Domestic violence and its mental health correlates in Indian women

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Background Domestic spousal violence against women has far-reaching mental health implications.

Aims To determine the association of domestic spousal violence with poor mental health.

Method In a household survey of rural, urban non-slum and urban slum areas from seven sites in India, the population of women aged 15–49 years was sampled using probability proportionate to size. The Self Report Questionnaire was used to assess mental health status and a structured questionnaire elicited spousal experiences of violence.

Results Of 9938 women surveyed, 40% reported poor mental health. Logistic regression showed that women reporting 'any violence' – 'slap', 'hit', 'kick' or 'beat' (OR 2.2, 95% CI 2.0–2.5) – or 'all violence' – all of the four types of physically violent behaviour (OR 3.5, 95% CI 2.94–3.51) – were at increased risk of poor mental health.

Conclusions Findings indicate a strong association between domestic spousal violence and poor mental health, and underscore the need for appropriate interventions.

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Mental health sequelae to spousal violence are significant and have long-term health implications. Battered women were found to have more depressive symptoms than other women (Campbell & Lewandowski, 1997). Studies have shown that the more severe the abuse, the greater its impact on a woman's physical and mental health (Laserman *et al*, 1996). Recently attempts have been made in India to systematically record data on the prevalence, nature and consequences of domestic violence (Jejeebhoy, 1998). Davar's insightful commentary on the rigidly defined roles of Indian women (Davar, 1999) outlines the barriers to expressing their stresses and conflicts; these barriers ensure that their mental health needs remain neglected. To counter the dearth of published research into this problem in India, a population-based, multicentre collaborative project, the Study of Abuse in the Family Environment (India-SAFE) was established in seven sites in India. This paper looks at the association of violence with poor mental health.

METHOD

This study was conducted by the multi-disciplinary faculty of the Indian Clinical Epidemiology Network, based at seven medical schools in New Delhi, Lucknow, Bhopal, Nagpur, Chennai, Trivandrum and Vellore, during the period April 1998 to September 1999. Using a population-based, cross-sectional study design, researchers collected data from rural, urban slum and urban non-slum strata located in or near these cities. Domestic violence was defined as any reported violence, whether physical or psychological, perpetrated by a husband against his wife. Physical violence was measured in terms of four behaviours: 'slap' (open hand), 'hit' (punch with a closed fist), 'kick' (hit with foot) and 'beat' (repeated blows). Psychological spousal violence was assessed according to the presence of one or more of seven psychological behaviours: 'insult', 'demean', 'threaten self', 'threaten someone else', 'action that induces fear', 'abandonment' and (husband) 'infidelity'. This paper, however, focuses only on physical violence.

Previous studies have estimated the prevalence of domestic violence against women in Bangladesh and rural India at 20–50% (Schuler *et al*, 1996; Jejeebhoy, 1998). Assuming a prevalence of 40%, at a precision of 2% with a 95% confidence interval and a 15% withdrawal rate, the sample size in each stratum was estimated at a minimum of 3200 women respondents. At each of the seven sites in the study, only two of three different strata (rural, urban slum, urban non-slum) were selected.

Each study site purposively selected potential blocks, localities and slums based on easy accessibility. Using the probability proportionate to size method, nearly eight to ten villages (in rural areas) or streets (in urban areas) were selected for each study site. When selecting households from urban slum areas, the field team randomly selected paths and enumerated all households located along those paths. If they failed to obtain the requisite sample size fixed for that particular area, they turned right and moved along the new path, repeating the manoeuvre until the required sample size was achieved. In urban non-slum areas, all households located on a single street were included; if there happened to be a building with more than three floors, then one floor alone was randomly selected and all flats on that floor were included. For the rural areas, a junction of some central point was identified. One line was selected from each compass direction and all households along that line were included. If the number of households fell short of the requisite sample size then the field team proceeded to the next line and continued with the process of selection.

Eligibility criteria

Women aged 15–49 years, with at least one resident child below 18 years of age, were eligible. As the main study also assessed child abuse, the presence of a resident child was an essential criterion for participation. Consequently, childless women were excluded from the study. Women aged 50 years and over and those not residing with their husbands for the past 12 months were also excluded. The interviews were conducted in privacy after obtaining the woman's informed consent.

Instruments

Spousal violence against women

A structured interview schedule was developed to assess physical spousal violence. These behaviours were assessed over the whole span of the woman's marriage. The instrument broadly elicited information on household characteristics, social status of woman's parental family vis-à-vis that of her husband's family, lifetime experiences of family violence, and childhood history of family violence. To ensure comparability between the different study regions, the instrument was translated into the local language (Hindi, Marathi, Tamil or Malayalam) and then back-translated into English. All the back-translations were thoroughly checked to ensure that the meaning of the original English language version was retained. An intensive joint training session was conducted for the research staff from all sites. Interrater reliability assessment found an intraclass correlation coefficient of 0.75.

Mental health status

The Self Report Questionnaire (SRQ; Sen, 1987; Srinivasan & Suresh, 1990), a standardised instrument, was administered to measure the mental health status of the participating women. This is a 20-item questionnaire requiring 'yes/no' responses, and screens for the presence of anxiety and depressive disorders. The SRQ has been standardised in India in two separate studies (Sen, 1987; Srinivasan & Suresh, 1990). Patients who scored 7 or more on the SRQ were designated as having 'poor' mental health and those with a score below 7 were designated as being 'normal'.

Definitions of violence

Spousal violence was grouped into three categories:

(a) 'any violence', defined as the perpetration of any one of four physically violent behaviours (slap, hit, kick or beat);

(b) 'multiple violence', defined as perpetration of two or more violent behaviours;

(c) 'all violence', defined as the perpetration of all four types of violent behaviour.

The violent behaviour could have occurred at any time during the woman's marriage.

Socio-economic status

In assessing socio-economic status, proxy indicators such as toilet facilities and ownership of household appliances and of vehicles were used. Toilet facilities inside the home rather than outside were considered to be an indication of higher socio-economic status. Similarly, possession of a greater number of household appliances, such as a refrigerator, gas or electric stove, television and air conditioner, and ownership of a vehicle, were also considered an indication of higher socio-economic status.

RESULTS

A total of 9938 women participated: 3611 in rural areas, 3155 in urban slum areas and 3172 in urban non-slum areas. Overall participation rates were 91% for rural areas, 84% for urban slum and 77% for urban non-slum areas. Of the 9938 women, 4005 (40%) reported experiencing 'any violence' during their marriage, of whom 2243 (56%) had SRQ scores indicating poor mental health.

Socio-demographic characteristics

The average age of the respondents was 31 years (s.d.=6.9). Rates of non-literacy were higher among rural (40%) and urban slum (32%) dwellers, whereas higher education levels were more common among urban non-slum (31%) dwellers. A third of women in rural areas were employed, predominantly in agriculture, in contrast to only 22% of women in urban slum and urban non-slum areas. Most of the women were married (96%); the remainder were recently widowed, separated or divorced.

Seventeen per cent of women in urban non-slum areas reported having toilet facilities outside their home, in contrast to 43% from the urban slum areas and 32% from the rural areas. Similarly, 49% of women living in urban non-slum areas reported owning a vehicle, in contrast to 17% and 15% from the urban slum and rural areas respectively. This indicated that women from the rural and urban slum areas lived in greater poverty.

Socio-demographic characteristics and mental health status

More women from urban slum areas (48%) and rural areas (44%) had poor mental health compared with those from urban non-slum areas (23%). Table 1 relates the mental health status of the women to various socio-demographic characteristics. There was a significant (P=0.001) increase in the proportion of women with poor mental health with an increase in age, suggesting the presence of probable anxiety and depression. Women aged 40–49 years living in the rural (50%) and urban slum (60%) areas constituted the greatest proportion in this category. An increase in the number of years of education was associated with a reduction in the proportion of women with poor mental health, a pattern that was statistically significant (P=0.001) and consistent across all three residential strata. Mental morbidity in women who had 12 years or more of education was 20% in rural areas, 25% in urban slum areas and 10% in urban non-slum areas, in contrast to 40%, 50% and 39% respectively in non-literate women from these three types of area.

Difference in employment status between the woman and her husband also emerged as significantly associated with poor mental health in the women (P=0.001). The mental health of the woman was less likely to be poor in instances where husbands held jobs of higher status and income compared with that of their wives (rural, 39%; urban slum, 43%; urban non-slum, 21%). However, the prevalence of poor mental health was increased almost three-fold when the woman's job and income status was at a higher level than that of her husband (rural, 69%; urban slum, 71%; urban non-slum, 54%).

Other spousal and family characteristics and mental health

The consumption of alcohol by the husband was found to be significantly (P=0.001) associated with the mental health status of the woman (Table 2).

Among women whose husbands abstained from alcohol, 39% of rural respondents, 41% of urban slum respondents and 20% of urban non-slum respondents had poor mental health. In contrast, a far greater proportion of women whose husbands were reported as being regularly drunk had poor mental health: rural 64%, urban slum 73%, urban non-slum 48%. Severe harassment by in-laws was also found to be significantly associated (P=0.001) with poor mental health status. Of women who reported experiencing severe harassment by their in-laws, 74%, 80% and 71% from the rural, urban slum

Table 1 Socio-demographic characteristics and poor mental health

	All areas		Rural		Urban slum		Urban non-slum	
	Total *n*	PMH (%)	Total *n*	PMH (%)	Total *n*	PMH (%)	Total *n*	PMH (%)
Age, years (*n*=9919)								
<20	147	32	60	33	69	30	18	33
20–24	1590	33	588	33	651	39	351	21
25–29	2596	37	949	41	901	45	746	22
30–34	2205	38	771	46	665	49	769	22
35–39	1913	41	701	49	504	55	708	24
40–49	1468	45	532	50	356	60	580	27
Education, years (*n*=9928)								
None	2844	48	1438	40	999	50	407	39
1–5	1599	49	693	51	609	50	297	39
6–9	2173	43	803	40	925	50	445	36
10–12	2230	28	647	32	565	39	1018	20
>12	1082	11	30	20	57	25	995	10
Differences in employment between woman and her spouse (*n*=9938)								
Wife < husband	7033	34	2327	39	2323	43	2383	21
Wife > husband	121	67	39	69	56	71	26	54
Wife = husband	2784	49	1245	54	776	58	763	30

PMH, poor mental health.

Table 2 Other spousal and family characteristics and poor mental health

	All		Rural		Urban slum		Urban non-slum	
	Total *n*	PMH (%)	Total *n*	PMH (%)	Total *n*	PMH (%)	Total *n*	PMH (%)
Alcohol intake of spouse (*n*=9938)								
No alcohol	6127	33	2277	39	1795	41	2055	20
Not to excess	851	45	263	54	432	50	156	16
Occasionally drunk	1495	32	505	42	341	35	649	23
Regularly drunk	1465	64	565	64	588	73	312	48
Harassment by in-laws (*n*=8946)								
Very much	394	75	180	74	102	80	112	71
Somewhat	750	55	279	63	193	64	278	41
Not at all	7802	36	2837	42	2669	45	2296	19
Social support (*n*=9938)								
None	403	55	143	60	149	58	111	43
Some	6858	41	2462	46	2344	49	2052	25
High	2677	30	1006	37	662	39	1009	18
Family used harsh physical punishment (*n*=9938)								
Yes	4342	45	1694	50	1498	54	1150	26
No	5596	34	1917	40	1657	42	2022	22
Saw father beat mother (*n*=9633)								
Yes	2578	50	1000	52	897	56	681	39
No	7055	34	2512	41	2129	44	2414	19

PMH, poor mental health.

Table 3 Distribution of types of physically violent behaviours and prevalence of poor mental health (n=9938)

Type of violence	n	PMH (%)	RR (95% CI)
Slap			
Yes	3953	58	2.3 (2.1–2.4)
No	5985	26	
Hit			
Yes	2014	71	2.3 (2.2–2.4)
No	7924	30	
Kick			
Yes	1718	73	2.3 (2.2–2.4)
No	8220	31	
Beat			
Yes	2025	70	2.2 (2.1–2.3)
No	7913	31	
Any physical violence			
Yes	4005	56	2.2 (2.1–2.4)
No	5933	25	

PMH, poor mental health; RR, relative risk.

and urban non-slum areas respectively had poor mental health. Even those who reported moderate harassment from their in-laws presented with higher rates of poor mental health. With respect to social support, the less the support the higher were the rates of poor mental health, which was also consistent across all three survey strata. Women who reported harsh physical punishment during childhood also had higher rates of poor mental health (P=0.001). Similarly, a greater percentage of women who reported having witnessed as children their father beating their mother also scored high on the SRQ (P=0.001). Both these findings were consistent across all sites.

Physically violent behaviours and mental health

Table 3 shows the distribution of physically violent behaviours and the prevalence of poor mental health. Each of the four types of physically violent behaviour was significantly associated with greater prevalence of poor mental health. For all four behaviours the risk was a little over twofold. Experience of any one of the four physically violent behaviours also doubled the relative risk of poor mental health, compared with women who had not reported any physical spousal violence.

A logistic regression analysis of factors associated with poor mental health revealed several (Table 4): women who experienced dowry harassment (OR 1.71, 95% CI 1.56–1.92) or harsh physical punishment during childhood (OR 1.41, 95% CI 1.27–1.57), witnessed their father beating their mother (OR 1.31, 95% CI 1.17–1.46), whose husbands regularly consumed alcohol (OR 2.2, 95% CI 1.9–2.55) and who had experienced any one of the four types of physically violent behaviour (OR 2.23, 95% CI 2.0–2.49) were all at increased risk of poor mental health. Similarly, after adjusting for the above hypothesised and confounding variables (in separate analyses), this risk increased when the woman was subjected to 'multiple violence' (OR 2.6, 95% CI 2.3–2.9) or 'all violence' (OR 3.5, 95% CI 2.9–3.5). In contrast, presence of more household appliances (OR 0.9, 95% CI 9–0.9), high-school education for both the woman and her husband (OR 0.9, 95% CI 0.9–0.9) and more social support (OR 0.8, 95% CI 0.7–0.8) served to protect the woman against mental morbidity.

DISCUSSION

Domestic violence is an all-pervasive, serious social malady with major public health implications. It is physically and psychologically damaging, often with long-term consequences. In this study, the risk of poor mental health was higher among women who had experienced domestic spousal violence compared with those who had not. This supports findings from other studies, which have shown that a history of being the target of violence puts women at increased risk of depression, suicide attempts, psychosomatic disorders and physical injury (Heise & Garcia-Moreno, 2002).

Poverty, education, domestic spousal violence and poor mental health

Women who were poor and those who were less educated were also found to be at increased risk of poor mental health. Other studies have also shown that women living in poverty are disproportionately affected. These women are faced with enormous social, physical and economic stresses, which in association with the experience of domestic violence are likely to increase their vulnerability to mental morbidities (Patel *et al*, 1999). Heise (1998) postulated that poverty probably acts as a marker for a variety of social conditions that combine to increase the risk of violence faced by women. Women in better jobs than their husbands were also found to

Table 4 Logistic regression for Self Report Questionnaire

Variable	OR	95% CI	P
Crowding	1.01	0.97–1.04	0.85
Household appliances	0.95	0.92–0.97	0.001
Woman's age	1.01	0.99–1.03	0.386
Husband's age	1.02	1.01–1.03	0.009
Husband's education	0.96	0.95–0.97	0.001
Woman's education	0.96	0.95–0.98	0.001
Social support	0.80	0.72–0.89	0.001
Alcohol intake			
No alcohol	1.00		
Not to excess/occasional	1.10	0.98–1.2	0.114
Regular	2.20	1.90–2.55	0.001
Dowry harassment	1.71	1.56–1.92	0.001
Employment differences			
Husband working, wife not working	1.00		
Wife working, husband not working	1.64	1.04–2.6	0.03
Both working	1.14	1.01–1.28	0.025
Harsh physical punishment during childhood	1.41	1.27–1.57	0.001
Witnessed father beating mother	1.31	1.17–1.46	0.001
Any physical violence	2.23	2.00–2.49	0.001

be at risk of poor mental health, a feature that is not unique to India. Counts *et al* (1992) found that where women have a higher economic status they are seen as having sufficient power to change traditional gender roles, and it is at this point that violence is at its highest.

An interesting finding was that higher levels of education of both the woman and her husband acted as a protective buffer against poor mental health, suggesting the important part education could play in reducing violence against women and thereby mental disorder. This implies that higher levels of education engender better skills in coping with and dealing with stressful situations. Studies have indeed shown that low academic achievement was one of the risk factors predicting physical abuse of partners by men in New Zealand (Moffitt & Caspi, 1999).

Alcohol, dowry, domestic violence and poor mental health

Regular alcohol consumption by the husband, harassment by the in-laws, exposure to harsh physical discipline during childhood and witnessing father beating the mother during childhood were other factors that were strongly associated with increased risk of poor mental health, all of which have been well documented (Black *et al*, 1999). Alcohol has consistently emerged as a risk marker for partner violence that is especially consistent across a range of settings (McCauley *et al*, 1995). Many researchers believe that alcohol operates as a situational factor, increasing the likelihood of violence by reducing inhibitions, clouding judgement and impairing an individual's ability to interpret cues (Flanzer, 1993).

Harassment by in-laws on issues related to dowry, which emerged as a risk factor for poor mental health in this study, is particularly characteristic of the Indian setting. The dowry has been in existence for many years and has been the subject of much debate as well as legislative action (Agnes, 1992). Despite efforts, this age-old practice continues to survive and has been a significant factor that has driven many women to suicide (Kumari, 1989).

Social support, childhood experiences or violence and poor mental health

The beneficial effects of social support have been acknowledged. In this study the mental health status of women who reported having good social support was better than that of those who reported poor social support. Coker *et al* (2003) found that higher levels of emotional support can modify the effect of intimate partner violence on health, and suggested that interventions to increase emotional and social support to women victims of violence might reduce the negative consequences to mental and physical health.

Published studies have provided fairly strong evidence of long-term psychological effects on women who remember violence between their parents. Such women were diagnosed as having low self-esteem, depression and poor social competence (Silveryn *et al*, 1995). Further, women who experienced physical or sexual abuse in childhood also experienced ill health with regard to physical functioning and psychological well-being more frequently than other women (McCauley *et al*, 1995). The results from our study clearly echo these findings. The statistically strong association that emerged between witnessing father beating mother during childhood and poor mental health, as well as between exposure to childhood violence and poor mental health during the woman's adult years, provide compelling evidence of the long-term and deleterious effects of violence.

Study limitations

The cross-sectional design of our study precluded the ability to establish the causal effect of violence in leading to poor mental health. The sample was restricted to women under 50 years, a decision that was based on the belief that women over that age were likely to have better crisis management skills than younger women and therefore were likely to experience less domestic spousal violence. This limited the

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CLINICAL IMPLICATIONS

■ Women with poor mental health or depression should be screened for domestic violence and provided counselling in healthcare settings.

■ Healthcare providers from the primary healthcare level onwards need to be sensitised to the issues of domestic violence in order to recognise it early.

■ Community awareness of the harmful consequences of domestic violence needs to be increased to reduce the community's tolerance of domestic violence against women.

LIMITATIONS

■ The study's cross-sectional design precluded our establishing a causal role of violence leading to poor mental health.

■ Restricting the study sample to women 15–49 years old limited our ability to apply the findings to a larger group of women.

■ All assessments are based on self-report, and are likely to underestimate the true prevalence of domestic spousal violence and poor mental health.

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ability to generalise the study's findings to a wider cross-section of older women. Further, all assessments were based on self-reports by respondents, and are likely to be gross underestimates. Despite these limitations, this study is one of the largest population-based studies in India that has provided valuable data on domestic violence and established the strong association between domestic spousal violence and poor mental health. It also provides substantive evidence of the need to classify domestic violence as a major public health problem. An effective preventive programme that could eliminate physical domestic violence could hope to achieve a reduction of 41% (population attributable fraction) in the prevalence of poor mental health in the total population, a fact that underscores the need for culturally acceptable and sustainable intervention strategies to deal with this social malaise.

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