

INTIMATE PARTNER VIOLENCE AND UNINTENDED PREGNANCY AMONG ADOLESCENT AND YOUNG ADULT MARRIED WOMEN IN SOUTH ASIA

ENU ANAND^{*1}, SAYEED UNISA^{*} AND JAYAKANT SINGH[†]

**International Institute for Population Sciences, Mumbai, India and †School of Health Systems Studies, Tata Institute of Social Sciences, Mumbai, India*

Summary. This study examined the relationship between Intimate Partner Violence (IPV) and unintended pregnancy among young women in South Asia using Demographic and Health Survey data from India (2005–2006), Bangladesh (2007) and Nepal (2011). The respondents were adolescent and young adult married women aged 15–24 years who had at least one childbirth in the five years preceding the survey. Bivariate and stepwise multivariate logistic regression analyses were performed to assess the relationship between IPV and unintended pregnancy. Thirty-eight per cent of the respondents in India, 52% in Bangladesh and 28% in Nepal reported having experienced physical or sexual IPV. Those who reported physical or sexual IPV had higher odds of unintended pregnancy (1.36 in India and 1.99 in Bangladesh). The findings indicate that IPV is a risk factor for unintended pregnancy among adolescent and young adult married women. Along with violence prevention programmes, a more responsive and youth-friendly health system needs to be in place to provide health care services to young women in these countries.

Introduction

Worldwide, an estimated 35% of ever-partnered women experience either physical or sexual violence (Garcia-Moreno *et al.*, 2006). Intimate Partner Violence (IPV) is deep-rooted in South Asian societies (Jejeebhoy *et al.*, 2013; Decker *et al.*, 2015), where women are at considerably higher risk of experiencing IPV than those from other parts of the world. The World Health Organization estimates a huge 42% prevalence rate of IPV in South Asia, against the global average of 30% (WHO, 2013). Research has highlighted the negative health consequences and decreased well-being of women who

¹ Corresponding author. Email: enuanand@hotmail.com

experience violence (Wang & Pillai, 2001; Garcia-Moreno, 2002; Mukanangana *et al.*, 2014; Herrmann, 2014; García-Moreno *et al.*, 2014; Kismödi *et al.*, 2015). The demonstrated consequences of IPV include unintended pregnancy, abortion, fetal loss, depression and HIV infection (Chowdhary & Patel, 2008; Zablotska *et al.*, 2009; Alio *et al.*, 2009; Antai, 2011; Stöckl *et al.*, 2012; Pallitto *et al.*, 2013; WHO, 2013). The effect on the gynaecological health of women who experienced IPV is persistent and long-lasting. Women experiencing IPV are more likely to report gynecological morbidity, sexually transmitted infections and urinary tract infections (Campbell, 2002; Raj *et al.*, 2005). Those who experience physical or sexual violence are more likely to suffer adverse pregnancy outcomes, including delivery by Caesarean section, kidney infections, premature labour and trauma due to falls or blows to the abdomen (Cokkinides *et al.*, 1999; Chalmers & Hashi, 2000; Silverman *et al.*, 2007; Mechanic *et al.*, 2008; Nunes *et al.*, 2010). In spite of the damaging effects of violence against women, historically it has been seen as a private matter within an intimate partner relation and hence a neglected priority of the state in South Asian countries.

Adolescents and young women are at high risk of intimate partner violence. Gender-based violence prevention is the third most important research priority area for adolescent sexual and reproductive health in low- and middle-income countries (Hindin *et al.*, 2013). World Health Organization estimates suggest that violence against women is higher at young ages, indicating the onset of violence early in the marriage (WHO, 2013). Nationally representative data from India and Nepal reveal that the mean age of the first experience of IPV is relatively low in India (20.68 years) and Nepal (20.35 years). Almost 86% of married women had experienced their first act of violence before they reached age 24 in India and Nepal. Adolescence is a period where women are more likely to be victims of physical violence, and the younger a woman at marriage, the higher the chances of first sex being non-consensual or forced (Watts & Zimmerman, 2002; Jejeebhoy & Bott, 2003; Raj *et al.*, 2010). Violence during adolescence and at a young age can, as in adult women, cause long-lasting psychological and physical harm.

Unintended pregnancy infringes the reproductive rights of a woman: the right to bear children according to their wish, the right to decide the number of children they intend to bear and the right to decide the timing of conception. Approximately 40% of pregnancies worldwide, or 85 million pregnancies in total, were unintended in 2012 (Sedgh *et al.*, 2014). The proportion of unintended pregnancy is the highest in the South-East Asia region (Singh *et al.*, 2009). A growing body of research in South Asia has explored levels of unintended pregnancies among adult victims of IPV (Silverman *et al.*, 2007; Begum *et al.*, 2010; Puri *et al.*, 2011; Shabnam & Mukherjee, 2013; Raj & McDougal, 2015). Some studies suggest that IPV is an independent covariate of unintended pregnancy (Silverman *et al.*, 2007; Cripe *et al.*, 2008; Begum *et al.*, 2010; Ismayilova, 2010; Puri *et al.*, 2011; Shabnam & Mukherjee, 2013; Bergmann & Stockman, 2015; Raj & McDougal, 2015). However, other studies have identified IPV as an intermediate factor of unintended pregnancy rather than a direct and independent factor (Bergmann & Stockman, 2015; Raj & McDougal, 2015).

Previous research on the relationship between IPV and unintended pregnancy specifically among young and adolescent women is limited. Adolescents and young married women are at high risk of physical violence and sexual coercion (Jejeebhoy *et al.*, 2013). Research into the relation between IPV and unintended pregnancy among

young married women necessitates them being in the early years of courtship, not likely to have attained their desired family size and likely to be sexually active leading to high conception rates. India, Bangladesh and Nepal are the three countries representing a substantial proportion of the population in South Asia. Moreover, they have similar socioeconomic and cultural characteristics. Therefore, these three countries are studied in a comparative frame. Pakistan could not be included in the study due to lack of information available on sexual violence in the Demographic and Health Survey data of Pakistan.

Methods

Data were from the Demographic and Health Surveys (DHSs), which are nationally representative datasets. Data for India were from the National Family Health Survey (2005–06), those from Nepal were from the Nepal Demographic Health Survey (2011) and those from Bangladesh were from the Bangladesh Demographic Health Survey (2007). The relationship between IPV and unintended birth was analysed within a comparative framework to provide a multifaceted occurrence of violence within different societies. The terms ‘unintended pregnancy’ and ‘unintended birth’ are used interchangeably in the study.

The DHS is a cross-sectional, household sample survey of women in the reproductive age group (15–49 years). It provides reliable information on fertility, fertility intentions, maternal and child health and domestic violence. The interviewers sought informed consent from the participants before starting an interview. Their privacy and confidentiality on the information provided was emphasized and assured. The domestic violence module was randomly administered to only one woman in a household to ensure her privacy in the household. All interviewers who administered the domestic violence module were females and had received special training to conduct interviews. This study selected ever-married respondents aged 15–24 who had given birth to at least one child in the last five years preceding the survey and who had provided information on fertility preference pertaining to the child after the child was born. The analysis consists of a total sample of 9788 women in India, 934 in Bangladesh and 574 in Nepal.

Computation of unintended last pregnancy

Accurate measurement of birth intentions was important to understand the fertility behaviour of the women. Measurement of pregnancy intention in the DHS was based on a retrospective question, posed to the woman for every live birth: ‘When she was pregnant with [Name] whether she wanted the pregnancy then, later or not at all’. Those who responded that their last birth was ‘wanted later’ or ‘not wanted at all’ were categorized to have an unintended pregnancy and those who responded ‘wanted birth then’ were considered to have an intended pregnancy.

Computation of IPV

The DHS collected information on three different forms of violence: physical, sexual and emotional. Any act of physical or sexual violence experienced by a woman in the study is considered as a case of intimate partner violence. The domestic violence module

used in the DHS is based on questions constructed from the Conflict Tactic Scale (CTS) (Straus, 1979).

Physical violence. A woman was considered to have experienced physical violence if her partner ever: pushed, shook or threw something at her; slapped her; twisted arm or pulled her hair; punched her with his fist or with something that could hurt her; kicked, dragged or beat her; tried to choke or burn her on purpose; threatened or attacked her with a knife, gun or any other weapon.

Sexual violence. Sexual violence was defined as any violence that includes physical force used by the husband to have sexual intercourse when a woman did not want to do so; or if she was forced to perform an unnatural sexual act.

Covariates

Selected demographic and socioeconomic characteristics, along with the reproductive health behaviour of women, were considered as covariates drawn from previously tested covariates of violence (Atteraya *et al.*, 2014; Santhya *et al.*, 2007; Koenig *et al.*, 2006; Speizer & Pearson, 2011). The analysis focused on three sets of independent characteristics associated with violence: a) household characteristics; b) women's characteristics; and c) husband's characteristics.

Type of place of residence (urban/rural), socioeconomic status of household (poor/middle/rich) and religion of the household (Hindu/Muslim/other) were the household characteristics. Age group of the women (15–19/20–24), levels of education (no education/primary/secondary/higher), current working status of the women (yes/no), ever used contraception (yes/no), ideal family size as per her wish (0–2/3+) and decision-making status (low/high) were the women's characteristics analysed. In the DHS, women were asked a few questions regarding their decision-making for health care, household purchases, daily need household purchases, visits to family and friends and final say on their husband's earnings. A score of '1' was assigned in cases where the woman decided on her own on the matters mentioned above and a score of '0' otherwise. The score of each woman was added to compute a decision-making index. Women who scored less than three were considered to have low decision-making status, and those who scored three and above were considered as having high decision-making status. Characteristics of the husband used as covariates included education (educated/uneducated), occupation (not working/agricultural/non-agricultural/manual labour) and alcohol consumption (yes/no).

Statistical analysis

The association between intimate partner violence and unintended pregnancy was assessed by cross-tabulation and Pearson's χ^2 test. Multivariate binary stepwise logistic regression models were employed to calculate the influence of different covariates on unintended pregnancy. The net and gross effects of IPV on unintended pregnancy were analysed using a stepwise logistic regression model through multiple models. In the first model, the gross effects of physical or sexual violence on unintended last birth

were calculated. In the second model, variables related to women's fertility intention and decision-making, i.e. ever used contraception, ideal family size and her decision-making status, were assessed. Finally in the third model, along with variables included in the first and second models, the socio-demographic characteristics of the women and their husbands were included. In the binary model, the outcome variable, i.e. unintended last birth, was assigned a value of '1' and '0' to those who reported otherwise. The results are presented as odds ratios and 95% confidence intervals. Appropriate domestic violence weights were applied for the bivariate analysis. The analyses were performed using Stata 13 and IBM SPSS 22.

Results

Profile of the respondents

The majority of the respondents (76.3% from India, 79% from Bangladesh and 81% from Nepal) were from rural areas (Table 1). Nearly 40% belonged to poor households in all three countries, and the percentage with a higher wealth index varied between 11 and 16% (11% in Nepal, 16% in Bangladesh and 13% in India). Most of the respondents from India and Nepal belonged to the Hindu religion, while a majority in Bangladesh followed Islam. Around 80% were in the age group 20–24 in India and Nepal. Sixty-eight per cent of respondents from Bangladesh were in the age group 20–24. Almost half of the respondents from all three countries were either illiterate or had only up to primary levels of education. A quarter of respondents from India and Bangladesh were working, while half of those in Nepal were working. Half of the respondents from India and around one-third from Nepal had ever used contraception, whereas a little less than two-fifths (18%) in Bangladesh had ever used contraception. About 40–46% of the respondents from India and Bangladesh showed high levels of decision-making power, whereas this was only 30% in Nepal. Most husbands were educated: 75% in India, 70% in Bangladesh and 85% in Nepal. In India, most of the husbands were engaged in manual labour and agriculture-related employment. About half of the husbands in Bangladesh were in non-agricultural-related employment. Similarly, about 40% of the husbands in Nepal worked as manual labourers and another 40% in the non-agricultural sector.

Prevalence of violence and unintended last pregnancy

The prevalence of physical violence was the highest in Bangladesh (47%), followed by India (34%) and Nepal (22%) (Table 2). In all three countries, slapping was the most common form of physical violence reported. Every second woman in Bangladesh, every third woman in India and every fifth woman in Nepal reported having been slapped by their spouse. Similarly, every fifth woman in Bangladesh was a victim of sexual violence. In Nepal, around 13% and in India around 12% of the women reported sexual violence. The experience of either physical or sexual violence was the highest in Bangladesh (52%), followed by India (38%) and Nepal (28%). The rate of unintended last births was also the highest in Bangladesh (23%), followed by Nepal (21%) and India (18%).

Association between IPV and unintended last births

The relationship between IPV and unintended pregnancy was examined using bivariate analysis and statistical significance was assessed using Pearson's χ^2 test (results not shown).

Table 1. Selected characteristics of married women aged 15–24 years who had given birth in the last five years in India, Bangladesh and Nepal

Background characteristics	India (%)	Bangladesh (%)	Nepal (%)
Household characteristics			
Urban residence	23.7	20.4	18.9
Wealth index			
Poor	45.5	44.4	42.3
Middle	41.9	39.7	46.9
Rich	12.6	15.9	10.9
Religion			
Hindu	80.4	7.0	84.7
Muslim	15.6	92.5	–
Other ^a	4.0	0.6	15.3
Women's characteristics			
Age group			
15–19	17.9	32.7	17.7
20–24	82.1	67.3	82.3
Education			
None	42.0	14.8	31.6
Primary	16.3	31.8	23.3
Secondary	38.7	48.2	41.3
Higher	3.1	5.2	3.8
Working status			
Yes	24.1	25.0	53.0
Ever used contraception	49.5	18.6	33.3
Ideal family size 3+	29.4	20.8	13.8
Index of decision-making			
Low	53.8	59.2	70.6
High	46.2	40.8	29.4
Husband's characteristics			
Literate	75.7	70.5	85.0
Working status			
Not working	1.2	1.9	0.0
Agricultural	30.7	29.0	21.1
Non-agricultural	25.2	49.3	40.3
Manual labour	42.9	19.8	38.5
Alcohol consumption	29.9	NA	46.1
Total (<i>N</i>)	9788	934	574

Percentages are weighted and *N* represents un-weighted count. NA, data not available.

^aOther religions includes Christian, Jain, Sikh, Buddhist and Parsi. For Nepal, 'other' religion includes all religions except Hindu.

The results showed a statistical significance in India and Bangladesh, but not in Nepal. Nevertheless, logistic regression analysis was carried out for all three countries to identify the factors associated with unintended last births. Odds ratios were calculated for each country using three different models. The odds ratios of physical or sexual violence and other control variables are presented in Tables 3, 4 and 5 for India, Bangladesh and Nepal, respectively.

Table 2. Percentage of respondents who reported any form of IPV by their current husband and unintended pregnancy by country

Type of IPV	India (%)	Bangladesh (%)	Nepal (%)
Ever experienced any physical violence	34.3	47.1	22.0
Spouse ever pushed, shook or threw something	11.1	27.9	15.0
Spouse ever slapped	31	47.2	19.7
Spouse ever punched with fist or something harmful	8.7	16.0	8.5
Spouse ever kicked or dragged	9.0	13.6	10.6
Spouse ever tried to strangle or burn	1.8	5.7	1.9
Spouse ever threatened or attacked with knife/gun or other weapon	1.0	1.2	1.7
Spouse ever twisted arm or pull hair	12.3	13.3	9.6
Ever experienced severe physical violence	9.5	14.6	11.1
Ever experienced any sexual violence	11.6	19.1	13.4
Spouse ever physically forced sex when not wanted	9.4	18	13.4
Spouse ever forced other sexual acts when not wanted	4.8	NA	3.5
Ever experienced physical or sexual violence	37.6	52.4	27.5
Unintended pregnancy (last birth)	18.1	22.6	21.2
Total (N)	9788	934	574

NA, data not available.

Physical or sexual violence was significantly associated with unintended births in India and Bangladesh across the three models. The gross effect of physical and sexual violence on unintended births in India and Bangladesh (Tables 3 and 4) showed statistical significance. Women who experienced physical or sexual violence were more likely to report an unintended birth in India and Bangladesh (OR = 1.314, $p < 0.001$; OR = 1.438, $p < 0.05$, respectively). Women with a rich wealth index were less likely to report unintended birth than poor women in India (OR = 0.799, $p < 0.001$). Those who followed 'other' religions were more likely to report unintended birth (OR = 1.535, $p < 0.001$) than Hindu women in India. Those who worked were less likely to report unintended birth (OR = 0.812, $p < 0.001$) than those who did not work in India. Women with primary and secondary levels of education were more likely to report unintended birth than women with no education in India and Nepal. The odds of unintended birth increased as the levels of education increased (OR = 1.349, $p < 0.001$ for primary level and OR = 1.451, $p < 0.001$ for secondary level in the case of India; OR = 1.776, $p < 0.10$ for primary level and OR = 2.311, $p < 0.05$ for secondary level in the case of Nepal). Similarly, unintended birth was more likely among women who ever used contraception in India, Bangladesh and Nepal (OR = 1.725, $p < 0.001$; OR = 1.664, $p < 0.05$ and OR = 1.566, $p < 0.05$ respectively).

Discussion

This paper examined the association between IPV and last unintended birth among married adolescent and young adult women in India, Bangladesh, and Nepal. Intimate partner violence comprised both physical and sexual violence. The respondents were married women who had had at least one birth in the five years preceding the survey.

Table 3. Odds of unintended last birth by selected characteristics of the respondent in India

Characteristic	Model 1		Model 2		Model 3	
Physical or sexual violence						
No (Ref.)						
Yes	1.314***	1.180–1.463	1.295***	1.162–1.444	1.359***	1.212–1.517
Ever used contraception						
No (Ref.)						
Yes			1.772***	1.588–1.978	1.725***	1.540–1.933
Decision-making status						
Low (Ref.)						
High			0.936	0.842–1.041	0.894**	0.800–0.997
Ideal family size						
0–2 (Ref.)						
3+			1.108*	0.986–1.246	1.102	0.971–1.250
Residence						
Rural (Ref.)						
Urban					0.973	0.854–1.107
Wealth status						
Poor (Ref.)						
Middle					0.907	0.81–1.015
Rich					0.800**	0.649–0.987
Religion						
Hindu (Ref.)						
Muslim						
Other					1.139	0.981–1.322
Age group						
15–19 (Ref.)						
20–24					1.059	0.903–1.243
Education						
None (Ref.)						
Primary					1.349***	1.148–1.586
Secondary					1.452***	1.252–1.683
Higher					0.784	0.531–1.161
Women's working status						
No (Ref.)						
Yes					0.848**	0.757–0.949
Husband's education						
Illiterate (Ref.)						
Literate					1.104	0.952–1.282
Husband's working status						
Not working (Ref.)						
Agricultural					0.926	0.550–1.562
Non-agricultural					0.957	0.570–1.607
Manual labour					0.919	0.548–1.539
Husband's alcohol abuse						
No (Ref.)						
Yes					0.985	0.892–1.087

*** $p < 0.001$; ** $p < 0.05$; * $p < 0.1$; based on 9788 women.

The rate of experience of physical or sexual violence ranged between 27 and 52% among the respondents. Around 20% reported that their last birth had resulted from an unintended pregnancy (Table 2). Unintended pregnancy was significantly higher among

Table 4. Odds of unintended last birth by selected characteristics of the respondent in Bangladesh

Characteristic	Model 1		Model 2		Model 3	
Physical or sexual violence						
No (Ref.)						
Yes	1.438**	1.067–1.938	1.415**	1.046–1.913	1.369*	0.998–1.879
Ever used contraception						
No (Ref.)						
Yes			1.616**	1.051–2.484	1.664**	1.065–2.601
Decision-making status						
Low (Ref.)						
High			0.878	0.650–1.185	0.846	0.624–1.156
Ideal family size						
0–2 (Ref.)						
3+			1.005	0.688–1.469	1.032	0.696–1.530
Residence						
Rural (Ref.)						
Urban					1.316	0.919–1.883
Wealth status						
Poor (Ref.)						
Middle					1.077	0.751–1.544
Rich					1.081	0.641–1.817
Religion						
Hindu (Ref.)						
Muslim					1.145	0.631–2.078
Other					1.587	0.142–17.273
Age group						
15–19 (Ref.)						
20–24					0.847	0.607–1.181
Education						
None (Ref.)						
Primary					1.472*	0.938–2.321
Secondary					1.086	0.671–1.758
Higher					1.115	0.472–2.620
Women's working status						
No (Ref.)						
Yes					0.954	0.664–1.369
Husband's education						
Illiterate (Ref.)						
Literate					0.805	0.595–1.091
Husband's working status						
Not working (Ref.)						
Agricultural					1.286	0.270–6.127
Non-agricultural					2.366	0.512–10.754
Manual labour					2.175	0.457–10.209

** $p < 0.05$; * $p < 0.1$; based on 934 women.

Table 5. Odds of unintended last birth by selected characteristics of the respondent in Nepal

Characteristic	Model 1		Model 2		Model 3	
Physical or sexual violence						
No (Ref.)						
Yes	1.057	0.686–1.629	1.113	0.715–1.734	1.201	0.732–1.970
Ever used contraception						
No (Ref.)						
Yes			1.63**	1.088–2.441	1.63**	1.024–2.395
Decision-making status						
Low (Ref.)						
High			0.798	0.531–1.224	0.806	0.521–1.245
Ideal family size						
0–2 (Ref.)						
3+			0.471*	0.229–0.945	0.530**	0.246–1.140
Residence						
Rural (Ref.)						
Urban					0.827	0.475–1.440
Wealth status						
Poor (Ref.)						
Middle					1.034	0.612–1.748
Rich					0.798	0.351–1.817
Religion						
Hindu (Ref.)						
Other					1.229	0.770–1.962
Age group						
15–19 (Ref.)						
20–24					0.744	0.439–1.261
Education						
None (Ref.)						
Primary					1.776*	0.945–3.337
Secondary					2.311**	1.230–4.344
Higher					1.632	0.56–4.756
Women's working status						
No (Ref.)						
Yes					0.818	0.519–1.288
Husband's education						
Illiterate (Ref.)						
Literate					1.525	0.737–3.155
Husband's working status						
Agricultural (Ref.)						
Non-agricultural					0.986	0.522–1.861
Manual labour					1.193	0.642–2.215
Husband's alcohol abuse						
No (Ref.)						
Yes					1.365	0.885–2.104

** $p < 0.05$; * $p < 0.1$; based on 574 women.

women who had experienced physical or sexual violence in India and Bangladesh, and the results are consistent with those of previous studies (Silverman *et al.*, 2007; Stephenson & Koenig 2008; Raihana *et al.*, 2012). However, in the case of Nepal this association was not significant, but this could have been due to small sample size. Although abortion is legal in the selected countries, it is more liberal in Nepal than in India and Bangladesh (WHO, 2013). Liberal abortion law in Nepal may be a factor leading women to seek abortion services whenever a pregnancy is unintended. There is evidence for a strong relationship between abortion and violence (Leung *et al.*, 2002). However, further studies are necessary to test the relationship between abortion and violence under different policy circumstances.

The results found a relationship between IPV, use of contraception and unintended births. Women who ever used contraception were more likely to report unintended birth. Although some previous studies have suggested the use of contraception to be higher among women who reported unintended childbirth (Begum *et al.*, 2010; Raihana *et al.*, 2012; Shabnam & Mukherjee, 2013), the reasons for this are uncertain. In countries with moderate to high contraceptive prevalence, the majority of unintended or unplanned pregnancies are the result of either contraceptive discontinuation or contraceptive failure (Black *et al.*, 2010). Intimate partner violence is associated with more rapid discontinuation of contraception (Allsworth *et al.*, 2013) leading to unintended pregnancy outcome. Community and individual perception about contraception is an important determinant of contraceptive use; therefore, misconceptions about the use and discontinuation of contraception may be leading to unintended pregnancies (Adhikari *et al.*, 2009). It may also be argued that misconceptions about contraception are widely prevalent in South Asian countries. Women reporting IPV are more likely to use traditional methods of contraception (Taft *et al.*, 2015). The chances of failure with traditional methods are high and may give rise to unintended pregnancies. A recent study by Raj and McDougal (2015) has pointed out that women with a history of IPV, particularly sexual violence, had a higher prevalence of contraceptive failure. The births that followed contraceptive failure were most likely to be considered unintended (Curtis *et al.*, 2011). Thus, it is possible that IPV may lead to contraceptive failure or discontinuation, resulting in unwanted births. Previous studies also indicate that due to fear of violence women fail to access contraception or abortion services (Shedlin & Hollerbach, 1981; Fort, 1989; Bawah *et al.*, 1999). Consistent use of contraception undoubtedly reduces the chances of unintended pregnancy, but the use of contraception may be associated with IPV and other factors.

The current study is a departure from earlier studies in a several ways. Previous studies have focused mostly on women in their childbearing years (15–49), whereas this study presents a more generalized picture of the relationship between IPV and unintended pregnancy among sexually active adolescents and young married women. It is important to study adolescents and young women because conception rates are higher at younger ages. Besides, marriage at an early age, i.e. before the age of 18, is associated with increased risk of intimate partner violence (Raj *et al.*, 2010; Singh & Anand, 2015). The social norms and sanctions in the South Asian regions pressurize women to prove their fertility soon after marriage. The reproductive rights of women are little respected in a society where a woman's status is dependent on her ability to conceive and give birth. Therefore, young women are under tremendous pressure to give birth. Young women who

experience sexual violence are likely to compromise in exercising their reproductive rights, which may lead to an unintended or coerced pregnancy. Under coercive circumstances, adolescent and young married women are prey to non-consensual sex out of fear of the consequences of refusal, which may range from physical abuse, loss of economic support to accusations of infidelity (Santhya *et al.*, 2007). This behaviour has been reported as 'defensive acquiescence' (Rance, 1994; Goldblatt & Meintjes, 1998; Heise *et al.*, 1999), where a woman surrenders herself to her husband's desire.

This study has a few limitations. The inferences drawn are based on cross-sectional data, so causal inference may not be drawn. Intimate partner violence is a self-reporting measure which may be under-reported as it is a very sensitive issue to discuss. Recall bias may also lead to under-reporting while sharing experiences of IPV. The retrospective measure of unintended birth is hugely affected by post-birth rationalization of pregnancy and maternity happiness, which may lead to under-reporting of an unintended birth outcome. The study did not capture those women who may have had an unintended pregnancy that resulted in miscarriage or induced abortion. Socially desirable behaviour often leads woman to report a child who has already been born as a wanted child. The probability of reporting the last pregnancy as wanted or mistimed may be higher than reporting it as unwanted. Therefore, it is assumed that mistimed pregnancy may be an unwanted pregnancy but may have been reported as mistimed. Therefore, both mistimed and unwanted last pregnancies were categorized as unintended pregnancies.

Conclusion

The investigation of the association between IPV and unwanted births is critical for developing intervention programmes in order to reduce the health and social costs attached to these. The very high level of fertility in South Asian countries is a grave concern and unintended births are an added burden. Unintended pregnancies due to IPV reduce the health and well-being of women. Unintended pregnancy is a form of gross reproductive rights violation. The toll of unintended fertility intentions experienced by these women is often suppressed under the pretext of post-birth rationalization. The happiness attached to being a mother as 'the source of life' is heavily praised in South Asian society. It is therefore likely that women are inclined to suppress their reproductive rights. However, unintended births not only harm the health and well-being of women, but affect the larger demographic goals of resource-poor countries and add a burden to their already strained public health systems.

There is a greater need to recognize the sexual and reproductive health rights of married adolescent and young women in South Asia, since they are prone to unwanted or forced sex due to persistently disadvantaged gender equity norms. A strong involvement of the health sector in the lives of distressed women is essential. Violence against women needs to be considered and treated as a public health concern. Frontline community-level workers can play an important role in identifying the victims of IPV and refer them for treatment in appropriate health facilities. Awareness about various methods of contraception that best suit a woman must be imparted at the community level. Long-term and non-terminal methods of contraception must be promoted as a way of helping women who are forced to take part in sexual acts to prevent pregnancy.

The emergency contraceptive pill is an available option to prevent unwanted pregnancies; this can be provided by Accredited Social Health Activists (ASHAs) or Auxiliary Nurse Midwives (ANMs). However, the prevalence of the IUD, for example, is very low in India, Bangladesh and Nepal due to a lack of awareness and fear of side-effects. Efforts must be made to increase the use of reversible contraceptive methods that are acceptable to users, and violence prevention programmes must be accompanied by a more responsive health care system.

Acknowledgments

An earlier version of this paper was presented at a seminar entitled 'Unintended Pregnancy among the Young: Correlates and Consequences' organized by the Asian Population Association's scientific group on Pathways to Adulthood in Asia and the Institute for Population and Social Research, Mahidol University, held in Bangkok in 2014. The authors gratefully acknowledge the comments made by reviewers and participants, especially Dr Shireen Jejeebhoy, whose valuable comments reshaped this paper.

References

- Adhikari, R., Soonthornhada, K. & Prasartkul, P.** (2009) Correlates of unintended pregnancy among currently pregnant married women in Nepal. *BMC International Health and Human Rights* **9**(1), 17.
- Alio, A. P., Nana, P. N. & Salihu, H. M.** (2009) Spousal violence and potentially preventable single and recurrent spontaneous fetal loss in an African setting: cross-sectional study. *Lancet* **373**(9660), 318–324.
- Allsworth, J. E., Secura, G. M., Zhao, Q., Madden, T. & Peipert, J. F.** (2013) The impact of emotional, physical, and sexual abuse on contraceptive method selection and discontinuation. *American Journal of Public Health* **103**(10), 1857–1864.
- Antai, D.** (2011) Traumatic physical health consequences of intimate partner violence against women: what is the role of community-level factors? *BMC Women's Health* **11**(1), 56.
- Atteraya, M. S., Gnawali, S. & Song, I. H.** (2014) Factors associated with intimate partner violence against married women in Nepal. *Journal of Interpersonal Violence* doi: 0886260514539845.
- Bawah, A. A., Akweongo, P., Simmons, R. & Phillips, J. F.** (1999) Women's fears and men's anxieties: the impact of family planning on gender relations in northern Ghana. *Studies in Family Planning* **30**(1), 54–66.
- Begum, S., Dwivedi, S. N., Pandey, A. & Mittal, S.** (2010) Association between domestic violence and unintended pregnancies in India: findings from the National Family Health Survey-2 data. *National Medical Journal of India* **23**(4), 198–200.
- Bergmann, J. N. & Stockman, J. K.** (2015) How does intimate partner violence affect condom and oral contraceptive use in the United States? A systematic review of the literature. *Contraception* doi:10.1016/j.contraception.2015.02.009.
- Black, K. I., Gupta, S., Rassi, A. & Kubba, A.** (2010) Why do women experience untimed pregnancies? A review of contraceptive failure rates. *Best Practice & Research. Clinical Obstetrics & Gynaecology* **24**(4), 443–455.
- Campbell, J. C.** (2002) Violence against women II. Health consequences of intimate partner violence. *Lancet* **359**(9314), 1331–1336.

- Chalmers, B. & Hashi, K. O.** (2000) 432 Somali women's birth experiences in Canada after earlier female genital mutilation. *Birth (Berkeley, California)* **27**(4), 227–234.
- Chowdhary, N. & Patel, V.** (2008) The effect of spousal violence on women's health: findings from the Stree Arogya Shodh in Goa, India. *Journal of Postgraduate Medicine* **54**(4), 306.
- Cokkinides, V. E., Coker, A. L., Sanderson, M., Addy, C. & Bethea, L.** (1999) Physical violence during pregnancy: maternal complications and birth outcomes. *Obstetrics & Gynecology* **93**(5, 1), 661–666.
- Cripe, S. M., Sanchez, S. E., Perales, M. T., Lam, N., Garcia, P. & Williams, M. A.** (2008) Association of intimate partner physical and sexual violence with unintended pregnancy among pregnant women in Peru. *International Journal of Gynaecology and Obstetrics* **100**(2), 104–108.
- Curtis, S., Evens, E. & Sambisa, W.** (2011) Discontinuation and unintended contraceptive an imperfect relationship. *International Perspectives* **37**(2), 58–66.
- Decker, M. R., Latimore, A. D., Yasutake, S., Haviland, M., Ahmed, S., Blum, R. W. & Astone, N. M.** (2015) Gender-based violence against adolescent and young adult women in low-and middle-income countries. *Journal of Adolescent Health* **56**(2), 188–196.
- Fort, A.** (1989) Investigating the social context of fertility and family planning: a qualitative study in Peru. *International Family Planning Perspectives* **15**(3), 88–95.
- Garcia-Moreno, C.** (2002) Violence against women: consolidating a public health agenda. In Sen, G., George, A. & Piroška, Ö. (eds) *Engendering International Health: The Challenge of Equity*. MIT Press.
- García-Moreno, C., Hegarty, K., d'Oliveira, A. F. L., Koziol-McLain, J., Colombini, M. & Feder, G.** (2014) The health-systems response to violence against women. *The Lancet* **6736**(14), 1–13.
- Garcia-Moreno, C., Jansen, H. A F. M., Ellsberg, M., Heise, L. & Watts, C. H.** (2006) Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence. *Lancet* **368**, 1260–1269.
- Goldblatt, B. & Meintjes, S.** (1998) Dealing with the aftermath: sexual violence and the Truth and Reconciliation Commission. *Agenda* **13**(36), 7–18.
- Heise, L., Ellsberg, M. & Gottemoeller, M.** (1999) *Ending Violence Against Women*. Issues in World Health, Series L, No. 11. Population Information Program, Center for Communication Programs, Johns Hopkins University School of Public Health, Baltimore. Suite 310, Baltimore, MD, USA doi:10.1080/15211030802194589.
- Herrmann, M.** (2014) Sustainable development, demography and sexual and reproductive health: inseparable linkages and their policy implications. *Reproductive Health Matters* **22**(43), 28–42.
- Hindin, M. J., Christiansen, C. S. & Ferguson, B. J.** (2013) Setting research priorities for adolescent sexual and reproductive health in low- and middle-income countries. *Bulletin of the World Health Organization* **91**(1), 10–18.
- Ismayilova, L.** (2010) Intimate partner violence and unintended pregnancy in Azerbaijan, Moldova, and Ukraine. *DHS Working Paper No. 79*. Calverton, MD, USA.
- Jejeebhoy, S. J. & Bott, S.** (2003) Non-consensual sexual experiences of young people: a review of the evidence from developing countries. *South and East Asia Regional Working Papers No. 16*. Population Council, Regional Office for South and East Asia, New Delhi, India, vi, p. 42.
- Jejeebhoy, S. J., Santhya, K. G. & Acharya, R.** (2013) Physical and sexual violence and symptoms of gynaecological morbidity among married young women in India. *Global Public Health* **8**(10), 1151–1167.
- Kismödi, E., Cottingham, J., Gruskin, S. & Miller, A. M.** (2015) Advancing sexual health through human rights: the role of the law. *Global Public Health* **10**(2), 252–267.
- Koenig, M. A., Stephenson, R., Ahmed, S., Jejeebhoy, S. J. & Campbell, J.** (2006) Individual and contextual determinants of domestic violence in North India. *American Journal of Public Health* **96**(1), 132–138.

- Leung, T. W., Leung, W. C., Chan, P. L. & Ho, P. C.** (2002) A comparison of the prevalence of domestic violence between patients seeking termination of pregnancy and other general gynecology patients. *International Journal of Gynecology & Obstetrics* **77**(1), 47–54.
- Mechanic, M. B., Weaver, T. L. & Resick, P. A.** (2008) Risk factors for physical injury among help-seeking battered women: an exploration of multiple abuse dimensions. *Violence against Women* **14**(10), 1148–1165.
- Mukanangana, F., Moyo, S., Zvoushe, A. & Rusinga, O.** (2014) Gender based violence and its effects on women's reproductive health: the case of Hatcliffe, Harare, Zimbabwe. *African Journal of Reproductive Health* **8**(1), 110–122.
- Nunes, M. A., Ferri, C. P., Manzolli, P., Soares, R. M., Drehmer, M., Buss, C. & Schmidt, M. I.** (2010) Nutrition, mental health and violence: from pregnancy to postpartum cohort of women attending primary care units in Southern Brazil – ECCAGE study. *BMC Psychiatry* **10**, 66.
- Pallitto, C. C., García-Moreno, C., Jansen, H. A. F. M. & Heise, L.** (2013) Intimate partner violence, abortion, and unintended pregnancy: results from the WHO Multi-Country Study on Women's Health and Domestic Violence. *International Journal of Gynecology and Obstetrics* **120**(1), 3–9.
- Puri, M., Tamang, J. & Shah, I.** (2011) Suffering in silence: consequences of sexual violence within marriage among young women in Nepal. *BMC Public Health* **11**(1), 1.
- Raihana, S., Shaheen, R. & Shafiqur Rahman, M.** (2012) Influence of intimate partners' violence on unintended pregnancy in Bangladesh. *International Journal of Psychology and Behavioral Sciences* **2**(5), 159–166.
- Raj, A., Liu, R., McCleary-Sills, J. & Silverman, J. G.** (2005) South Asian victims of intimate partner violence more likely than non-victims to report sexual health concerns. *Journal of Immigrant Health* **7**(2), 85–91.
- Raj, A. & McDougal, L.** (2015) Associations of intimate partner violence with unintended pregnancy and pre-pregnancy contraceptive use in South Asia. *Contraception* doi:10.1016/j.contraception.2015.03.008
- Raj, A., Saggurti, N., Lawrence, D., Balaiah, D. & Silverman, J. G.** (2010) Association between adolescent marriage and marital violence among young adult women in India. *International Journal of Gynaecology and Obstetrics* **110**(1), 35–39.
- Rance, S.** (1994) *Control and Resistance: Empowering Strategies in the Reproductive Lives of La Paz Market Women*. Bolivia Report No. 1. JSI Research and Training Institute Empowerment of Women Research Programme, Arlington, VI. URL: <http://www.popline.org/node/311153>
- Santhya, K. G., Haberland, N., Ram, F., Sinha, R. K. & Mohanty, S. K.** (2007) Consent and coercion: examining unwanted sex among married young women in India. *International Family Planning Perspectives* **33**(3), 124–132.
- Sedgh, G., Singh, S. & Hussain, R.** (2014) Intended and unintended pregnancies worldwide in 2012 and recent trends. *Studies in Family Planning* **45**(3), 301–314.
- Shabnam, S. & Mukherjee, A.** (2013) Spousal violence and unintended pregnancy in India: evidence from NFHS-3. *Indian Journal of Research and Reports in Medical Sciences* **3**(3), 1–8.
- Shedlin, M. G. & Hollerbach, P. E.** (1981) Modern and traditional fertility regulation in a Mexican community: the process of decision making. *Studies in Family Planning* **12**(6–7), 278–296.
- Silverman, J. G., Gupta, J., Decker, M. R., Kapur, N. & Raj, A.** (2007) Intimate partner violence and unwanted pregnancy, miscarriage, induced abortion, and stillbirth among a national sample of Bangladeshi women. *BJOG: An International Journal of Obstetrics and Gynaecology* **114**(10), 1246–1252.
- Singh, J. & Anand, E.** (2015) The nexus between child marriage and women empowerment with physical violence in two culturally distinct states of India. *International Journal of Population Research* **2015**, No. 458654.

- Singh, S., Wulf, D., Hussain, R., Bankole, A. & Sedgh, G.** (2009) *Abortion Worldwide: A Decade of Uneven Progress*. Guttmacher Institute, New York. URL: <http://www.womenhealth.or.th/downloads/document-resource/eng-10.pdf>
- Speizer, I. S. & Pearson, E.** (2011) Association between early marriage and intimate partner violence in India: a focus on youth from Bihar and Rajasthan. *Journal of Interpersonal Violence* **26**(10), 1963–1981.
- Stephenson, R. & Koenig, M. A.** (2008) Domestic violence, contraceptive use, and unwanted pregnancy in rural India. *Studies in Family Planning* **39**(3), 177–186.
- Stöckl, H., Filippi, V., Watts, C. & Mbwapo, J. K. K.** (2012) Induced abortion, pregnancy loss and intimate partner violence in Tanzania: a population based study. *BMC Pregnancy and Childbirth* **12**(1), 12.
- Straus, M. A.** (1979) Measuring intrafamily conflict violence. *Journal of Marriage and Family* **41**(1), 75–88.
- Taft, A. J., Powell, R. L. & Watson, L. F.** (2015) The impact of violence against women on reproductive health and child mortality in Timor-Leste. *Australian and New Zealand Journal of Public Health* **39**(2), 177–181.
- Wang, G. & Pillai, V. K.** (2001) Women's reproductive health: a gender-sensitive human rights approach. *Acta Sociologica* **44**(3), 231–242.
- Watts, C. & Zimmerman, C.** (2002) Violence against women: global scope and magnitude. *The Lancet* **359**, 1232–1237.
- WHO** (2013) *Global and Regional Estimates of Violence Against Women: Prevalence and Health Effects of Intimate Partner Violence and Non-Partner Sexual Violence*. WHO, Geneva.
- Zablotska, I. B., Gray, R. H., Koenig, M. A., Serwadda, D., Nalugoda, F., Kigozi, G. & Wawer, M.** (2009) Alcohol use, intimate partner violence, sexual coercion and HIV among women aged 15–24 in Rakai, Uganda. *AIDS and Behavior* **13**(2), 225–233.