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CLINICAL ARTICLE

Impact of the RHANI Wives intervention on marital conflict and sexual coercion

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ABSTRACT

Objective: To assess the effects of the RHANI (Reducing HIV among Non-Infected) Wives intervention on marital conflict and intimate partner violence (IPV) in urban India. *Methods:* A 2-armed cluster-randomized controlled trial (7 intervention, 6 control clusters) of the RHANI Wives intervention was conducted with 220 women contending with a history of IPV and/or husband's drunken behavior. Participants were surveyed at baseline and 4.5-month follow-up. Outcome measures included marital conflict (arguments with husband in past 3 months), marital IPV (physical or sexual violence from husband in past 3 months), and marital sexual coercion (husband forcing sex at last sex). Intention-to-treat logistic generalized linear mixed models were used to determine intervention impact. *Results:* One-third (35.0%) of participants reported physical or sexual abuse from their husband in the past 3 months, and 58.6% reported that their husband was drunk in the past 30 days. Intention-to-treat analyses indicated time × treatment reductions in marital conflict (risk ratio [RR] 0.4; 90% confidence interval [CI], 0.1–0.9; $P = 0.06$) and marital sexual coercion (RR 0.2; 90% CI, 0.05–0.9; $P = 0.08$), but not IPV. *Conclusion:* The findings suggest the potential utility of this intervention in reducing marital conflict and sexual coercion among women in urban India.
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1. Introduction

Intimate partner violence (IPV) in marriage, including both physical and sexual abuse, affects more than 1 in 3 married women in India [1,2]. Studies indicate that violence may contribute to HIV infection directly through transmission of HIV during rape and indirectly through increasing vulnerability to risky sexual behavior [3–5]. Research also indicates that violence may inhibit access to HIV-testing and prevention services [6,7] among both married women [2] and high-risk groups such as female sex workers [8–10], further increasing women's HIV risk. Among married women in India, research documents that physical violence combined with sexual violence from husbands is associated with an increased likelihood of HIV infection [2]. Despite the well-documented increasing percentage of new HIV cases represented by women, particularly for those contending with violence from their male partners, there remains a paucity of interventions with demonstrated impact on reducing male-perpetrated IPV. Notably, the most well-known studies having such impact were the result of HIV/sexual risk reduction interventions, which included consideration of IPV as a risk factor for HIV [11,12]. Both of these studies involved cluster-randomized controlled trials of community-based multisession HIV interventions conducted in South Africa; such trials are now being conducted in Asia.

Despite the high prevalence of IPV among married women in India, the demonstrated connection between HIV and IPV, and the many large-scale HIV prevention major investments in this context, no published studies have assessed the effect of HIV prevention programming in this region on violence or sexual coercion from male partners. Previous studies indicate reductions in violence among female sex workers as a result of crisis response interventions within HIV prevention programs [13,14]. However, these studies were not originally designed to evaluate intervention impact and, as a result, these interventions have not been rigorously evaluated.

RHANI (Reducing HIV among Non-Infected) Wives is an HIV intervention with married women in India that includes considerations of marital conflict and IPV. This multisession intervention for women in

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low-income communities in urban India includes both individual and group sessions and is focused on women's problem solving regarding marital conflict by building their skills to self-negotiate and find resources against marital difficulties, including physical and sexual IPV. Effects of RHANI Wives on marital conflict and violence are presented here; findings regarding effects on sexual risk reduction are presented elsewhere [15].

2. Materials and methods

A 2-armed cluster-randomized controlled trial of the RHANI Wives intervention was conducted from June 4, 2010, to June 30, 2011, in a low-income community (slum) in Mumbai, India. The study community has a population of approximately 200 000, spread over 2 km^2. The geographic terrain of the slum includes both plain and hilly land. Approximately 90% of the houses consist of 1 room in which all nuclear-family members reside, with a small portion of the space for cooking and bathing. Male residents are employed primarily as daily-wage laborers. There are many community locales selling local liquor (*Desi daru*) and English liquor (e.g. whiskey). In total, 8 liquor shops with government licenses are located in different parts of the community. Additionally, each cluster in the community has at least 1 household selling liquor (mostly local liquor) illegally to the people of the cluster.

The study community was further divided into different geographic clusters for randomization by the research team prior to study implementation. Clusters were selected via mapping of the study area by geographic boundaries (e.g. a hill or a street) and population density, such that each geographic cluster included approximately 300 households. This approach resulted in 22 clusters, 13 of which were selected for study inclusion based on indications of large numbers of alcohol venues within them. One cluster was utilized for piloting but retained in the study, as no changes were made to the program. The remaining 12 clusters were randomized to intervention or control conditions.

Within selected clusters, trained female research staff approached all households to determine whether a married woman aged 18–40 years (used as a first level of screening) was available. If a woman in the specified age range was at home, research staff initiated a conversation to introduce the study as a health-focused research project for women in the community. Research staff then assessed the woman's willingness to participate. If the woman indicated interest, a private space was identified within the house or nearby for the consent process and study eligibility assessment. Owing to the low literacy rates of the population of focus and the sensitivity of the topic, consent forms were read in full to all participants, and written informed consent was obtained prior to screening for eligibility. The consent form outlined that the purpose of the project was to evaluate an HIV prevention intervention for women contending with husbands who engage in recent heavy alcohol use and/or have been physically or sexually abusive in the marital relationship. The consent form clarified that participants would participate in 2 rounds of survey assessment and would receive either the multisession intervention or a brief single-session intervention. The participants were informed after consent whether they were in the intervention or the control group. Thus, neither participants nor research staff members were blinded to treatment condition. All study procedures were reviewed and approved by the institutional review boards of Boston University Medical Campus and the National Institute for Research in Reproductive Health (Indian Council of Medical Research).

Subsequent to acquisition of written informed consent, the 20-minute eligibility screener was conducted. The screener included a variety of questions on health care, fertility and parity, and family tobacco use in order to increase rapport with the interviewer prior to the questions on husband's alcohol use and abusive behaviors. The woman was identified as eligible if she satisfied the following criteria: 18–40 years of age; fluent in Hindi or Marathi; resided with her husband in the area of study for a period of 2 months or more; reported that her husband engaged in heavy drinking (past 30-day drunken behavior or 3 drinking days in past 7 days) or that she had experienced lifetime physical or sexual spousal violence perpetration; and had no plans to relocate from the area in the next year. Once the woman was determined eligible, research staff again clarified the study procedures and asked whether she would like to participate in the broader study, which involved 2 detailed surveys over a 5-month period, as well as an HIV intervention program for those women residing in intervention cluster areas.

Over the 1-year recruitment period, research staff approached 2410 households that included married women aged 18–40 years who agreed to screening. Of those screened, 285 women were eligible (11.8% eligibility rate); 220 eligible women agreed to participate (77.2% participation rate) and were enrolled into the study (Fig. 1). Of those who were eligible but refused participation, time constraints and husband disapproval of participation were cited as primary reasons for refusal. Such low eligibility rates are believed to be a consequence of our informed consent outlining potentially stigmatizing eligibility criteria (e.g. spousal violence and husband drinking) prior to screening. Women who were enrolled from intervention clusters were then linked with the RHANI Wives program. Women were assessed again at 4.5 months post-baseline; an 80.9% (n = 178/220) follow-up rate was achieved. Non-response at follow-up was primarily because of participants' relocation to a different community (many lived in rented houses). However, a small number of participants (n = 10) dropped out during the study because of family disapproval of their participation. All data collection procedures were conducted in Hindi or Marathi, and no monetary incentive was provided for study or program participation.

The RHANI Wives intervention included 4 individual sessions in the household and 2 group sessions in the community delivered over 6–9 weeks by a trained master's-level counselor. Individual sessions focused on problem solving related to marital communication regarding issues of conflict by building women's skills to negotiate and find resources. Conflict issues of focus were the sexual relationship, financial and family pressures, and husband's alcohol use. Group sessions reinforced individual sessions through education and provided a potential for social cohesion among women living in the community. The first individual session was conducted in week 1 (post-baseline survey) and was aimed at introductions and discussion regarding financial stresses and women's health using tools created for the intervention, such as a modified thermometer and various scales to measure levels of stress and burden. The second individual session was conducted during weeks 1–2, depending on convenience for the participant. The second session focused on issues around alcohol, violence, financial stress, and poor health of family using cyclical figures designed for the project to illustrate the relationship between these areas. Subsequent to the 2 individual sessions, the first group session was conducted in weeks 2–4; a counselor used reconstructed stories documenting women's marital issues (alcohol, violence, sexual infidelity) to stimulate group discussion on problem-

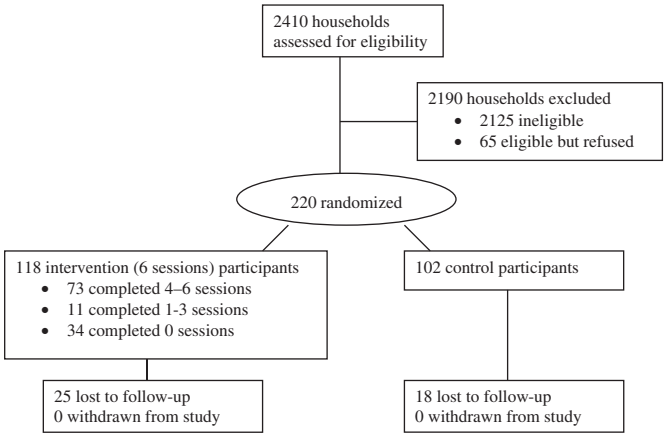

Fig. 1. Recruitment and participation flow diagram.

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