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Authors

Bloom, Brittnie E
Wagman, Jennifer A
Dunkle, Kristin
et al.

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Exploring intimate partner violence among pregnant Eswatini women seeking antenatal care: How agency and food security impact violence-related outcomes

Brittanie E. Bloom^{a,b}, Jennifer A. Wagman^c, Kristin Dunkle^d, Rebecca Fielding-Miller^e

^aGraduate School of Public Health, San Diego State University, San Diego, CA, USA;

^bDepartment of Global Public Health and Infectious Diseases, School of Medicine, University of California, San Diego, CA, USA;

^cFielding School of Public Health, Department of Community Health Sciences, University of California, Los Angeles, CA, USA;

^dGender and Health Research Unit, South African Medical Research Council, Cape Town, South Africa;

^eHerbert Wertheim School of Public Health and Human Longevity Science, University of California San Diego, San Diego, CA, USA

Abstract

Women with agency (i.e. the ability to make choices and act on them) may experience reduced food insecurity (FI) and intimate partner violence (IPV). Reducing FI and IPV among women are global goals; however, research focused on agency among Eswatini women has been overlooked, though they experience high rates of FI and IPV. We analysed cross-sectional data from 406 Swazi women who sought care at one rural and one urban–public antenatal clinic in 2013–2014 to understand how FI and agency, our independent variables, are associated with IPV. We assessed the incidence rate ratio (IRR) of number of violent events (including emotional, physical and sexual IPV) in the previous 12 months using Poisson regressions. We found significant relationships between FI and IPV, where higher levels of FI were associated with IPV risk (weekly: IRR = 2.18, 95% CI = 1.82–2.61; Daily: IRR = 3.53, 95% CI = 2.89–4.32) and constrained agency increased women’s risk of IPV (IRR = 1.44; 95% CI = 1.22–1.70). Our findings suggest that FI and agency independently impact women’s experience (s) of IPV. Interventions focused on women simultaneously experiencing severe FI and constrained agency may have the highest impact; however, providing focused and moderate FI relief (e.g. reducing FI daily to monthly) could potentially reduce women’s risk of experiencing violence.

CONTACT Brittanie E. Bloom brittniebloom@gmail.com Graduate School of Public Health, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182, USA.

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Keywords

Food insecurity; intimate partner violence; agency; empowerment; Eswatini

Introduction

Intimate partner violence (IPV) affects millions of people globally (World Health Organization, 2002), but disproportionately impacts women and girls (UNAIDS, 2012; United Nations, 2019). Worldwide, 35% of women have experienced at least one type of IPV (e.g. emotional, physical and/or sexual IPV) in their lifetime (Garcia-Moreno et al., 2006; Garcia-Moreno et al., 2013). There are significant differences in how women experience IPV across low- and middle-income countries (LMICs). In a study among 372,000 ever-partnered women from 46 LMICs, Coll et al. (2020) found that the prevalence of IPV was highest among women who were younger, less empowered (e.g. had restricted social and economic opportunities), living in rural areas and in polygamous relationships (Coll et al., 2020). Further, studies show that women who experience violence, specifically sexual violence or sexual coercion, have less control over deciding when they want to get pregnant, have children or how many children they want (Maxwell et al., 2015; Miller et al., 2010; Wandera et al., 2018). Women in Eswatini, a small, lower middle-income country in sub-Saharan Africa with the highest prevalence of HIV in the world (27% of the adult population and 35% of women are HIV seropositive) (Bicego et al., 2013; UNAIDS, 2019), are of particular interest, as nearly 40% of women under the age of 18 have experienced sexual violence (Reza et al., 2009). The Eswatini government has prioritised addressing violence and gender inequity as key strategies to address the nation's HIV epidemic (NERCHA, 2014), one of their most pressing issues causing substantial morbidity and mortality (PEPFAR, 2019).

There are 821 million people around the world who experience food insecurity (i.e. inadequate access to sufficient, safe and nutritious food for an active and healthy life) and 60% of them are women and girls (Food and Agriculture Organizations of the United Nations, 2018; World Food Program, 2019). Of the 1.1 million people who live in Eswatini, 14% (approximately 159,000 people) are considered food insecure (World Food Programme, 2018). Food insecurity and IPV connect via multiple potential pathways: food insecurity may make women more vulnerable to abuse (Diamond-Smith et al., 2019), more likely to participate in risky sex practices (Miller et al., 2011), and less able to leave a violent relationship (Diamond-Smith et al., 2019; Miller et al., 2011). Additionally, women suffering from IPV are more likely to struggle with food security if their perpetrator controls the food supply within the household (Chilton et al., 2014; Diamond-Smith et al., 2019) or if they are pregnant, as Willie et al. (2018) found in their study: Pregnant Liberian women with histories of IPV were at higher risk of experiencing food insecurity compared to women without histories of IPV (Willie et al., 2018). This may be especially true when there are large power differentials in a relationship, such as a large age gap between a woman and her partner (Catalozzi et al., 2011; Izugbara, 2018).

A woman's ability to make her own choices and create the outcomes she wants (i.e. her agency) is an important factor to consider when investigating the relationship between IPV and food security, especially in vulnerable and marginalised populations, such as pregnant women and those at heightened risk for HIV/AIDS (Jewkes, 2010; Siedner et al., 2012; Willie et al., 2018). Previous research has shown that food secure women and women with high decision-making power (i.e. agency) in their households are less likely to experience IPV (Andarge & Shiferaw, 2018). Women with higher levels of agency may have increased access to social and financial support, giving them the means to negotiate for themselves or leave a violent relationship (Fielding-Miller & Dunkle, 2017). They may also be more able to negotiate and have control over sexual encounters, which is related to reproductive health outcomes, such as use of family planning and deciding when to become pregnant (James-Hawkins et al., 2018; Prata et al., 2017). Alternatively, a woman who is financially dependent on her partner and reliant on them for food and other basic needs may lack agency and be less likely to exit an unsafe relationship, especially if they are pregnant (Fielding-Miller et al., 2017; McCoy et al., 2014). Because a woman's agency is independently connected to both her ability to maintain access to food and her experiences of violence, it should be considered when investigating the relationship between food insecurity and IPV.

A synergetic relationship has been documented between food insecurity and IPV in a variety of contexts globally (Andarge & Shiferaw, 2018; Diamond-Smith et al., 2019; Ricks et al., 2016); however, a gap in research exists on how a woman's agency impacts outcomes related to food insecurity and IPV (individually and interrelated), especially in lower-income and low-resource countries such as Eswatini. In this setting, where the majority of Eswatini women (95%) experience at least one pregnancy in their lifetime (DHS, 2007), pregnant women are both a vulnerable and understudied population. There are critical public health and clinical issues related to IPV victimisation and nutrition during pregnancy (Alhusen et al., 2015; Field et al., 2018), and while food insecurity is deleterious at any time in life, its outcomes are exponentially adverse during pregnancy and can be life-threatening for the mother and her unborn child (Barnett et al., 2019; Howell et al., 2017; Willie et al., 2018). This study addresses key gaps in the literature, as its primary objective was to investigate whether a woman's agency impacts the relationship between food insecurity and IPV among women seeking antenatal care in Eswatini. We tested the hypotheses that (1) food insecurity would be significantly associated with IPV and (2) having constrained agency would increase food insecure women's risk of experiencing IPV.

Materials and methods

This study used data from a mixed-methods research project focused on transactional sex among pregnant Eswatini women seeking care at rural and urban antenatal clinics between November 2013 and June 2014 in Hhohho and Manzini regions. As previously stated, the majority of Eswatini women (95%) are pregnant at least once in their lifetime and 97% of them access health care while pregnant (DHS, 2007). Details of the larger study have been previously published elsewhere (Fielding-Miller & Dunkle, 2017; Fielding-Miller et al., 2017). The survey was self-administered in siSwati using audio computer-assisted self-interview software (ACASI). Participants were provided information about the study

in either English or siSwati. Once the participants expressed interested in participating, they provided signed written consent. Research assistants then collected demographic information and assisted participants in familiarising themselves to the ACASI so they could complete the survey independently.

The study was approved by the Eswatini (Swaziland) Scientific and Ethics Committee (SEC) and the Institutional Review Board from Emory University. The research team sought and obtained permission from clinic managers, traditional leadership and community members within rural sites. In lieu of incentives, refreshments and childcare were made available to participants.

Measures

Outcome of interest: Our primary outcome of interest was intimate partner violence (IPV). IPV was measured using an adaptation of the 9-item WHO Violence Against Women Scale, as was previously used in South Africa (Jewkes et al., 2006). The scale assessed three types of partner violence in the previous 12 months: emotional (Four items: Has your partner made you feel bad about yourself, done things to scare or intimidate you on purpose, threatened to hurt you), physical (Four items: Has your partner slapped you, thrown something at you, pushed you, hit you) and sexual (One item: Has your partner physically forced you to have sex). Response options included ‘never’, ‘once’, ‘a few times’ and ‘many times’. We modelled IPV as a continuous variable, ranging from 0 to 9, with each experience of IPV (e.g. a woman selecting anything other than ‘never’) equalling one violent event.

Predictors: Our two predictors of interest were food insecurity and constrained agency. For the purposes of this study, food security was conceptualised as *experiential* food security (e.g. someone’s individual experience(s) of being without adequate amounts of food), which has been adopted by food insecurity experts and researchers including the United Nations (UN) and the Food and Agriculture Organization (FAO) (Cafiero et al., 2018; Food and Agriculture Organizations of the United Nations, 2019). Food insecurity was assessed using a single item: ‘In the past 12 months, how often have you eaten less than enough because you did not have enough food or did not have enough money to buy food?’ with a 5-point Likert-scale response. Items ranged from ‘every day’ (1) to ‘never’ (5).

We measured constrained agency based on a number of items that were elicited from Eswatini women in a previous phase of this research project (Fielding-Miller et al., 2016), which asked a sample of participants via cultural consensus modelling, a rapid mixed-methods ethnographic technique (Romney et al., 1986), to provide a list of reasons why Swazi women (not the women themselves) might agree to have sex with a partner (Fielding-Miller et al., 2016). Twenty-seven items were identified by participants. In the present analyses, women were shown the 27-item list and were asked to select which items described why they had agreed to have sex with their most recent partner in the past 12 months. Using exploratory factor analysis, eight items were identified as representing a single latent construct – hunger, fear of violence, abuse, poverty, money, for the sake of the children, out of fear they would leave, because parents forced them – and were labelled

‘constrained agency’ as these responses seemed to demonstrate the barriers a woman might experience in making her own choices and creating the outcomes she wants (i.e. her agency) (Fielding-Miller & Dunkle, 2017). Due to their high correlation with food insecurity and IPV, hunger, fear of violence and abuse were removed; the final index included five items (poverty, money, for the sake of the children, out of fear they would leave, because parents forced them). We then created a constrained agency variable in which participants who had responded ‘yes’ to at least one item were labelled as having constrained agency.

Sociodemographic variables: Demographic data included participant’s age and education (i.e. the highest grade they completed in school). Participants were asked the age of their most recent sexual partner, and we then constructed a binomial variable to denote women whose partners were 10 or more years older than they were. Women were also asked whether their most recent pregnancy was wanted.

Analysis

After conducting basic descriptive statistical checks (e.g. running frequencies to describe demographic information and distribution of key variables), we used unadjusted Poisson models to assess the relative risk of experiencing IPV in the previous 12 months by women’s level of food insecurity and whether or not she reported experiencing any items we identified as capturing constrained agency (e.g. having sex with a partner because of poverty, needing money, for the sake of the children). We also included variables of theoretical interest in the unadjusted Poisson models, including age, education, age of a woman’s most recent sex partner, and whether her most recent pregnancy was wanted. We then built a fully adjusted Poisson model to assess the role of food insecurity, agency and whether or not the pregnancy was wanted as predictors of IPV relative risk. We only included variables in the adjusted Poisson model that were statistically significant in the unadjusted models (i.e. level of education and whether a woman’s pregnancy was wanted). Data were analysed using SPSS version 25 (IBM Corp., 2017).

Results

Four hundred and six women participated in the study. Ten women were excluded from the analysis for non-response on questions related to constrained agency ($n = 5$), food security ($n = 4$) and IPV ($n = 1$), leaving a total sample of 396 women. Sample characteristics are summarised in Table 1. Two hundred and fourteen women (54%) reported experiencing some form of IPV with their most recent sexual partner in the previous 12 months. Among women who experienced IPV, the median number of violent events reported in the last 12 months was 2, and the mean was 3.7 (range 1–21, $SD = 3.6$). Just under half of participants (43%) reported not having enough to eat at least once a month in the previous 12 months, and just under 1 in 10 (8.8%) reported having less than enough to eat every day. Approximately 16% ($n = 61$) of participants reported experiencing constrained agency (e.g. having sex with their most recent partner because of poverty, money, for the sake of the children, out of fear they would leave, because parents forced them).

In unadjusted Poisson regressions, women with more indicators of constrained agency had an 84% higher risk of experiencing IPV in the previous 12 months (Incident Rate Ratio

[IRR] = 1.84, 95% Confidence Interval [CI] = 1.57–2.16) compared to women without indicators of constrained agency. Compared to women who reported always having enough to eat in the past 12 months, reporting not having enough to eat a few times a month was associated with more than a two-fold increase in the risk of experiencing IPV in the previous 12 months (IRR = 2.28, 95% CI = 1.90–2.72). Women who reported not having enough to eat every day in the previous 12 months had the highest risk of experiencing IPV compared to those who reported no food insecurity (IRR = 3.76, 95% CI = 3.11–4.54). Lower education (IRR = 1.18, 95% CI = 1.01–2.16) and reporting that her pregnancy was unwanted (IRR = 1.20, 95% CI = 1.03–1.40) were both associated with a significantly higher risk of IPV. Neither a woman's age (IRR = 0.99, 95% CI = 0.98–1.01) nor the age difference between her and her partner (IRR = 1.01, 95% CI = 1.03–1.40) were significantly associated with experiencing IPV (Table 2).

In our final fully adjusted model, we assessed agency, food insecurity, education and whether or not a woman's pregnancy was wanted as predictors of IPV in the previous 12 months. Women who reported indicators of constrained agency had 44% more risk of experiencing IPV in the previous 12 months (IRR = 1.44, 95% CI = 1.22–1.70) compared to women without indicators of constrained agency. Women who reported not having enough to eat a few times a month and every day had a twofold (IRR = 2.18; 95% CI = 1.82–2.61) and threefold (IRR = 3.53; 95% CI = 2.89–4.32) increase in risk of IPV in the previous 12 months compared to women who reported never having trouble obtaining enough to eat. In the fully adjusted model, education and whether or not she wanted her current pregnancy were no longer significant predictors of experiencing IPV (IRR = 0.93, 95% CI = 0.79–1.31; IRR = 1.12, 95% CI = 0.96–1.31, respectively) (Table 3).

Discussion

We found that among pregnant women attending antenatal care in Eswatini, women who reported more severe experiences of food insecurity were significantly associated with having an increased risk of experiencing IPV, even after controlling for a woman's agency. While food insecurity and agency are strongly associated, our findings demonstrate that the two experiences operate independently of one another and are unique factors impacting women's experiences of violence.

Our findings are consistent with previous research conducted in North America (Conroy et al., 2019), South American and Asian countries (e.g. Brazil and Nepal) (Diamond-Smith et al., 2019; Ribeiro-Silva et al., 2016), and throughout Africa (e.g. Cote d'Ivoire, Ethiopia) (Andarge & Shiferaw, 2018; Fong et al., 2016), suggesting that the association between food insecurity and IPV is likely a global phenomenon. We found that the relationship between increasing severity of food insecurity and increased risk of experiencing IPV remained, even after controlling for a woman's agency. This suggests that both food insecurity and agency may separately impact a woman's experience(s) of violence. Interventions focused on women who experience the highest levels of food insecurity and multiple indicators of constrained agency may have the potential to do the most good; however, even providing moderate relief of food insecurity (e.g. reducing experiences of hunger from daily to monthly) has the potential to reduce the risk of a woman experiencing violence. This may

have implications for women living in impoverished communities and households, as they may have limited access to food and other resources, impacting their ability to navigate through or leave violent relationships due to dependence on a partner for basic needs (Fielding-Miller et al., 2017).

While our survey used individual level data, it may reflect the experiences of the full household (Miller et al., 2011). Likely, if a woman is experiencing food insecurity, other members of the household are also experiencing a lack of access to food and heightened exposure to violence (Ackerson & Subramanian, 2009; Miller et al., 2011), including violence perpetration. A recent study among South African men found that food insecure men were more than two times as likely to perpetrate IPV as compared to men who were not food insecure (Hatcher et al., 2019). Additionally, in a multi-country study conducted by the UN, current experiences of food insecurity were associated with physical and sexual IPV perpetration among men (Jewkes et al., 2013). Additional research is needed to further explore the relationship between IPV perpetration and food security among men, specifically in order to develop interventions focused on harm reduction and violence prevention.

In addition to violence, food insecurity is also associated with many family-level stressors (Misselhorn, 2005), including mental health issues in adults (Hadley et al., 2008) and maternal depression and anxiety, which has been linked to behavioural problems in children (Whitaker et al., 2006). Both food insecurity and violence are linked to poor outcomes for both a pregnant woman (e.g. substance use, depression, suicidality, death) and her unborn child (e.g. pre-term birth, low-birth weight, growth delays) (Barnett et al., 2019; Dewing et al., 2013; Martin et al., 2007). This is especially important to consider for our sample, which consisted of pregnant women seeking antenatal care, as this is likely a uniquely stressful period of time for a woman – especially for those who may be experiencing violence and other extreme stressors (e.g. food insecurity, constrained agency) that impact her ability to care and provide for herself and her child.

Interventions that aim to lessen financial stressors (i.e. cash vouchers) and increase access to food (i.e. food transfers, developing subsistence agriculture) have been successful in the past (Baiphethi & Jacobs, 2009; Hidrobo et al., 2016). Such interventions often focus on the empowerment of women (i.e. increasing their agency), specifically on increasing their incomes, promoting their ability to be economic actors and enhancing their decision-making abilities within their households and communities (Buller et al., 2018; UN Women). Though there have been successes, such interventions should take great care, especially in regions where there are norms embedded in labour and household responsibilities. If culturally inappropriate interventions are introduced, they could cause tension within the household and contribute to women's experiences of violence, food insecurity and negatively impact her agency (Faber et al., 2011; Food and Agriculture Organizations of the United Nations, 2017). Food insecurity and its association with violence for women and members of their household are complex and require a nuanced approach which accounts for the interactive nature of all levels of the social–ecological model and the context in which efforts are being made. The FAO has created guiding principles for such assurances, including building on local capacities, tapping into the community's knowledge and current practices, and respecting their culture (Food and Agriculture Organizations of the United Nations, 2017;

Hart, 2010). Multi-modal interventions aimed at addressing food insecurity and/or violence prevention should consider such principles and include components of agency-building and decision-making for women, as this may positively impact many facets of women's lives (e.g. individually, interpersonally (within her household and social relationships), within in her community) when implemented appropriately.

While our findings are consistent with other research in sub-Saharan Africa, it is important to note that our using a sample of pregnant woman in Eswatini may not be generalisable to other populations or settings. When conducting research with vulnerable populations about sensitive topics, such as experiencing violence, lacking agency and/or not having enough food for yourself and your family, there is a risk of social desirability bias influencing the results. Though impossible to eliminate social desirability biases completely, our study mitigated some of those risks through its use of ACASI software, which allowed participants to respond to survey questions independently. Additionally, while we cannot draw conclusions about directionality or temporality of associations due to the cross-sectional design of our study and we recognise there is potential for bidirectionality among our key variables (i.e. IPV, food insecurity and agency), our findings contribute to the literature by address existing gaps and exploring agency.

The intricacies of addressing food insecurity and IPV in sub-Saharan Africa has been foci of its regional and national government, policy-makers, non-government organisations and the public sector for decades (Food and Agriculture Organizations of the United Nations, 2017; Perez-Escamilla & Segall-Correa, 2008); however, agency has not often been included in efforts to address outcomes related to violence. While there are many existing measures of food insecurity (over 25 different measures of food insecurity have been used in Sub-Saharan Africa alone (Hendriks et al., 2016; Misselhorn & Hendriks, 2017), we feel our measures are in alignment with efforts to develop internationally – or regionally agreed-upon indicators to measure constructs, such as food security and agency, in ways that are grounded in the broader social context in which one lives. The scales we used to measure agency and food insecurity were derived from qualitative interviews among women in the region using free-listing, a component of cultural consensus modelling. Utilising cultural consensus modelling, as we did in this study, could assist in accurately capturing a woman's cultural and social experiences of being food insecure and living with constrained agency in Eswatini (Weiler et al., 2015). Additional research should be conducted to better understand the nuances of food insecurity and how to best capture experiences of food insecurity, especially among highly vulnerable and marginalised populations.

Conclusion

There are complex and interrelated relationship(s) that exist between experiences of violence and food insecurity (Diamond-Smith et al., 2019; Miller et al., 2011), violence and agency (Siedner et al., 2012; Tsai et al., 2012) and food insecurity and agency (Fielding-Miller & Dunkle, 2017). Findings from our research indicate that food insecurity can increase a woman's risk of violence. Specifically, women with higher levels of food insecurity have higher risks of experiencing IPV, regardless of their level of agency. Eswatini women, especially those who are pregnant, are a unique and important population to continue to

focus on, as they are exposed to high levels of HIV, IPV, food insecurity and culturally influenced gender power differentials that can impact agency. While more research is needed further investigate these constructs together, especially among vulnerable women and their families (Kaschula, 2011; Tsai et al., 2017), ultimately supporting multi-level interventions and programming that focus on achieving food security and increasing agency may be most promising in combatting violence against women and girls.

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Table 1.

Characteristics of pregnant women seeking antenatal care in clinics in Eswatini ($n = 396$).

Variable	<i>n</i> (%)
Age mean (SD)	24.6 (5.0)
Education	
Below secondary	272 (68.7%)
Secondary and above	124 (31.3%)
Experience(s) of IPV mean (SD)	3.7 (3.6)
Eaten less than enough (food insecurity)	
Every day	35 (8.8%)
A few times a week	47 (11.9%)
A few times a month	68 (17.2%)
Once a month	19 (4.8%)
Never	227 (57.3%)
Agency	
Constrained agency	61 (15.4%)
Agency	335 (84.6%)
Partner age difference	
Less than 10 years	285 (72.0%)
10 years or older	111 (28.0%)
Pregnancy wanted	
Yes	269 (67.9%)
No	127 (32.1%)

Table 2.

Unadjusted Poisson regression analysis between food security, constrained agency and sociodemographic variables and number of violent events experienced among pregnant women seeking antenatal care in clinics in Eswatini ($n = 396$)

Variable	Unadjusted association between food security, constrained agency and sociodemographic variables and number of violent events	
	IRR (95% CI)	<i>p</i> -value
Age	0.99 (0.98–1.01)	0.41
Education		
Secondary and above (ref)	ref	ref
Below secondary	1.18 (1.01–1.38)	<0.05
Agency		
Agency (ref)	ref	ref
Constrained agency	1.84 (1.57–2.16)	<0.001
Eaten less than enough (food insecurity)		
Never (ref)	ref	ref
Monthly	0.93 (0.61–1.42)	0.74
Few times a month	2.28 (1.90–2.72)	<0.001
Few times a week	1.69 (1.35–2.11)	<0.001
Every day	3.76 (3.11 –4.54)	<0.001
Partner age difference		
Less than 10 years (ref)	ref	ref
10 years or older	1.01 (0.86–1.17)	0.96
Pregnancy Wanted		
Yes (ref)	ref	ref
No	1.20 (1.03–1.40)	<0.05

IRR = Incidence Rate Ratio; CI = Confidence Interval

Table 3.

Adjusted Poisson regression analysis between food security, constrained agency and sociodemographic variables and number of violent events experienced among pregnant women seeking antenatal care in clinics in Eswatini ($n = 396$).

Variable	Adjusted ^a association between food security, constrained agency and sociodemographic variables and number of violent events	
	IRR (95% CI)	<i>p</i> -value
Education		
Secondary and above (ref)	ref	ref
Below secondary	0.93 (0.79–1.31)	0.35
Agency		
Agency (ref)	ref	ref
Constrained agency	1.44 (1.22–1.70)	<0.001
Eaten less than enough (food insecurity)		
Never (ref)	ref	ref
Monthly	0.92 (0.60–1.40)	0.69
Few times a month	2.18 (1.82–2.61)	<0.001
Few times a week	1.69 (1.35–2.13)	<0.001
Every day	3.53 (2.89–4.32)	<0.001
Pregnancy Wanted		
Yes (ref)	ref	ref
No	1.12 (0.96–1.31)	0.15

IRR, Incidence Rate Ratio; CI, Confidence Interval.

^aAdjusted for food security, constrained agency, education and pregnancy wanted.

* Age not included in adjusted model due to nonsignificance ($p > 0.05$) in unadjusted model.