence can be used as a tool to control or punish female behavior that deviates from gendered expectations around female behavior (Krause et al., 2016). Women living in patriarchal societies may endorse inequitable gender norms about IPV because they were socialized to accept violence in relationships as a males' right to reprimand his wife and view it as discipline for disobedience instead of violence (Krause et al., 2016; Sardinha & Nájera Catalán, 2018). There is intergenerational transmission of violence among children who witness violence against their mothers or who experience violence themselves. These children may learn from role models in their home environments that violence is an acceptable tool for conflict resolution and tolerance of violent behavior is normal (Jewkes, 2002).

High endorsement of inequitable gender norms about IPV and sexual behavior was also associated with all the HIV risk factors studied, although findings varied by sex. For example, there were no differences in having reported an STI among males and no differences for having multiple sexual partners or early sexual debut among females. Different expectations between genders shape their sexual behaviors. For males, early sexual initiation and having multiple partners can be a sign of popularity and virility (Heise et al., 2019). For girls, early sexual debut and multiple partners may be an honor violation, making them less likely to seek contraceptives (Heise et al., 2019). Furthermore, norms place expectations on males to initiate and control sex when it happens and females are to be compliant, including having sex when it's unwanted and not negotiating for the use of contraception (Pulerwitz et al., 2010). IPV further compromises negotiation of sex and contraception use as both fear and social norms influence female behavior. Thus, promoting gender equality may address both violence and the HIV epidemic, as well as the intersections between the two.

Our study was unique in that it could examine norms items from both the DHS and the GEM Scale in the same survey and their influence on different sets of behaviors—IPV



victimization and perpetration and sexual risk behavior. This crossover is unique to this study, as is our exploration of IPV victimization of males and IPV perpetration by females. Most studies examine males as perpetrators and females as victims only, so this manuscript adds diversity to the literature on IPV by examining perpetration and victimization among both sexes. That being said, in our study there were no significant findings for males as victims, and the confidence interval for the finding that high endorsement of inequitable gender norms about sexual behavior was associated with IPV perpetration among females was wide. Even seemingly unrelated norms, such as those around sexual behavior, are associated with differences in violence victimization and perpetration, and norms around violence are associated with sexual risk behaviors. These associations could suggest a potential synergy between HIV and violence prevention programming.

Another important contribution of this study to diversity in the literature on IPV is the focus on Nigerian children and youth and the use of a nationally representative sample. Adolescence and early adulthood are critical periods in laying the foundation for healthy and stable relationships, free from violence. Furthermore, risk behaviors such as substance abuse, high-risk sexual behaviors, early pregnancy and school dropout that develop in adolescence set the stage for poor adult health outcomes. IPV may greatly increase adolescents' and young adults' likelihood to engage in these risk behaviors (Silverman et al., 2001).

Given the influence of gender inequality on health risks such as violence and HIV, the Sustainable Development Goals call for achieving gender equality and empowering women and girls ("Sustainable Development Goals," 2030). Addressing norms and values is listed as one of the seven strategies to end violence against children in the INSPIRE Technical Package (World Health Organization, 2016). A gender-equitable man may be described as one who supports relationships based on respect, equality, and intimacy rather than sexual conquest; is or seeks to be involved as a domestic partner and father in terms of childcare and household activities; assumes or shares with his partners the responsibility for reproductive health and disease prevention; and does not practice violence (Pulerwitz & Barker, 2007; Verma et al., 2006).

Approaches to changing norms typically center around three strategies: (a) awareness-raising campaigns, (b) small group workshops or trainings, often with community engagement, and (c) behavior change and communication strategies, including "edutainment" (a term referring to educational programming that also provides entertainment, to make learning fun) programs in which media is used to share important messages (Heise, 2011). There are several examples of these types of programs that simultaneously reduce violence and HIV risk behaviors. Yaari-Dosti/Program H (name varies depending on location) involves small group trainings, targets groups of young men and/or women, and seeks to promote awareness of norms and gender inequalities, challenge inequitable differences between men and women, and change behavior around violence (Pulerwitz, 2006; Verma, 2008). Stepping Stones, a gender transformative, HIV-prevention program centered on life skills training to improve relationship skills and communication, not only reduced HIV risk, but also physical and sexual IPV (Jewkes et al., 2008; Paine et al., 2002; Skevington et al., 2013). The community mobilization intervention SASA!, which

was designed to reduce violence and HIV-risk behaviors, has demonstrated reductions in the experience and acceptance of IPV (Abramsky et al., 2014).

Communication and “edutainment” programs use media and/or entertainment to encourage dialogue and social norms change at the community level. Soul City uses on-going edutainment program targeting gender norms through booklets, radio, and television drama that shows characters discussing topics such as sexual behavior, HIV and violence, and demonstrated decreased acceptance of IPV (Usdin et al., 2005). A spin-off of Soul City meant for youth, Soul Buddyz, addresses topics around HIV risk behaviors (Johnson et al., 2018).

Other than programming addressing norms specifically, programming targeting access to education and life skills training as well as economic opportunity and equality may work synergistically with norms change. For example, female literacy has been found to be a protective factor against the acceptance of violence against women (Sardinha & Nájera Catalán, 2018). Similarly, Jewkes et al. (2017) analyzed risk factors for past-year male-perpetrated IPV, and in a structural model found a resilience pathway showing less poverty, higher education, and more gender-equitable ideas were connected and conveyed protection from IPV, suggesting why interventions that combine economic empowerment of women and gender empowerment/relationship skills training have been successful. Furthermore, Sardinha (Sardinha & Nájera Catalán, 2018) found that societal acceptance of IPV was lower in countries with more gender-equitable economic rights for women, such as the right to choose profession or gainful employment without the need to obtain a husband’s or male relative’s consent.

There are some important limitations. First, VACS rely on retrospective data. Youth are asked to recall any violence they experienced in the past, and recall bias is a potential concern, as violence that occurred in very early childhood may not be recalled (Fan et al., 2016). Second, given the sensitive nature of violence, some participants may feel uncomfortable disclosing their experiences, and violence prevalence may therefore be underestimated (Bifftu et al., 2019). Male victims may be even more uncomfortable with disclosure given the influence of gender norms (Walker et al., 2020). Sexual IPV perpetration may be further underestimated because it was only measured in the context of forced sex, unlike the sexual violence victimization questions which also included unwanted sexual touching, attempted forced sexed and pressured or coerced sex. Inequitable norm endorsement may also be underestimated due to social desirability (Vesely & Klöckner, 2020). A third concern is that not all 10 indicators from the Poverty Score Card were assessed in the VACS (Schreiner, 2015). Only 8 of the 10 were included; information about mattress and cook type were not available from the survey. Furthermore, the score card estimates current economic conditions of the household, and the violence may have occurred when the household was under different economic circumstances. Additionally, our analysis only permits us to discuss associations between the endorsement of inequitable gender norms and IPV and sexual risk behaviors; causality cannot be assumed and temporality cannot be assessed. Next, in some cases, such as female IPV perpetration, our sample size is quite small, so confidence intervals are wide. Finally, previous research has indicated women’s responses to questions on the acceptability of wife beating may reflect their

perceptions of local norms rather than their personal opinions on what is right or wrong (Heise, 2011).

This study has demonstrated that endorsement of inequitable gender norms about violence against women and sexual behavior is associated with IPV perpetration and victimization as well as sexual risk behaviors associated with HIV acquisition and transmission. Gender equality and having a childhood free of violence are both critical to breaking intergenerational cycles of IPV and HIV transmission among youth.

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## Author Biographies

**Leah Gilbert, MD**, earned her Medical Degree, Masters of Science in Public Health—Maternal and Child Health, and Bachelor's in Psychology at the University of North Carolina at Chapel Hill. After training as an Emergency Medicine physician, she joined the Centers for Disease Control and Prevention as an Epidemic Intelligence Service Officer in 2012. Presently she serves as a Medical Officer in the Division of Violence Prevention, National Center for Injury Prevention and Control. Dr Gilbert has a long history of research and activism in the prevention of violence against women and children, both domestically and globally. She has interned with the United Nations Children's Fund, trained in child abuse forensic examination, and worked in disaster settings, with a special interest in child protection. Her current work at the CDC focuses on implementation of global Violence Against Children Surveys (VACS). She also conducts research related to child maltreatment in high-risk populations and adverse childhood experiences.

**Francis B. Annor, PhD**, is an Epidemiologist with the Division of Violence Prevention at the US Centers for Disease Control and Prevention (CDC). He has about 10 years of experience conducting epidemiologic research at academic institutions and federal and state public health institutions. Dr Annor's research has mostly focused on non-infectious conditions, including violence (physical, sexual, and emotional) against children and youth, especially in the global space. Dr Annor's work in the past couple of years have focused on using data from the violence against children survey to identify, highlight, and prevent violence against children and youth. Prior to his work at the CDC, Dr Annor worked with the Georgia Department of Public Health in Atlanta, Georgia.

**Howard Kress, PhD**, has over 16 years of experience in conducting social science and public health research in the USA and over 30 nations around the world. He currently is the Team Lead for the Implementation Team for the Violence Against Children Surveys in the Division of Violence prevention at the US Centers for Disease Control and Prevention (CDC). This team focuses on understanding the risk and protective factors for violence against children both in the USA and globally. During his career Dr Kress has published on a range of topics including the demographic transition, violence and injury prevention, effects of migration on school-aged children, and male initiation rites. Prior to his current position with CDC, Dr Kress received funding from the National Science Foundation to

develop a greater understanding of the demographic transition Ecuador and Bangladesh. He obtained his PhD in Anthropology from the University of Connecticut in 2008 and has been with the CDC since 2010.

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Table 1.

Demographic Characteristics and Other Violence Exposure by Intimate Partner Victimization and Perpetration Among Ever-Partnered Nigerian Youth Aged 13–24, Nigeria VACS, 2014.

Demographics	Unweighted <i>n</i> <sup>‡</sup>	Weighted %, 95% CI	Unweighted <i>n</i> <sup>‡</sup>	Any IPV Victimization	No IPV Victimization	<i>p</i>	Unweighted <i>n</i> <sup>‡</sup>	Any IPV Perpetration	No IPV Perpetration	<i>p</i>
Males										
Educational attainment										
Less than secondary school	1,188	24.8 (19.8 – 29.9)	1,187	31.6 (21.5 – 41.7)	23.9 (18.6 – 29.2)	0.1263	1,186	22.5 (12.8 – 32.2)	24.9 (19.8 – 30.0)	0.6625
Secondary school graduate	1,188	56.7 (52.1 – 61.2)	1,187	52.2 (43.2 – 61.3)	57.3 (52.3 – 62.2)	0.3285	1,186	62.7 (53.4 – 72.0)	55.7 (50.9 – 60.5)	0.1651
Higher than secondary school	1,188	18.5 (14.9 – 22.1)	1,187	16.2 (9.5 – 22.8)	18.8 (15.0 – 22.6)	0.4809	1,186	14.8 (9.4 – 20.2)	19.4 (15.5 – 23.3)	0.1370
Poverty score										
50% or higher poverty likelihood	1,134	33.7 (28.8 – 38.6)	1,133	35.3 (23.1 – 47.5)	33.5 (28.5 – 38.6)	0.7723	1,132	35.1 (25.0 – 45.2)	33.1 (28.0 – 38.1)	0.6981
25%–50% poverty likelihood	1,134	27.2 (23.6 – 30.7)	1,133	27.6 (18.3 – 36.9)	27.1 (23.3 – 30.8)	0.9117	1,132	28.7 (21.2 – 36.2)	27.0 (23.0 – 30.9)	0.6711
Less than 25% poverty likelihood	1,134	39.1 (34.2 – 44.1)	1,133	37.1 (27.6 – 46.6)	39.4 (34.1 – 44.7)	0.6568	1,132	36.2 (27.5 – 44.8)	40.0 (34.5 – 45.4)	0.4405
Other violence exposure										
Any childhood non-IPV violence	1,188	58.0 (53.2 – 62.9)	1,186	62.6 (51.6 – 73.7)	57.4 (52.3 – 62.5)	0.3796	1,186	84.5 (79.1 – 89.9)	52.2 (47.0 – 57.4)	<0.0001
Witnessed violence in childhood	1,185	68.3 (64.5 – 72.0)	1,183	83.8 (76.7 – 90.9)	66.3 (62.3 – 70.3)	<b>0.0002</b>	1,183	88.2 (83.4 – 93.0)	63.9 (59.9 – 67.9)	<0.0001
Females										
Educational attainment										
Less than secondary school	1,131	42.9 (36.2 – 49.6)	1,131	32.9 (23.5 – 42.3)	46.7 (39.9 – 53.6)	<b>0.0025</b>	1,131	39.5 (25.2 – 53.8)	43.1 (36.2 – 50.0)	0.6449
Secondary school graduate	1,131	43.7 (38.3 – 49.1)	1,131	50.5 (42.2 – 58.9)	41.1 (35.3 – 46.9)	<b>0.0260</b>	1,131	48.5 (35.5 – 61.5)	43.3 (37.8 – 48.9)	0.4042
Higher than secondary school	1,131	13.4 (9.4 – 17.4)	1,131	16.6 (10.0 – 23.1)	12.2 (8.2 – 16.2)	0.1184	1,131	12.0 (4.6 – 19.4)	13.5 (9.4 – 17.6)	0.6914



Demographics	Unweighted $n^{\ddagger}$	Weighted %, 95% CI	Unweighted $n^{\ddagger}$	Any IPV Victimization	No IPV Victimization	$p$	Unweighted $n^{\ddagger}$	Any IPV Perpetration	No IPV Perpetration	$p$
Poverty score										
50% or higher poverty likelihood	1,123	33.7 (29.0 – 38.4)	1,123	30.6 (23.4 – 37.7)	34.9 (29.4 – 40.4)	0.3039	1,123	33.2 (20.3 – 46.0)	33.7 (28.9 – 38.6)	0.9303
25%–50% poverty likelihood	1,123	30.1 (26.8 – 33.5)	1,123	32.7 (25.0 – 40.4)	29.1 (25.0 – 33.2)	0.4462	1,123	33.2 (20.3 – 46.0)	29.9 (26.4 – 33.5)	0.6094
Less than 25% poverty likelihood	1,123	36.2 (31.4 – 41.0)	1,123	36.8 (29.1 – 44.4)	36.0 (30.7 – 41.2)	0.8373	1,123	34.2 (23.3 – 45.0)	36.3 (31.5 – 41.2)	0.6926
Other violence exposure										
Any childhood non-IP violence	1,131	55.1 (50.4 – 59.9)	1,131	71.5 (64.7 – 78.2)	48.8 (43.6 – 54.0)	<0.0001	1,131	71.9 (59.1 – 84.7)	53.8 (48.9 – 58.7)	<b>0.0132</b>
Witnessed violence in childhood	1,118	73.2 (69.0 – 77.5)	1,118	77.2 (71.3 – 83.1)	71.7 (66.6 – 76.7)	0.1261	1,118	81.8 (72.5 – 91.0)	72.6 (68.1 – 77.0)	0.1000

Note.  $n^{\ddagger}$  represents the denominator.  $^{\ddagger}$  to these three  $n^{\ddagger}$ 's (unweighted  $n$ ).

Bold indicates statistical significance.

**Table 2.**

Endorsement of Inequitable Gender Norms About Intimate Partner Violence Against Women (IPVAW) and Sexual Behavior Among Ever-Partnered Nigerian Youth Aged 13–24, Nigeria VACS, 2014.

	Males			Females			<i>p</i>
	Unweighted <i>n</i>	Weighted % (95% CI)	Unweighted <i>n</i>	Weighted % (95% CI)			
<b>Inequitable gender norms about IPVAW</b>							
Believe it is right for a man to hit or beat his wife	1,183	12.4 (9.9 – 14.9)	1,123	22.4 (18.4 – 26.4)	<0.0001		
If she goes out without telling him	1,182	17.8 (15.0 – 20.7)	1,120	22.9 (19.3 – 26.4)	<b>0.0288</b>		
If she does not take care of the children	1,182	12.9 (10.3 – 15.5)	1,121	20.8 (17.2 – 24.5)	<b>0.0003</b>		
If she argues with him	1,166	18.4 (15.6 – 21.3)	1,111	21.1 (17.2 – 25.1)	0.2804		
If she refuses to have sex with him	1,182	8.8 (6.8 – 10.8)	1,122	9.4 (7.2 – 11.6)	0.6936		
If she burns the food	1,188	30.6 (27.1 – 34.2)	1,131	38.4 (33.5 – 43.2)	<b>0.0105</b>		
Other circumstances are justified	1,188	47.8 (43.9 – 51.7)	1,131	61.9 (57.0 – 66.9)	<0.0001		
<i>Percent endorsing at least one</i>							
<i>3 levels of IPVAW items</i>							
Endorsed none	1,159	52.3 (48.4 – 56.3)	1,098	38.1 (33.1 – 43.1)	<0.0001		
Endorsed 1 or 2 items	1,159	32.7 (28.9 – 36.6)	1,098	42.0 (37.4 – 46.6)	<b>0.0015</b>		
Endorsed more than 2 items	1,159	14.9 (12.4 – 17.5)	1,098	19.8 (15.8 – 23.8)	<b>0.0351</b>		
<b>Inequitable gender norms about sexual behavior</b>							
Believe men, not women, should decide when to have sex	1,105	55.6 (51.6 – 59.5)	1,017	55.1 (50.2 – 60.0)	0.8788		
Believe men need more sex than women	1,075	55.6 (51.5 – 59.7)	994	74.3 (70.3 – 78.2)	<0.0001		
Believe men need to have sex with other women, even if they have good relationships with their wives	1,137	19.5 (16.4 – 22.7)	1,065	13.8 (10.5 – 17.0)	<b>0.0157</b>		
Believe women who carry condoms have sex with a lot of men	1,050	63.0 (58.9 – 67.2)	906	58.1 (53.4 – 62.7)	0.1202		
<i>Percent endorsing at least one</i>	1,167	81.3 (78.3 – 84.3)	1,102	81.7 (78.4 – 85.0)	0.8445		
<i>3 levels of sexual behavior items</i>							
Endorsed none	970	16.3 (12.9 – 19.6)	813	16.6 (12.8 – 20.5)	0.8952		
Endorsed 1 or 2 items	970	48.1 (44.1 – 52.0)	813	43.9 (39.2 – 48.6)	0.1853		
Endorsed more than 2 items	970	35.7 (31.8 – 39.6)	813	39.5 (34.7 – 44.3)	0.2232		

Bold indicates statistical significance.

**Table 3.**

Relationship Between the Endorsement of Inequitable Gender Norms About Intimate Partner Violence Against Women (IPVAW) and Intimate Partner Violence Perpetration, Victimization, and Sexual Risk Behaviors Among Ever-Partnered Nigerian Youth Aged 13–24, Nigeria VACS, 2014.

Number of Inequitable Gender Norms About IPVAW Endorsed	Unweighted <i>n</i> <sup>‡</sup>	0 Inequitable Gender Norms About IPVAW			1–2 Inequitable Gender Norms About IPVAW			3+ Inequitable Gender Norms About IPVAW		
		OR; <i>p</i>	AOR* ; <i>p</i>	AOR* ; <i>p</i>	OR; <i>p</i>	AOR* ; <i>p</i>	AOR* ; <i>p</i>	OR; <i>p</i>	AOR* ; <i>p</i>	AOR* ; <i>p</i>
<b>Males</b>										
Intimate partner violence (IPV)										
Any IPV victimization	1,100	Ref	1.21 (0.78–1.88); 0.3853	1.15 (0.70–1.89); 0.5815	1.43 (0.85–2.43); 0.1779	1.38 (0.78–2.42); 0.2595				
Any IPV perpetration	1,099	Ref	1.45 (0.96–2.20); 0.0805	1.13 (0.70–1.82); 0.5985	<b>3.13 (1.99–4.94); &lt;0.0001</b>	<b>2.96 (1.81–4.82); &lt;0.0001</b>				
Sexual risk behaviors										
Multiple partners in the past 12 months <sup>†††</sup>	827	Ref	0.97 (0.60–1.56); 0.8878	0.84 (0.48–1.48); 0.5774	<b>2.22 (1.31–3.76); 0.0031</b>	<b>2.28 (1.28–4.07); 0.0056</b>				
Early sexual debut	1,015	Ref	1.71 (1.06–2.74); 0.0267	1.55 (0.95–2.53); 0.0797	<b>2.24 (1.39–3.6); 0.0010</b>	<b>1.99 (1.17–3.38); 0.0108</b>				
Infrequent condom use in past 12 months <sup>†††</sup>	615	Ref	0.78 (0.50–1.21); 0.2620	0.65 (0.42–1.01); 0.0673	<b>2.45 (1.40–4.27); 0.0017</b>	<b>2.14 (1.15–3.97); 0.0164</b>				
STI	1,094	Ref	1.58 (0.83–2.98); 0.1623	1.65 (0.88–3.08); 0.1156	0.94 (0.36–2.43); 0.8982	1.09 (0.41–2.86); 0.8682				
<b>Females</b>										
Intimate partner violence (IPV)										
Any IPV victimization	1,075	Ref	1.32 (0.90–1.94); 0.1577	1.26 (0.86–1.85); 0.2395	<b>1.75 (1.13–2.71); 0.0131</b>	<b>2.02 (1.31–3.10); 0.0014</b>				
Any IPV perpetration	1,075	Ref	1.02 (0.55–1.87); 0.9573	0.97 (0.53–1.77); 0.9219	1.53 (0.79–2.98); 0.2070	1.52 (0.81–2.83); 0.1925				
Sexual risk behaviors										
Multiple partners in the past 12 months <sup>†††</sup>	836	Ref	0.96 (0.33–2.85); 0.9468	0.98 (0.33–2.94); 0.9504	0.50 (0.11–2.22); 0.3633	0.70 (0.20–2.45); 0.5781				
Early sexual debut	1,057	Ref	0.63 (0.42–0.94); 0.0234	0.72 (0.48–1.08); 0.1167	1.52 (0.92–2.53); 0.1054	1.07 (0.66–1.72); 0.8095				
Infrequent condom use in past 12 months <sup>†††</sup>	684	Ref	1.69 (0.94–3.06); 0.0819	1.50 (0.80–2.81); 0.2065	0.95 (0.49–1.86); 0.8808	1.20 (0.60–2.37); 0.6027				
STI	1,071	Ref	1.73 (0.91–3.29); 0.0964	1.79 (0.92–3.50); 0.0875	1.81 (0.84–3.89); 0.1303	<b>2.40 (1.09–5.27); 0.0296</b>				

\* AOR: Adjusted for educational attainment, poverty score, childhood nonintimate partner violence victimization, and witnessing violence in childhood.

<sup>‡</sup>*n*<sup>†</sup>: Represents the *n* in the final adjusted model.

<sup>†††</sup>Multiple partners in the past 12 months<sup>†††</sup>: question asked to only those who had sex in the past 12 months.

In frequent condom use<sup>\*\*\*</sup>: question asked to only those who had sex in the past 12 months. Bold indicates statistical significance.

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**Table 4.**

Relationship Between the Endorsement of Inequitable Gender Norms About Sexual Behavior and Intimate Partner Violence Perpetration, Victimization, and Sexual Risk Behaviors Among Ever-Partnered Nigerian Youth Aged 13–24, Nigeria VACS, 2014.

Number of Inequitable Gender Norms About Sexual Behavior Endorsed	Unweighted <i>n</i> <sup>‡</sup>	0 Inequitable Gender Norms About Sexual Behavior			1–2 Inequitable Gender Norms About Sexual Behavior			3+ Inequitable Gender Norms About Sexual Behavior		
		OR	AOR*	AOR*	OR	AOR*	AOR*	OR	AOR*	AOR*
<b>Males</b>										
Intimate partner violence (IPV)										
Any IPV victimization	917	Ref	1.21 (0.56–2.60); 0.6234	1.18 (0.51–2.76); 0.7058	1.39 (0.66–2.93); 0.3908	1.27 (0.55–2.95); 0.5952				
Any IPV perpetration	917	Ref	2.56 (1.25–5.23); 0.0101	1.66 (0.77–3.57); 0.2034	<b>4.04 (1.90–8.59); 0.0003</b>	<b>2.31 (1.04–5.11); 0.0406</b>				
Sexual risk behaviors										
Multiple partners in the past 12 months <sup>†††</sup>	700	Ref	1.50 (0.85–2.64); 0.1608	1.21 (0.66–2.22); 0.5675	<b>2.75 (1.44–5.27); 0.0024</b>	<b>2.37 (1.20–4.65); 0.0153</b>				
Early sexual debut	844	Ref	1.44 (0.74–2.83); 0.2847	1.39 (0.69–2.79); 0.3484	1.50 (0.76–2.94); 0.2416	1.23 (0.60–2.50); 0.5602				
Infrequent condom use in past 12 months <sup>†††</sup>	526	Ref	1.02 (0.56–1.86); 0.9613	0.77 (0.39–1.49); 0.4274	<b>2.44 (1.28–4.65); 0.0069</b>	<b>1.99 (1.02–3.86); 0.0469</b>				
STI	915	Ref	0.82 (0.38–1.77); 0.3255	0.85 (0.38–1.89); 0.4450	1.21 (0.62–2.39); 0.1928	1.29 (0.62–2.69); 0.2339				
<b>Females</b>										
Intimate partner violence (IPV)										
Any IPV victimization	804	Ref	<b>2.24 (1.20–4.15); 0.0110</b>	<b>2.06 (1.07–3.98); 0.0313</b>	<b>2.82 (1.51–5.26); 0.0012</b>	<b>2.75 (1.40–5.41); 0.0038</b>				
Any IPV perpetration	804	Ref	1.47 (0.59–3.64); 0.4040	1.37 (0.55–3.37); 0.4938	<b>3.09 (1.17–8.14); 0.0226</b>	<b>2.94 (1.10–7.86); 0.0344</b>				
Sexual risk behaviors										
Multiple partners in the past 12 months <sup>†††</sup>	648	Ref	0.80 (0.22–2.84); 0.7323	0.63 (0.18–2.23); 0.5062	1.92 (0.59–6.26); 0.2813	1.78 (0.57–5.57); 0.2846				
Early sexual debut	791	Ref	0.49 (0.29–0.83); 0.0078	0.57 (0.32–0.99); 0.0436	0.68 (0.40–1.16); 0.1598	0.61 (0.35–1.09); 0.0963				
Infrequent condom use in past 12 months <sup>†††</sup>	535	Ref	<b>2.50 (1.26–4.98); 0.0009</b>	<b>2.18 (1.06–4.47); 0.0301</b>	<b>3.29 (1.61–6.72); 0.0012</b>	<b>3.73 (1.73–8.06); 0.0008</b>				
STI	801	Ref	0.89 (0.49–1.60); 0.1623	0.96 (0.51–1.79); 0.3022	0.71 (0.43–1.18); 0.5385	0.81 (0.49–1.35); 0.5608				

\* AOR: Adjusted for educational attainment, poverty score, childhood nonintimate partner violence victimization, and witnessing violence in childhood.

<sup>‡</sup>*n*<sub>i</sub> - Represents the *n* in the final adjusted model.

††† Multiple partners in the past 12 months; †† question asked to only those who had sex in the past 12 months.

In frequent condom use<sup>†††</sup>: question asked to only those who had sex in the past 12 months. Bold indicates statistical significance.

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