

Intimate partner violence and unintended pregnancy in India

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Context: Intimate partner violence (IPV), a common form of violence against women perpetrated by husband or intimate male partner, often happens in low developed countries. IPV is found to be associated with range of negative effects: often leads to still birth, premature delivery, low birth weight, high risk of STI, lower use of maternal health care etc. In India, at least half of battered wives reported the episode of violence while they were pregnant. However, there is no clear understanding about the association between IPV and unintended pregnancy in the context of India.

Objective: The present study examines the relationship between IPV and unintended pregnancy in India and its states that starkly vary in socioeconomic and demographic parameters.

Data and Methods: The study uses data from third round of National Family and Health Survey conducted during 2005-2006. The original sample size is restricted to currently-married women of reproductive age who completed the surveys Domestic Violence Module and who had a pregnancy in the past five years. Using multinomial logistic regression, the study compares outcomes of current/last pregnancy (intended, mistimed and unwanted) by exposure to various types of IPV.

Result and Conclusion: Women who ever experienced IPV showed consistently higher risks of unintended pregnancy in India. After adjusting for socio-demographic covariates and lifetime contraceptive use, the study found that women with a history of intimate partner violence reported higher risks of their current/last pregnancy ending in mistimed or unwanted live birth. The study stress the need for developing policies and programs that integrate reproductive health and IPV components to lessen the risk of unintended births among women living with abusive partners in India.

Introduction

The episodes of intimate partner violence are prevalent across globe in both developed and developing societies, cutting across class, race, ethnicity and regions. However, the problem seems to be more crucial in case of developing countries with acutely gendered norms biased against females. Often the women folk are poor, illiterate, unemployed, engaged in economically less productive works (household chores), lack access to resources, involved in procreation and often subject to the violence of her most close and trusted people. i.e., husband/partners/boy friends and family members over the life course.

However, incidence of any forms of violence and discrimination should not be tolerated in any civilized societies. Many international organization including United Nations, United Nations Fund on Population Affairs, World Bank etc., have commissioned numerous studies to gauge the scale of the problem and also suggested various tools to address, curb and reduce the menace of domestic violence against women. Studies have also estimated large the burden of disease due to domestic violence against women in the developing world in absolute proportions. However, the large chunk of burden of disease associated with communicable and life style diseases in developing world, puts the issue of domestic violence against women away from the focus of the mainstream research and policy agenda.

There are few studies in Indian context that attempt to look at the nexus between domestic violence and its various implications (Jejeebhoy 1998; Babu and Kar, 2009; Ackerson and Subramanian, 2008; Stephenson et al, 2008; Ackerson and Subramanian, 2009; Koeing et al, 2010). However, most of these studies have covered only restricted geographical area or limited to rural part of India or to a few group of states or not looked at association between intimate partner violence (IPV) and unintended pregnancy.

Therefore, as per our literature research, this is the first nationally representative study that examines the extent of intimate partner violence (IPV) in India and states using third round of NFHS data on currently married women (15-49 y). We further examine the association between exposure to the IPV and risk of unintended pregnancy among women in India.

Data and Methods

The present study is based on the currently married women 15-49 years old who were interviewed for the domestic violence schedule. The detail of the same is available in the national report of NFHS.

Outcome variables

The main outcome variable of the study is pregnancy intention. We capture the pregnancy intention by generating a categorical variable that is related to the couple of questions asked in the NFHS. Firstly, question is asked to women about the status of the current pregnancy, that is: “*whether the current pregnancy is wanted then, wanted later, or not at all wanted?*” Secondly, question is asked about the status of last pregnancy that occurred to the women i.e., “*whether the last pregnancy was wanted then, wanted later, or not at all wanted?*” Based on these two set of questions, we categorized the women into three following groups: *Intended pregnancy*-those women who reported the current pregnancy as wanted then or those who reported last pregnancy as wanted then; *mistimed pregnancy*- those women who reported current pregnancy to be wanted later and last pregnancy to be wanted later; and *unwanted pregnancy*-those women who did not want the current pregnancy or do not wanted the last pregnancy at all.

Exposure variables

The chief exposure variable in the present study is intimate partner violence. We generate seven categorical variables to capture various dimensions (physical, psychological and sexual) of the IPV. We finally used the type of IPV variables that exclusively categories the women in various groups based on the absence or presence of various form of intimate partner violence. This variable has been used in the multivariate analysis section.

Control Variables

We used a set of theoretically pertinent demographic and socioeconomic variables as controls to adjust the association between IPV and unintended pregnancy among women in India. The control variables include age of the women (<15 y, 15-19y, 20-24y, 25-29y, 30-34y, 35-39y, 40-44y, 45-49y), women education (none, 1-5y, 6-8y, 9-12y, 13-15y, >5y), women occupation (not working, agriculture, manual, non-manual), sex-composition of surviving children (no surviving children, no son, no daughter, more sons than daughter, more daughter than sons), wealth status from poorest to richest (first quintile, second quintile, third quintile, fourth quintile, and fifth quintile), caste (scheduled caste, scheduled tribe, other backward class, general class and don't know caste), religion (Hindu, Muslim and other), location (large city, small city, town and village), spousal age difference (no gap or wife is older, husband is up to five year older, husband is older by 6-10 yrs, husband is older by more than 10 yrs). We used principal component analysis (PCA) to compute the women autonomy index based on various dimension of women agency: mobility, seeking health care, participation in household decision making etc. We categorized the women autonomy index into three following groups i.e., low, medium and high. We also checked the reliability of the index using cronbach alpha test and found it to be robust (0.813).

Result

Descriptive results

The results in table 1 present the descriptive statistics about the different form of intimate partner violence and selected demographic and socioeconomic characteristics of the currently married women (15-49y) in India. About more than one third of women (33.4 per cent) in India ever experienced some form of IPV in India. Furthermore, about 30 percent of women reportedly experienced any physical IPV and around 19 per cent of them sustained physical injuries due to physical IPV. However, the proportion of psychological and sexual IPV was relatively lower, that is, about 13.3 per cent and 8.0 percent respectively. The results further suggest that around 4 percent of women suffered multiple types of IPV.

Figure 1 reports the state wise variations in the prevalence of any IPV by place of residence (urban vs. rural) among currently married women in India. As per expectation, the

demographically poor performing states from the northern part of India remained leaders in the prevalence of IPV and the women in rural areas were reportedly suffering more from the syndrome of IPV as compared to their urban counterparts. Among states, IPV was highest in Bihar, Rajasthan, Madhya Pradesh, Uttar Pradesh etc. On the contrary, the IPV least in the states of Himachal Pradesh, Meghalaya and Jammu & Kashmir.

The results from table 2 presents the descriptive statistics of pregnancy intention by the experience of IPV, demographic and socioeconomic characteristics among currently married women (15-49y) in India. The results succinctly depict the positive association between exposure to IPV and risk of unintended pregnancy. Women who have ever experienced various forms of IPV were also reporting higher incidence of mistimed or unwanted pregnancy. For instance, those women whose experienced multiple form of IPV, around 12 percent of them reported their last pregnancy as current/mistimed and 22 percent reported their current/ last pregnancy as unwanted. The results also indicate inverse association between age of women and risk of mistimed pregnancy. However, the data indicated positive association between age of women and risk of unwanted pregnancy. Education was negatively associated with unintended pregnancy, as women with higher education least experienced unintended pregnancy.

Figure 2 presents the state wise variations in the pregnancy intention among currently married women (15-49y) in India. It is apparently clear from the figure that woman from Uttar Pradesh, Bihar, Jharkhand and West Bengal dominated when it comes to the experience of unintended pregnancy (mistimed/unwanted). However, states like Goa, Maharashtra, Tamil Nadu and Punjab were states where women were least likely to report the current/last pregnancy to be unintended (mistimes/unwanted).

Multivariate results

The unadjusted results from bivariate analysis indicate a consistent pattern of elevated incidence of unintended pregnancy among women who reportedly had ever experienced various forms of IPV. Considering the polychotomous nature of the outcome variables (pregnancy intention: intended, mistimed and unwanted), we fitted a multinomial logistic regression model with maximum likelihood function, to test the association between life time exposure to various types of IPV and risk of unintended pregnancy, after adjusting for various demographic and socioeconomic characteristics. Here, we have fitted three separate models. The first model only adjusts for the state level fixed effects and complex survey design. The second model adjusts for the various demographic and socioeconomic confounders. The final third model controls for the spousal age gap and women autonomy index.

The results of the multinomial logistic regression models have been presented here as the relative risk ratios. The data clearly suggest increased relative risk of unintended pregnancy (mistimed/unwanted) among women who ever experienced various types of IPV. For instance, in model-1, the relative risk ratio of mistimed pregnancy among women who experienced multiple forms of IPV was higher as compared to the reference groups, after adjusting for confounding variables. Even after accounting for the effect of demographic and socioeconomic and women agency variables, the relative risk of mistimed birth remained higher among women who experienced various forms of IPV. It may be important to note that the association between exposure to IPV and experience of unintended pregnancy was relatively stronger in case for unwanted pregnancies as compared to mistimed birth.

Discussion and Conclusion

The present study for the first time attempts to examine the association between exposure to various form of intimate partner violence (IPV) and experience of unintended pregnancy among currently married women (15-49 y) using a nationally representative household survey data.

This study brings out that more than one third of currently married women have ever experienced any form of IPV. It further demonstrates large inter-state variations in the

prevalence of IPV in India. Particularly, the northern states (so called BIMARU states) were notoriously suffering from disproportionate burden of IPV. However, the southern and north-western states were relatively less suffering from the IPV. The findings from the multivariate analysis succinctly bring out the detrimental negative influence of IPV on the pregnancy intention among married women in India. Many women who experienced various forms of IPV were more likely to report the current/last pregnancy as mistimed/unwanted. The study, therefore, stress the need for developing policies and programs that integrate reproductive health and IPV components to lessen the risk of unintended births among women living with abusive partners in India.

References:

1. Bontha V Babu, Shantanu K Kar (2009). Domestic violence against women in eastern India: a population-based study on prevalence and related issues, *BMC Public Health* 2009, **9**:129 doi:10.1186/1471-2458-9-129.
2. Jejeebhoy SJ. (1998) Associations between Wife-Beating and Fetal and Infant Death: Impressions from a Survey in Rural India. *Studies in Family Planning*, Vol. 29, No. 3 (Sep., 1998), pp. 300-308.
3. Leland K. Ackerson, S. V. Subramanian (2008) Domestic Violence and Chronic Malnutrition among Women and Children in India. *American Journal of Epidemiology* Vol. 167, No. 10, 1188–1196.
4. Leland K. Ackerson and S. V. (2009). Subramanian Intimate Partner Violence and Death Among Infants and Children in India. *Pediatrics* 124:e878-889.
5. Michael A Koenig, Rob Stephenson, Rajib Acharya, Lindsay Barrick, Saifuddin Ahmed , Michelle Hindin (2010). Domestic violence and early childhood mortality in rural India: evidence from prospective data. *International Journal of Epidemiology* 2010; 39:825–833.
6. Rob Stephenson, Michael A. Koenig, Rajib Acharya, Tarun K. Roy (2008) Domestic Violence, Contraceptive Use, and Unwanted Pregnancy in Rural India. *Studies in Family Planning*, 39(3): 177–186.

Table 1: Descriptive demographic and intimate partner violence (IPV) characteristics of currently married women (15-49y), India, 2005-2006

Total, N (%)	64972	100.0
Any IPV		
No	42598	65.6
Yes	22374	34.4
Any Physical IPV		
No	45336	69.8
Yes	19636	30.2
Physical IPV Injury		
No	57937	89.2
Yes	7035	18.8
Sexual IPV		
No	59769	92.0
Yes	5203	8.0
Psychological IPV		
No	56366	86.8
Yes	8606	13.3
Type of IPV		
None	42598	65.6
Physical only	10916	16.8
Sexual only	2852	4.4
Psychological only	6431	9.9
Multiple types	2175	3.4
Current age of women		
15-19y	2954	4.6
20-24y	10467	16.1
25-29y	14442	22.2
30-34y	13670	21.0
35-39y	10847	16.7
40-44y	7497	11.5
45-49y	5095	7.8
Women education (in years)		
None	25396	39.1
1-5 y	9808	15.1
6-8 y	9598	14.8
9-12 y	14311	22.0
13-15 y	4014	6.2
>15 y	1845	2.8
Women Occupation		
Not working	38830	59.8
Agriculture	13886	21.4
Manual	5660	8.7
Non-manual	6596	10.2
Spousal Age-difference (in years)		
None or husband is younger	3818	5.9
Husband is older by 1-5y	33034	50.8
Husband is older by 6-10y	20869	32.1
Husband is older by >10y	7251	11.2

Table 1: Descriptive demographic and intimate partner violence (IPV) characteristics of currently married women (15-49y), India, 2005-2006

Sex composition of surviving children		
No surviving children	6155	9.5
No son	9765	15.0
No daughter	15159	23.3
More sons than daughter	10423	16.0
More daughter than sons	23470	36.1
Women autonomy		
Low	21031	32.4
Medium	22269	34.3
High	21672	33.4
Wealth Status		
First (lowest) quintile	8942	13.8
Second quintile	10300	15.9
Third quintile	12531	19.3
Fourth quintile	15018	23.1
Fifth (highest) quintile	18181	28.0
Caste		
Scheduled caste	11170	17.2
Scheduled tribe	8378	12.9
Other backward class	21088	32.5
General class	21641	33.3
Don't Know caste	2695	4.2
Religion		
Hindu	48311	74.4
Muslim	8191	12.6
Others	8470	13.0
Location		
Large city	13495	20.8
Small city	4601	7.1
Town	10456	16.1
Village	36420	56.1

Figure 1: Prevalence of any IPV among currently married women (15-49y) by residence across states, India, 2005-2006

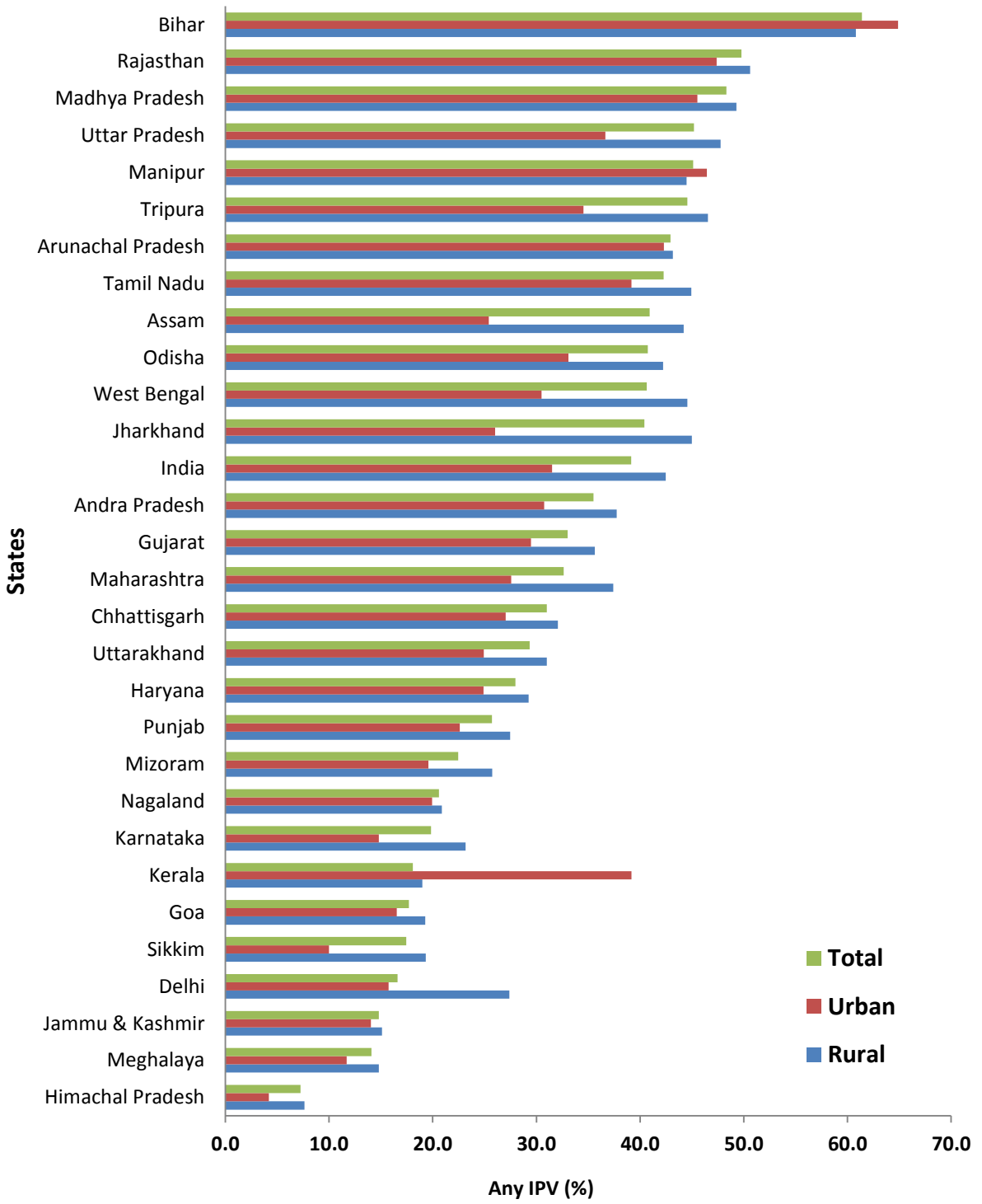


Table 2: Descriptive statistics of pregnancy intention by IPV, demographic and socioeconomic characteristics of currently married women (15-49y), India, 2005-2006

Variable	<i>Pregnancy Intention</i>			All women
	Intended	Mistimed	Unwanted	
Total (%) N	76.9	11.2	11.9	29885
Type of IPV				
None	79.7	11.0	9.3	19263
Physical only	73.1	10.6	16.3	5227
Sexual only	71.7	14.2	14.1	1461
Psychological only	71.7	11.9	16.4	2859
Multiple types	65.9	11.7	22.4	1075
Current age of women				
15-19y	82.8	26.4	1.8	1809
20-24y	79.5	14.8	5.7	8835
25-29y	77.4	11.3	11.3	10253
30-34y	74.4	7.3	18.3	5943
35-39y	70.6	5.4	24.0	2310
40-44y	65.8	4.4	29.3	597
45-49y	63.8	4.4	31.9	138
Women education (in years)				
None	75.2	8.4	16.5	11643
1-5 y	73.8	13.0	13.3	4187
6-8 y	75.9	13.5	10.7	4580
9-12 y	78.7	14.3	7.1	6781
13-15 y	85.7	9.7	4.6	1855
>15 y	87.6	8.4	4.1	838
Women Occupation				
Not working	76.9	12.1	11.0	19270
Agriculture	76.7	9.0	14.4	6089
Manual	76.4	10.0	13.6	2294
Non-manual	77.9	10.6	11.5	2210
Spousal Age-difference (in years)				
None or husband is younger	74.5	11.4	14.1	1672
Husband is older by 1-5y	77.6	10.9	11.5	15854
Husband is older by 6-10y	76.9	11.5	11.7	9373
Husband is older by >10y	74.5	12.0	13.5	2892

Table 2: Descriptive statistics of pregnancy intention by IPV, demographic and socioeconomic characteristics of currently married women (15-49y), India, 2005-2006

Variable	<i>Pregnancy Intention</i>			All women
	Intended	Mistimed	Unwanted	
Sex composition of surviving children				
No surviving children	88.7	10.3	1.0	1605
No son	81.9	13.2	4.9	6620
No daughter	81.7	12.5	5.8	7179
More sons than daughter	64.7	8.2	27.1	3862
More daughter than sons	73.1	10.3	16.6	10619
Women autonomy				
Low	76.9	12.2	10.9	11584
Medium	75.8	11.0	13.2	10125
High	78.2	10.0	11.8	8176
Use of Family Planning Methods				
None	77.6	11.3	11.1	15915
Any Spacing method	76.9	12.4	10.7	8193
Any Limiting method	74.9	9.2	15.9	5777
Wealth Status				
First (lowest) quintile	75.1	8.6	16.3	5272
Second quintile	73.5	11.3	15.3	5326
Third quintile	74.6	12.4	13.0	6018
Fourth quintile	77.3	12.8	9.9	6621
Fifth (highest) quintile	82.7	10.6	6.8	6648
Caste				
Scheduled caste	75.6	11.2	13.3	5334
Scheduled tribe	74.3	13.7	12.0	4691
Other backward class	76.7	10.3	13.0	9534
General class	79.6	10.7	9.7	8972
Don't Know caste	74.7	12.3	13.0	1354
Religion				
Hindu	78.6	10.3	11.1	21010
Muslim	71.7	11.9	16.4	4617
Others	74.0	14.7	11.3	4250
Location				
Large city	79.9	10.2	10.0	5478
Small city	76.6	12.5	10.9	1859
Town	76.6	12.7	10.7	4694
Village	76.1	11.0	13.0	17854

Figure 2: Pregnancy intention among currently married women (15-49y) across states, India, 2005-2006

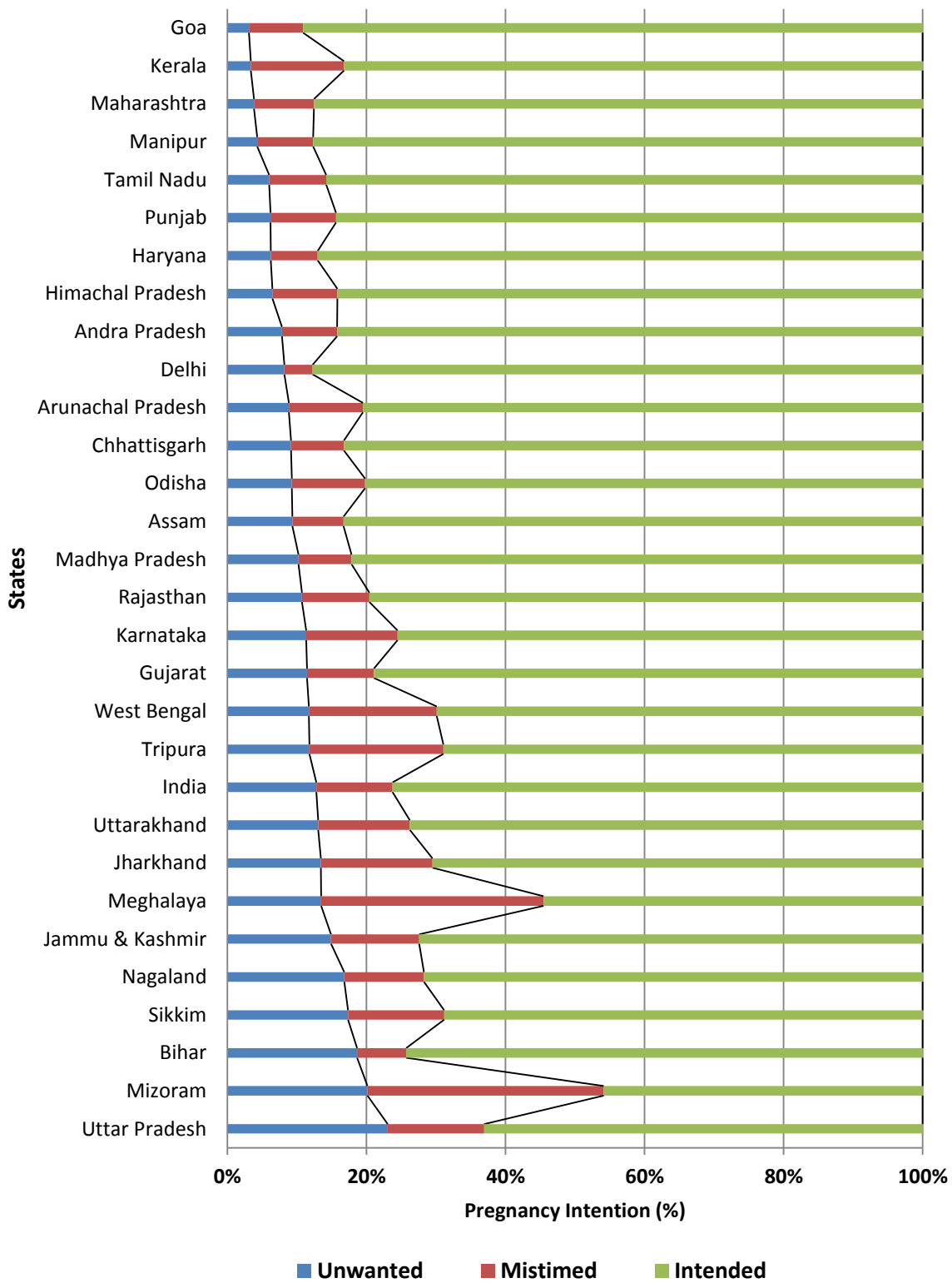


Table 3: Relative risk ratios representing association of exposure to intimate partner violence (IPV) and unintended pregnancy adjusted for selected demographic and socioeconomic characteristics of currently married women (15-49y), India, 2005-2006

Variable	<i>Pregnancy Intention</i>					
	Mistimed vs. Intended			Unwanted vs. Intended		
	<i>Model-1</i>	<i>Model-2</i>	<i>Model-3</i>	<i>Model-1</i>	<i>Model-2</i>	<i>Model-3</i>
Type of IPV						
None	Reference (95%CI)	Reference (95%CI)	Reference (95%CI)	Reference (95%CI)	Reference (95%CI)	Reference (95%CI)
Physical only	1.146 (1.032-1.271)	1.206 (1.083-1.343)	1.205 (1.082-1.342)	1.826 (1.662-2.006)	1.442 (1.305-1.594)	1.447 (1.308-1.599)
Sexual only	1.558 (1.324-1.833)	1.564 (1.325-1.845)	1.560 (1.322-1.842)	1.626 (1.380-1.916)	1.428 (1.201-1.699)	1.426 (1.199-1.698)
Psychological only	1.324 (1.167-1.503)	1.385 (1.217-1.577)	1.387 (1.218-1.578)	1.922 (1.711-2.159)	1.581 (1.398-1.789)	1.581 (1.397-1.789)
Multiple types	1.407 (1.152-1.718)	1.501 (1.224-1.841)	1.495 (1.219-1.834)	2.729 (2.324-3.204)	2.220 (1.870-2.635)	2.203 (1.855-2.617)

Model 1: Adjusted for state fixed effects and survey design; Model 2: Adjusted for selected demographic and socioeconomic characteristics of women including age, education, occupation, sex composition of surviving children, use of family planning methods, wealth, caste, religion and location; Model 3: Adjusted for women autonomy and spousal age difference.