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## Reproductive health concerns of women contending with spousal violence and husband's alcohol use in a Mumbai slum community

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### Synopsis

Spousal violence is associated with higher gravidity, and husband's frequent alcohol use is associated with induced abortion among women residing in Mumbai slum communities.

#### Keywords

Alcohol use; Reproductive health; Violence against women

Mumbai, India, has diverse slum communities consisting primarily of migrants struggling to survive in a high-cost living environment [1]. Financial and survival stressors and increased access to low-cost alcohol have been cited as reasons for increased alcohol problems and spousal violence in these slums [2]. Studies from India indicate heightened risk for spousal violence among men reporting alcohol use, and poorer reproductive health outcomes among women contending with such violence [3]. Less is known about reproductive health risks among women who report risky alcohol use by their husband. The present study examined the effects of recent spousal violence and husband's frequent drinking on poor reproductive health among women with these issues in Mumbai slums.

The authors have no conflicts of interest.

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The study group was a household-recruited sample of married women aged 18-40 years who reported spousal violence ever and/or husband's risky alcohol use in the past 30 days (heavy alcohol use ["drunken" behavior as perceived by the wife] or frequent alcohol use [ 3 days of use in a typical week]). These women were recruited as part of the RHANI Wives HIV prevention intervention study [4]. All study procedures, including informed consent, were approved by the Institutional Review Boards of the National Institute for Research in Reproductive Health and Boston University Medical Campus, USA. Survey measures included single items on past 30-day spousal violence (physical and/or sexual), husband's frequent alcohol use, and reproductive health outcomes (each of the following: lifetime number of pregnancies, spontaneous abortions, stillbirths, induced abortions, and child deaths). Logistic regression analyses-adjusted for age, religion, education, income generation, contraception use, and born outside Mumbai- were conducted via SPSS version 19.0 (IBM, Armonk, NY, USA) to assess associations of spousal violence and husband's frequent alcohol use with reproductive health outcomes; Wald  $\chi^2$  statistic and 95% confidence intervals (CIs) were used to determine significance of effect sizes. P < 0.05was considered to be statistically significant.

The 220 participants had a mean age of  $29.5 \pm 5.8$  years (range, 18–40 years); 47 (21.4%) had no formal education and 152 (69.1%) reported no personal income generation. In total, 139 (63.2%) women were born outside of Mumbai. On average, participants reported  $3.0 \pm 1.5$  pregnancies (range, 0–11); 34 (15.5%) reported a history of induced abortion, 51 (23.2%) reported spontaneous abortion or stillbirth, and 26 (11.8%) had a history of child mortality. Analyses revealed a significant association between recent spousal violence and having 3 or more pregnancies (adjusted odds ratio [AOR] 2.0; 95% CI, 1.1–3.1; *P*<0.05) and a trend between husband's frequent alcohol use and induced abortion (AOR 2.1; 95% CI, 0.9–4.7; *P*=0.07) (Tables 1,2).

The findings demonstrate that spousal violence increases risk for higher gravidity, and husband's recent frequent alcohol use increases risk for induced abortion among women in Mumbai slums. More focused reproductive health services are needed for women contending with these issues.

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#### Table 1

Association of husband's recent spousal violence with reproductive health outcomes among women in Mumbai slum communities (n=220) a

	Spousal violence (n=77)	No spousal violence (n=143)	Crude odds ratio (95% confidence interval)	Adjusted odds ratio (95% confidence interval) <sup>b</sup>
3 pregnancies	54 (70.1)	83 (58.0)	1.7 (0.9–3.1)	2.0 (1.1-3.1)
Stillbirth and spontaneous abortion $^{\mathcal{C}}$	19 (24.7)	32 (22.4)	1.1 (0.6–2.2)	0.9 (0.5–1.9)
Induced abortion <sup>C</sup>	11 (14.3)	23 (16.1)	0.9 (0.4–1.9)	0.6 (0.3–1.5)
Child mortality <sup>C</sup>	10 (13.0)	16 (11.2)	1.2 (0.5–2.8)	0.9 (0.4–2.3)

 $^{a}$ Values are given as number (percentage) unless otherwise indicated.

<sup>b</sup>Adjusted models included female education, age, religion, female income generation, current use of family planning, born outside Mumbai, and husband's frequent alcohol use.

<sup>c</sup>Adjusted models also included the "3 pregnancies" variable as a covariate.

#### Table 2

Association of husband's frequent alcohol use with reproductive health outcomes among women in Mumbai slum communities (n=220)  $^{a}$ 

	Husband's frequent alcohol use (n=79)	No husband's frequent alcohol use (n=141)	Crude odds ratio (95% confidence interval)	Adjusted odds ratio (95% confidence interval) <sup>b</sup>
3 pregnancies	56 (70.9)	81 (57.4)	1.8 (1.0–3.2)	0.7 (0.3–1.4)
Stillbirth and spontaneous abortion <sup>C</sup>	15 (19.0)	36 (25.5)	0.7 (0.3–1.3)	0.7 (0.4–1.4)
Induced abortion <sup>C</sup>	17 (21.5)	17 (12.1)	2.0 (1.0-4.1)	2.1 (0.9–4.7)
Child mortality <sup>C</sup>	6 (7.6)	20 (14.2)	0.5 (0.2–1.3)	0.4 (0.2–1.1)

 $^{a}$ Values are given as number (percentage) unless otherwise indicated.

 $^{b}$ Adjusted models included female education, age, religion, female income generation, current use of family planning, born outside Mumbai, and spousal violence.

<sup>C</sup>Adjusted models also included the "3 pregnancies" variable as a covariate.