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Local Social Support Mitigates Depression among Women Contending with Spousal Violence and Husband's Risky Drinking in Mumbai Slum Communities

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Abstract

Background—Women living in slum communities in India too often contend with depression. Local social support in other national contexts has been shown to reduce such risks. Less research in this area has been done in India and specifically with monogamous wives.

Methods—This study involved a household sample of women reporting husband's partner violence or heavy alcohol use (N=220). Participants were assessed on high social support in the community, and number of depressed days in the past 30 days (dichotomized as 10+ vs<10 days). Logistic regression analyses assessed associations between local social support and depression, adjusting for demographics, spousal violence, and husband risky alcohol use.

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Anindita Dasgupta led the conceptual development and wrote the first draft of this paper. During data collection, Ms. Dasgupta also coordinated the study from the United States. Madhusudana Battala managed the data collection and processing for this paper, and provided considerable feedback to help revise this paper. Niranjan Saggurti was co-principal investigator on this study and was instrumental in designing the study. Saritha Nair oversaw data collection by the research team and coordinated the study from India. Dr. Nair also provided considerable feedback on the paper during the drafting process. DD Naik managed the field research during the study, and also contributed to the revision process of the paper. Jay G. Silverman provided human subjects protections consultation throughout the study, and also provided significant feedback throughout each stage of paper development. Donta Balaiah was co-principal investigator on this study, and helped with overall conceptualization of the paper. Anita Raj was co-principal investigator on this study and provided heavy input in terms of analysis and revision of this paper. All authors contributed to and have approved the final manuscript.

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Results—High local social support was reported by 40% of women; 33% reported never having local social support. Women with high local social support were significantly less likely to report depression (AOR: 0.53, 95% CI: 0.30–0.94), even after adjusting for husbands' recent spousal violence perpetration and his risky alcohol use, both of which were also significantly associated with depression.

Limitations—The data analyzed for this study are vulnerable to self-report and recall biases, as well as issues around social desirability. These analyses are further limited due to the use of single item measures to assess depression and local social support.

Conclusions—Local social support reduces risk for depression among women in Mumbai contending with husbands' spousal violence and risky alcohol use. These findings support the likely utility of community-based social support building to reduce risk for depression among this vulnerable population of women.

Keywords

spousal violence; depression; mental health; social support

Introduction

Mental health disorders have reached epidemic proportions globally, with more than 450 million people suffering from mental health disorders (WHO, 2010). However mental health concerns that exist in developing countries go largely unaddressed (Desjarlais et al., 1995). Depression is considered one of the most burdensome diseases in the world (WHO, 2002), and this health concern is especially pervasive in developing countries such as India (Patel and Shidhaye, 2011; Sharan and Rai, 2009; WHO, 2012). Both globally and within India, women are disproportionately affected by depression (Bernstein et al., 2012; Fichter et al., 1996; Patel and Shidhaye, 2011; WHO, 2012). Although national data are not available on this issue, recent population-based data from South India suggests that approximately 1 in 6 women suffer from depressive symptoms (Poongothai et al., 2009).

In the context of India, numerous studies have examined risk factors for depression among women. Identified risk factors include poverty (Ganguli, 2000; Nayak et al., 2010; Patel et al., 1999; Patel and Shidhaye, 2011; Pereira et al., 2007; Sharan and Rai, 2009; Shidhaye and Patel, 2010), urban residence (Ganguli, 2000), pregnancy (Pereira et al., 2007; Varma et al., 2007) marital conflict and violence from husbands (Chandra et al., 2009; Kumar et al., 2005; Nayak et al., 2010; Patel and Shidhaye, 2011; Pereira et al., 2007; Sharan and Rai, 2009; Shidhaye and Patel, 2010;), and husband alcohol problems (Nayak et al., 2010; Shidhaye and Patel, 2010). Less focus has been placed on identification of resiliency factors that may reduce risk for depression or depressive symptoms, in the context of these structural and family risks or otherwise. Social support has been identified as one such resiliency factor. Evaluation research studies from non-developing nations indicate the utility of improved social support to reduce community depression symptoms (Mead et al., 2010), particularly for women[41] including those contending with partner violence (Coker et al., 2002; Coker et al., 2003; Mburia-Mwalili et al., 2010; Taft et al., 2011). Such work has not yet been done in India.

Building upon this previous research and with the goal of supporting identification of resiliency factors against depression among women in India, this study examines whether high local social support can reduce risk for depression among women contending with urban poverty and marital difficulties in the form of spousal violence and/or husband's risky alcohol use. These findings can guide development of community level interventions for vulnerable populations of wives in urban slum communities in India.

Methods

This study involved analysis of cross-sectional baseline data from a behavioral HIV intervention study focused on wives in India at risk for HIV from their husbands- the Raising HIV Awareness in Non-HIV-Infected Indian Wives (RHANI Wives) Study.

This study involved household recruitment of women by trained female staff members in selected areas of a single Mumbai slum community. Research staff held Masters degrees in either psychology or social work, and all were trained on issues domestic violence and safety, HIV, and the research protocol. All households in the study site area were approached to determine if an age-eligible (18–40 years) married woman was present and available for meeting. If an age-eligible married woman was home, the research staff member let her know that this team was conducting a women's health focused research project for women in this community. She assessed her willingness to participate in a survey. If the woman indicated interest, a private space was identified within the house or nearby for the eligibility assessment and consent process. Written informed consent was obtained prior to screening and survey.

For screening, a 20 minute survey was conducted to determine if the woman met the following eligibility criteria: She needed to be age 18–40 years, fluent in Hindi or Marathi, married and residing with husband and in the community for a period of 3 months or greater, and without plans to relocate from the community in the next 6 months. Additionally, she had to report that her husband either engaged in past 30 day drunken behavior or drank alcohol 3 days in the past week or spousal violence (physical or sexual violence or threat of physical violence) perpetration against her at some point in their marriage. If a woman was identified as eligible, research staff again clarified the study procedures and assessed participation interest. Over the one, year recruitment period [July 2010 to June 2011], research staff screened 2410 age-eligible wives. Of those screened, 285 women were eligible (12% eligibility rate); 220 eligible women agreed to participate and were enrolled into the RHANI Wives evaluation study (77% participation rate). NOTE: Low eligibility rates in this study are believed to be a consequence of our informed consent outlining eligibility prior to the eligibility assessment, a requirement of our institutional review board approval.

Subsequent to consent, screening, and confirmation of eligibility and willingness to participate in the study, a baseline survey was conducted with participants. Research staff administered the survey within the homes of study participants or at a nearby location, to help ensure privacy during research participation. The baseline survey assessed sociodemographics, sexual and husband substance use behaviors, spousal violence, perceived health, and social support. All data collection was conducted in Hindi or Marathi by trained female research staff members.

No monetary incentive was provided for study or program participation. All study procedures were reviewed and approved by the Institutional Review Board of Boston University Medical Campus, and the Indian Council of Medical Research.

Survey Measures

Sociodemographics included single item measures on participant age, religion, region of origin, length of time in Mumbai, level of education, length of marriage, number of children and demographics (age, education, employment) of spouse.

Our primary independent variable, high local social support was assessed via a single item, which asked participants "How often do you get the social and emotional support you need

from friends and family in the neighbourhood?" Responses included "always," "usually," "sometimes," "rarely" and "never." Due to skewed distribution of data, we dichotomized this variable into high local social support (always/usually) and low local social support (sometimes/rarely/never).

The depression outcome variable was based on an item taken from the Centers for Disease Control's Behavioral Risk Factor Surveillance System (CDC, 2009). The item asked participants the number of days in the past 30 days they felt "sad, blue or depressed." Participants responding yes to 10+ depressed days were defined as having a high number of depressed days. The 10+ days definition was based on a median split to dichotomize this outcome due to skewed distribution.

Additional covariates included husband's spousal violence perpetration and his drunkenness. For spousal violence, participants were asked a single yes/no item, "In the past 3 months, have you and your husband had an argument or fight where he physically or sexually hurt you?" Husband's alcohol use behavior was assessed by asking "Do you think your husband drank any alcohol in the past 30 days?", and for those responding yes, "How many days in the past 30 days do you think your husband was heavily drunk?" Husband drunkenness was based on his wife's reports of him having 1 or more drunk days in the past 30 days.

Data Analysis

Descriptive analyses were conducted on all demographic indicators, and social support, recent IPV, husband alcohol use in the past 30 days for the total sample, and for the subsample reporting high numbers of depression days, vs. those not reporting high depression. Simple and adjusted logistic regression analyses were also conducted to assess the associations between high local social support and our outcome measures of high number of depressive days, high number of anxious days. Adjusted analyses controlled for no female formal education, past 3 month spousal violence, and past 30 day husband drunkenness. Neither age nor history of migration to Mumbai were associated with depression therefore they were dropped from adjusted models. Odds ratios and 95% confidence intervals were used to assess size and significance of associations. Analyses were conducted in SPSS 19.1.

Results

Demographic Profile

Participants had a mean age of 29.5 years (SD: 5.8). [See Table 1.] 21.4% reported no formal education, and 69.1% of women reported no personal income. A small proportion of husbands (11.4%, n/N=25/220) had no formal education; 97.3% of husbands (n/N=214/220) were income-generating. Mean marital length was 11.8 years (SD: 6.5); mean number of children was 2.4 (SD: 1.2 children). The majority of women were born outside of Mumbai (63.2%). Of those born outside of Mumbai, 56.1% (n/n=78/139) were from Maharashtra, 33.1% (n/n=46/139) were from Uttar Pradesh, and 10.8% (n/n=15/139) were from other states in India. For these migrant women, mean age at time of relocation was 17.8 years (SD=6.7 years); most (77.7%; n/n=108/139) relocated to reside with their husbands. Most husbands (60.9%, n=134) were also not born in Mumbai; for these, mean age at relocation was 21.1 years (SD: 11.1 years). For these migrant men, 32.1% (n/n=43/134) relocated alone, and 58.2% (n/n=78/134) relocated with family or friends (not including wife).

Spousal Violence, Husband Alcohol Use, and Wife's Social Support

More than one-third of women (35%) reported spousal violence in the past 3 months. [See Table 1] The majority (58.6%) reported husband's alcohol use in the past 30 days; 43.2%

reported husband was drunk in the past 30 days. Almost half of women (40%) reported "always" or "usually" having social support in the neighborhood; 33.2% reported never having such local social support.

Adjusted Logistic Regression Analyses to Assess Associations between High Local Social Support and Depression

Women with high local social support were significantly less likely to report having a high number of depression days (AOR: 0.53, 95% CI: 0.30–0.94, p=0.03), even after adjusting for husbands' recent spousal violence perpetration and risky drinking. Adjusted analyses did demonstrate that high number of depression days was also significantly associated with husband's alcohol use (AOR: 1.93, 95% CI: 1.08–3.37) and spousal violence (AOR:2.27, 95% CI: 1.25–4.09), as well as low female education (AOR: 2.01, 95% CI: 1.00–4.03).

Discussion

Findings from the current study document that lack of local social support is an issue for one-third of women contending with spousal violence and/or husbands' risky alcohol use in Mumbai slums. Nonetheless, an additional 40% of these women indicated high local social support, and women reporting high local social support were less likely to report a high number of depressive days. These findings are consistent with previous research from other national settings documenting an association between local social support and reduced risk for depression among women generally (Coker et al., 2002; Coker et al., 2003; Mitchell and Hodson, 1983; Mburia-Mwalili et al., 2010; Plazaola-Castaño et al., 2008; Taft et al., 2011) and among women contending with spousal violence and other marital problems (Mead et al., 2010; Small et al., 2011). These findings suggest the potential utility of a local social support-focused intervention to reduce mental health risks for vulnerable women in India. Such an intervention has been seen to be useful with women experiencing spousal violence in Australia (Taft et al., 2011), and should be considered for use in India, as well.

Consistent with previous studies (Chandra et al., 2009; Kumar et al., 2005; Nayak et al., 2010; Patel and Shidhaye, 2011; Pereira et al., 2007; Sharan and Rai, 2009; Shidhaye and Patel, 2010), current findings also document that spousal violence and husbands' risky drinking, as well as lower education, increase women's risk for having more depressed days. However, unexpectedly, being a migrant had no association with our depression variable. Although an association between migration and depression has not been seen in previous studies on this issue in India, extensive research documents such an association in other national contexts (Bhugra, 2004). Certainly, migration would be assumed to reduce likelihood of local social support, especially given that the migrant women in this sample predominantly reported migration for husbands. Of note, residence with family, either in-laws or natal family, also was not associated with having a high number of depressed days. Ad hoc analyses were conducted to determine if these factors were associated with local social support, as these family members may provide such support, but also because previous study documents presence of in-laws can increase isolation of women, as well (Raj et al., 2011). No such associations were observed, indicating that presence of additional family in the home is no guarantee that local social support will exist for these women. Further research is thus needed to determine and understand the nature of local social support for intervention development.

Study findings must be considered in the context of certain limitations. Survey data are vulnerable to self-report and recall biases. Recall biases were reduced by assessments with recent time frames. Social desirability is likely a greater concern. This would more likely result in under-reporting rather than over-reporting other stigmatizing issues such as depression and spousal violence, but potentially over-reporting of local social support.

Efforts were made to reduce social desirability, including use of private space for interviews and time with staff to build rapport and to review confidentiality protections. Additional concerns are the use of single items to assess depression and local social support. However, given the paucity of data on this topic, and the importance of this unique sample in answering this research question, these findings offer important insight despite these limitations.

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Table 1

Demographics, spousal violence and risky alcohol, and high local social support of wives by total sample (N=220), and by high depression (N=115) and low depression (N=105), respectively.

	Total Sample (N=220)	**High Depression (N=115)**	**Low Depression (N=105)**	**P-Value**
	% (n) or Mean (SD)	**% (n) or Mean (SD)**	**% (n) or Mean (SD)**	
Mean age	29.5 (SD: 5.8) Range: 18–40	29.5 (SD: 6.1) Range: 18–40	29.5 (SD: 5.4) Range: 18–40	0.71
No formal education	21.4% (47)	27.0% (31)	15.2% (16)	**0.03**
No female income generation	69.1% (152)	65.2% (75)	73.3% (77)	0.19
Migrant (Born outside Mumbai)	63.2% (139)	66.1% (76)	60.0% (63)	0.35
Residing with in-laws	30.5% (67)	33.9% (39)	26.7% (28)	0.24
Residing with natal family	5.4% (12)	6.1% (7)	4.8% (5)	0.88
Religion - Hindu	63.6% (140)	61.7% (71)	65.7% (69)	0.54
Mean marital length (years)	11.8 (SD: 6.5) Range: 1–27	12.2 (SD: 7.0) Range: 1–27	11.3 (SD: 6.0) Range: 1–25	0.30
Mean number of living children	2.4 (SD: 1.2) Range: 0–7	2.5 (SD: 1.2) Range: 0–7	2.2 (SD: 1.3) Range: 0–6	0.20
IPV, past 3 months	35.0% (77)	42.6% (49)	26.7% (28)	**0.01**
Any husband alcohol use, past 30 days	77.3% (170)	83.5% (96)	70.5% (74)	**0.02**
Any husband drunk days past 30 days	58.6% (129)	64.3% (74)	52.4% (55)	0.07
High social support	40.0% (88)	33.0% (38)	47.6 % (50)	**0.03**

Table 2

Crude and Adjusted Logistic Regression to Assess Impact of High Social Support on Depression Among Monogamous Wives in Mumbai, India

	Odds Ratio (95% Confidence Interval)	**Adjusted Odds Ratio (95% Confidence Interval)**
High local Social Support	0.53 (0.32, 0.94)	0.53 (0.30, 0.94)
Any husband drunk days past 30 days	1.64 (0.96, 2.82)	1.93 (1.08, 3.37)
No formal education	2.05 (1.05, 4.02)	2.01 (1.00, 4.03)
IPV, Past 3 Months	2.04 (1.16, 3.61)	2.27 (1.25, 4.09)