

## 13 Sexual Risk Reduction among Married Women and Men in Urban India: An Anthropological Intervention

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### Introduction

Worldwide, the number of people living with HIV/AIDS is currently estimated at 33.2 million (UNAIDS 2007). In the early stages of the epidemic, the disease primarily affected men (Mann, Tarantola, and Netter 1992), but this proportion quickly changed, so that women manifested the most rapid increase in global infection rates (Vuylsteke, Sunkutu, and Laga 1996). In sub-Saharan Africa, there has been a dramatic shift in gender ratios over the past decade, with HIV-positive women now outnumbering men (1.3 to 1; UNAIDS 2004a).

The global epidemiological picture is being replicated in India. As the epidemic accelerated in India in the early 1990s, gender distribution estimates for 1994 indicated a male-to-female ratio of 5:1, with female cases mostly among sex workers (Pais 1996). By the end of the decade, the epidemic had crossed over to the general population and gender ratios had reduced to a 3:1 ratio. Currently it is estimated that the ratio is between 1.7:1 (UNAIDS 2004b) and 1.2:1 (Hawkes and Santhya 2002), with infection rates increasing most rapidly among women (NACO 2004), who now represent an estimated 40% of people aged 15 to 49 living with HIV/AIDS in India (NACO 2004; UNAIDS 2004b). Much of this rapid increase in prevalence among women in India is a result of male-to-female transmission within marriage (Gangakhedkar et al. 1997; Newmann et al. 2000).

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The prevention challenge in India, as elsewhere in the world, is to identify effective approaches to reduction of risk behavior that will serve to lower transmission rates. The approaches to this problem need to move beyond the standard interventions to risk and harm reduction that have characterized the mainstream approaches to HIV prevention and to work with men and women within the context of their own culture and worldview to reduce the risk of HIV transmission. In the case presented in this chapter, the focus is on married women and men living in urban poor communities (referred to locally as "slums") in Mumbai, the largest city and economic center of India. Our first step in these communities was to understand the broader issues of men's and women's sexual and reproductive health beliefs and behaviors.

### Sexual Health Concepts in India

#### Men's Culturally Based Sexual Health Concepts

The work of Verma, Rangaiyan, Singh, Sharma, and Pelto (2001) at the International Institute for Population Sciences (IIPS) in Mumbai on men's sexual concepts, conducted in the late 1990s, provided the "opportunity" to address HIV/STI (sexually transmitted infection) risk from a cultural perspective. Male sexual dysfunctions, such as a lack of sexual interest, premature ejaculation, impotence (erectile dysfunction), and infertility and the anxieties they produce are widely distributed across societies and cultures. Male sexual performance is seen in most cultures as the benchmark of masculinity, virility, personal adequacy, and fulfillment (Kulhara and Avasthi 1995). Verma and colleagues, research showed that men living in both urban and rural areas of India have widespread anxieties associated with sexual matters (Pelto, Joshi, and Verma 1999; Verma et al. 2001; Verma and Schensul 2004). South Asian and Indian culture amplifies these concerns with a focus on the dangers associated with "semen loss" through nocturnal emission and masturbation (Kulhara and Avasthi 1995). According to Indian tradition (writings in *Upanishads*), semen is known as *virya*, derived from a Sanskrit word that means bravery, power, or greatness (Verma, Khaitan, and Singh 1998) and is considered the source of physical and spiritual strength. The loss of *virya* through sexual acts or imagery (including masturbation and nocturnal emission) is considered harmful both physically and spiritually. The focus on semen loss makes premature ejaculation, nocturnal emission, and masturbation special concerns among Indian men (Verma et al. 1998). Although nocturnal emissions and masturbation are the main sources of "sexual release" in the years before marriage among the majority of males, they are also major causes of anxieties among unmarried young men in South Asia.

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Men are more concerned about performance issues related to semen loss than they are about STIs (Pelto et al. 1999). Strongly held cultural beliefs cause the vulnerable individual to develop concerns about sexual performance, thereby leading to anxiety, which may then

act as a mediator for the genesis and perpetuation of problems (Verma et al. 1998). The term *gupt rog* ("secret illnesses" in Hindi) refers to the range of symptoms that are caused by semen loss and other factors that range from eating meat to having sex with "wrong" women. It became clear that *gupt rog* would provide a cultural route to addressing HIV/STI risk reduction among men in the study communities.

## Women's Culturally Based Sexual Health

Many Indian women living in poor rural and urban communities are faced with numerous life challenges that include a difficult work schedule, limited financial resources to support the household, and male domination that limits mobility, empowerment, and control over their own sexuality. One way that the difficulties in life situation are manifested in some Indian women is in part through sexual and reproductive health symptoms, particularly *safed pani* (vaginal white discharge) and *kamjori* (general state of weakness) (Patel and Oomman 1999; Prasad, Abraham, Akila, Joseph, and Jacob 2003). Research studies on women's health in India indicate that women express the psychological, social, and economic difficulties in their lives in the form of culturally defined gynecological problems, including *safed pani*, as "idioms of distress" (Nichter 1981) or as "metaphors for psychological distress" (Patel and Ooman 1999).

As a consequence, community-based studies in India have reported a high level of gynecological morbidity. Of the 90,303 ever-married women sampled nationwide in the 1999 National Family Health Survey (IIPS 2000), 39% reported at least one gynecological and related symptom within the past two months that included vaginal discharge (31%) and urinary tract problems (17%). A number of community-level studies in India have also shown that from 55% to 100% of ever-married women respondents self-reported one or more current symptoms (Bang et al. 1989; Bhatia and Cleland 1995; Garg et al. 2002; Kambo, Dhillon, Singh, Saxena 2004; Koenig, Jejeebhoy, Singh, Sridhar 1998; Oomman 2000; Prasad et al. 2003).

The most prevalent problem mentioned by women in India is *safed pani* (Bang and Bang 1991, 1994), a nonspecific vaginal discharge related to a number of causes, most of which reflect normal physiology and micro-organisms in the reproductive tract. *Safed pani* is deeply embedded in cultural beliefs about causation of *kamjori*, menstrual complications, and symptoms related to their husbands having sex with other women; *safed pani* is considered by women to be a serious health problem (Bang and Bang 1994; Bhatia and Cleland 1995; Kambo et al. 2004; Patel 1994; Patel, Barge, Kolhe, and Sadhwani 1994).

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Another condition, *kamjori* includes a wide range of general bodily complaints such as pain related to menses, pain in joints (hands and legs), dizziness, loss of appetite, and chronic fatigue. *Kamjori* as a health concern is pervasive throughout South Asia (Nichter 1989). In South Asia, women associate *kamjori* with *safed pani* (Bhatti and Fikree 2002; Gittelsohn et al. 1994). Another culturally defined health problem linked by many Indian women to gynecological and related symptoms is *tenshun*, an English-derived term used by Urdu- and Hindi-speaking women to define psychological distress that is expressed in terms of anxiety and sadness or depression. *Tenshun* has also been viewed as associated with high levels of poverty, low education, excessive household chores, husband's alcoholism, low empowerment, domestic violence, and marital difficulties (Oomman 1996; Patel and Oomman 1999; Prasad et al. 2003; Ramasubban and Rishyasringa 2001). *Tenshun*, as well as *safed pani* and *kamjori*, are associated with women's heavy social burden, low self-esteem, and gender-based inequalities that in turn prevent women from seeking proper health care (Jejeebhoy and Koenig 2003; Patel and Oomman 1999; Weiss and Gupta 1998).

## Sexual Health Concepts and HIV Risk

How can we use these folk concepts of illness to develop a responsive HIV preventive intervention? From the perspectives of the authors, there were several "hooks" on which to hang an approach to HIV prevention. The first of these hooks is that the domains of *gupt rog* and *stree rog* (women's illness) can provide a cultural base for raising issues related to the sexual and reproductive risks of HIV and other sexually transmitted diseases (STDs). Second, *gupt rog* and *stree rog* are seen as problems that need to be treated, and therefore men and women can be engaged in intervention at the "point of service." Third, *gupt rog* and *stree rog* symptoms may be markers of sexual risk or the behaviors that contribute to sexual risk. Finally, the concepts of *gupt rog* and *stree rog* are highly salient among men and women in the study communities and create a pathway to addressing sexual risk.

## The NIH Projects

### The Male Grant

Utilizing these concepts, the first author, an anthropologist and the principal investigator, Verma, an Indian-based psychologist, and Nastasi, a US-based psychologist, developed a 5-year (2002–2007) grant entitled, "Sexual Health Concerns and Prevention of HIV/STD in India" (the Male Grant) that was funded by the National Institute of Mental Health (RO1-MH64875). The same

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collaborators developed a supplement funded by the Office of AIDS Research (2002–2006) entitled “Assessing Women’s Risk of HIV/STD in Marriage in India.” These grants were the product of collaboration between the University of Connecticut School of Medicine and the Institute for Community Research in the United States and the IIPS in Mumbai, India. They led to the formation of the IIPS-based program, Research and Intervention in Sexual Health: Theory to Action (RISHTA, an acronym meaning “relationship” in Hindi and Urdu). (For a more detailed discussion of grant development and basic design, see Schensul, Verma, Nastasi [2004] and Schensul et al. [2006a]).

The Male Grant focused on married men between the ages of 21 and 40. Married men in this age range were selected because (1) risky sex primarily occurs close to and after marriage for young Indian men; and (2) we were interested in the role of marriage and spouse in the dynamics of sexual risk. The grant involved a quasi-experimental design that was implemented in 3 stages. The first stage consisted of “formative research,” a mix of qualitative and quantitative data collection methods in which the objectives were to (1) understand the cultural and community context; (2) provide the empirical base for intervention design; and (3) develop culturally appropriate instruments for measurement of change. Formative research methodology included a community ethnography, 52 male in-depth interviews, a rapid assessment of all 245 private allopathic and nonallopathic providers in the 3 communities (Schensul et al. 2006b), in-depth interviews with 37 nonallopathic providers, and a baseline survey of a random sample of 2,408 married men, aged 21 to 40, in the 3 slum communities in Mumbai. A randomly selected subset of 642 men was tested for STI, including acute and lifetime syphilis and herpes simplex virus-2 using 5 ml of blood, and gonorrhea and Chlamydia through polymerase chain reaction (PCR) testing of urine.

The intervention stage involved the implementation of a multilevel intervention involving community education, provider training, and patient counseling. The third stage involved a follow-up instrument that was consistent with the baseline survey to provide a final evaluation of the impact of the intervention, built on a comparison with the baseline survey. The follow-up survey was administered to a systematic random sample of 2,710 men (a new sample from that of the baseline), and a subset of 910 men were administered STI testing to assess the impact of the program on the community and a patient sample of 537 married men who utilized allopathic and nonallopathic providers in the communities to address *gupt rog* problems.

## The Women’s Supplement

The Women’s Supplement represented a pilot effort and involved the collection of both qualitative and quantitative data. Field staff conducted in-depth

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qualitative interviews among married Hindu and Muslim women ( $n = 66$ ) in the 3 study communities. In addition, 260 married women were administered a survey instrument that was comparable to the men’s baseline survey. The women’s project sample was generated from the men’s project sample. A random sub-sample of men ( $n = 311$ ) was asked for their verbal consent to have their wives interviewed for the women’s project. When these men agreed, their wives were recruited into the sample after the women’s project was explained to them and they gave their written consent. Of the 311 women who were contacted, 9.3% refused to be interviewed and an additional 7.1% had family members (principally husbands) who refused to allow them to be interviewed. Therefore, the women’s project survey instrument was administered to a final sample of 260 married women whose husbands had also participated in the study. A subset of 193 women consented to be involved in a gynecological exam and STI testing for Chlamydia, gonorrhea, HSV-2 and syphilis.

## The Study Communities

The 3 study communities, with an estimated total population of 700,000, are located in a fringe area of Mumbai. They are large settlements of people relocated from the central part of Mumbai in the late 1970s. Over a period of about 2 decades the slum population has grown rapidly, with a large number of illegal and unauthorized structures added by migrants coming from various parts of the country. The population in the baseline sample is mixed: Hindu (42%), Muslim (54%), and Christian (4%), with migrants coming from Uttar Pradesh (51.2%), rural Maharashtra (22.2%), and Tamil Nadu (9.1%) among other states. The majority (66%) of the population are migrants, with almost half of the migrants coming with their natal families, while the rest came as older male youth or adults on their own (28%) or with friends (21%). For those coming as older youth or adults, the typical pattern (68.8%) is to live with family (frequently a brother) or in a rented room with other migrants from the same location or from the same workplace (25.2%). After migrant men have established work and residence, they frequently return to their native village to marry or bring wives left in the village to Mumbai on a permanent basis. Close to 16% of married men are living without their wives for a mean of 8.6 months.

Most (90.7%) marriages in the study communities are arranged, with most wives and husbands coming together on their wedding day as virtual strangers. This emotional distance can be exacerbated by the fact that men who migrate to Mumbai from rural areas for jobs, leave wives in the husbands' parental homes until they finally settle in Mumbai, seeing them only during periodic

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visits to the rural village. Once women join their husbands, the opportunities for increased intimacy with their husbands are limited by the presence of husband's parents, children, and other family members in extremely limited residential space. Households consist primarily of one (81.3%) or two (17.5%) rooms with an average of 6.4 people per household. Nuclear households are most common (47.0%), followed by joint and extended households (37.1%), with 15.8% of households consisting of men only that may include same-age relatives, friends, and coworkers sharing a single residence.

Men in the study communities are daily wage workers (39.8%), petty traders and business owners (27.5%), salaried factory and private workers (13.2%), drivers (8.3%), government employees (5.3%), and construction workers (4.4%), with only 1.5% reporting being unemployed. The mean income for men is Rs. 3272 per month (approximately US\$72) with only 4% of wives working for cash income, either inside the home (40.6%) or outside the home (59.4%) for a mean income of Rs. 1353 (\$31) per month. Of the total households, 22% have another wage earner (other than wife), frequently a younger brother, who brings in an additional mean income.

Sexual behavior was explored with married men responding to the baseline survey instrument. Close to 40% (37.8%,  $N = 910$ ) of married men in the baseline survey reported that they had had sex before marriage. Age at first sex was relatively late in adolescence/young adulthood at 18.5 years. For those men reporting premarital sex, only 12.3% of men reported that their first sex was with a sex worker, with 87.7% reporting that their first sex partners were friends, neighbors, and relatives. For those men who had premarital sex, they reported a mean of 2.6 partners before marriage. The relatively high age at marriage corresponds to reports of men masturbating before marriage (62.7%) and experiencing nocturnal emission (93.5%). Only 1.4% of men reported sex with a male before marriage.

In terms of extramarital sex, 22.5% reported ever having sex with women other than their wives and 12.4% reported sex with women other than their wives in the past 12 months. Of those who had extramarital sex in the last year, 30.7% reported sex with a sex worker and 73.7% with women who were not sex workers. Five percent of married men reported having sex with men after marriage, both sex workers and non-sex workers.

On the baseline survey men were asked about marital sex. Since almost all of the households consist of a single room, frequently occupied by children and extended family members, marital sexuality presents its own unique problems. Those men whose wives lived with them reported having sex with their wives a mean of 10.9 times per month, with a mean number of sexual acts of 11.1 including penetrative sex, despite the environmental constraints.

Condom use in the baseline survey with sex workers at last sex was 81.9%; with non-sex workers, 43.6%; and with wives at last marital sex, 11.7%. Of the

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13 men who did not use a condom with a sex worker, none used a condom with their wives in last intercourse. Of 102 men who had sex with a woman who was not a sex worker, 92 did not use a condom with their wives.

## Formative Research Results

### Men's *Gupt Rog*

Analysis of the baseline results of the 2,407 married men between the ages of 21 and 40 showed that 53% reported at least one symptom of *gupt rog* in the last 3 months. Men's interviews, further confirmed by provider interviews, identified three primary symptom clusters through principal components analysis and consensus modeling (Weller and Romney 1988): men's *kamjori*, which can be defined as "sexual weakness" (distinguished subsequently from women's *kamjori*, which relates more to general weakness/tiredness); *dhat*, which indicates a problem with the quality and quantity of semen and the loss of semen; and *garmi*, which primarily relates to external and internal genital symptoms. Table 13.1 presents the symptoms reported by men in the baseline survey in these 3 clusters.

More than half the men sampled in the study communities reported that they had a *gupt rog* problem in the last 3 months. Further, the more likely men were involved in extramarital sex without a condom, the greater the number of *gupt rog* problems (Schensul et al. 2007). It is unclear whether men who have *gupt rog* problems compensate for those problems through extramarital sexual activity or whether the *gupt rog* problems are a result of risky sex. In any case, these problems serve as markers for those men involved in risky sex outside of marriage.

In India and elsewhere in the world, occupational migrants are seen as a population at greater risk for engaging in high-risk sexual behavior. The data from these study communities, however, show that it is the nonmigrant sector, including those individuals who have migrated as children with their natal families, who are involved to a significantly greater degree in premarital and extramarital sex. In addition to the nonmigrant status, it is occupational mobility as defined by being away from home overnight as a part of work, which shows a significant relationship to sexual risk behavior. Individuals who show greater occupational mobility are more likely to be involved in risky extramarital sex.

A significant number of men seek treatment for *gupt rog* problems, primarily from the many nonallopathic providers (225) who practice Indian systems of medicine and have small "cabinets" in the 3 study communities (Schensul et al. 2006b). For those men who have at least 1 symptom in any of the clusters,

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**Table 13.1. Men's *gupt rog* symptoms**

| CLUSTER AND SYMPTOMS      | FREQUENCY | PERCENTAGE (N = 2407) |
|---------------------------|-----------|-----------------------|
| <i>Kamjori</i>            | 630       | 26.0                  |
| • Early ejaculation       | 388       | 16.1                  |
| • Loss of sexual desire   | 185       | 7.7                   |
| • Loss of erection        | 47        | 2.0                   |
| • Penis shape and size    | 52        | 2.2                   |
| <i>Dhat</i>               | 348       | 14.0                  |
| • Quantity of semen       | 64        | 2.7                   |
| • Thinning of semen       | 104       | 4.3                   |
| • Color of semen          | 17        | 0.7                   |
| • Nocturnal emission      | 178       | 7.4                   |
| • Masturbation            | 37        | 1.5                   |
| • Infertility             | 36        | 1.5                   |
| <i>Garmi</i>              | 877       | 36.0                  |
| • White Discharge         | 78        | 3.2                   |
| • Hot urine               | 221       | 9.2                   |
| • Burning urine           | 276       | 11.5                  |
| • Itching on the genitals | 335       | 13.9                  |
| • Pain in the penis       | 39        | 1.6                   |
| • Pimples on the penis    | 55        | 2.3                   |
| • Sores on penis          | 28        | 1.2                   |
| • Pain in the abdomen     | 125       | 5.2                   |

the frequency of treatment is 58% for *garmi* with a mean number of treatments of 1.5; 23% for *kamjori* with a mean number of treatments of 1.7; and 18% for *dhat* with a mean number of treatments of 2.3. Men are the most frequent users of the nonallopathic providers both for general health problems and for *gupt rog* specifically. The results of the formative research demonstrate the significance of *gupt rog* in terms of frequency, saliency, and a stimulus for seeking treatment with nonallopathic providers.

### Gupt Rog and Sexual Risk

The baseline survey data show a statistically significant relationship between men's reports of *gupt rog* symptoms and extramarital sex (see Schensul et al. 2007). The qualitative interview data (Schensul et al. 2004) illustrate men's perceptions of the complex relationships of their sexual behavior to *gupt rog* symptoms. Many men associate their sexual performance problems with their wives to semen loss through masturbation and early ejaculation. This view is frequently supported by the nonallopathic practitioners. Other causal behaviors include watching pornographic films and ideating about sex resulting in

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nocturnal emission, having sex with an older woman (e.g., a neighbor whose husband is away or a sister-in-law), sex with a sex worker and being involved in an occupation where heat is generated from machinery (e.g., driving or factory work), and wives' lack of satisfaction with their husband's sexual performance. Thus a variety of etiological factors that include risky sexual behavior can contribute to *gupt rog*.

At the same time, *gupt rog* symptoms, particularly those involving men's sexual performance, are related to men's conceptions of their masculinity and status as a husband and household leader. Early ejaculation and lack of interest in marital sex leads some men to seek

more willing and compliant women with whom to have extramarital sex or on-going affairs. Men see these affairs as validation of both their sexual potency and their masculinity. In addition, *gupt rog* symptoms are significantly related to intimate partner violence with spouse as a further indication of the need, in their view, to find alternative approaches to male domination.

## Women's Culturally Based Symptoms

Results from the female baseline survey (designed to be comparable to the male baseline survey) provided data from 260 women about whether they had experienced any of 32 sexual and reproductive health and related symptoms in the previous 3 months (these symptoms had been identified through in-depth interviewing). Utilizing principal components analysis (Tabachnick and Fidell 1996), 5 clusters were identified: (1) *kamjori*; (2) *safed pani*; (3) *tenshun*; (4) sexual dysfunction; and (5) vaginal symptoms. *Kamjori* (80.8%) was the most frequently reported cluster, with *safed pani* (31.2%) being the second, and *tenshun* (28.1%) being the third, followed by sexual dysfunction (9.6%) and vaginal symptoms (6.9%; Table 13.2). The average number of reported symptoms was 4.1 per woman. There are a variety of terms for these overall symptoms within the community; we have chosen to call them *stree rog* (women's illnesses in Hindi, see Table 13.2).

Once again, we see that the culturally based symptoms of *stree rog* take on greater importance when examining their relationships to factors in a woman's life and her risk of HIV/STI. Path analysis (Wright 1921) of these survey data shows that a greater number of women's *stree rog* symptoms are significantly associated with more negative women's life situations, as defined by less empowerment, increased domestic violence, poorer self-assessment as a wife and sex partner, and lower self-esteem. Further, there is a significant association between men's extramarital risky sex and women's *stree rog* symptoms indicating that they can be a marker for greater risk of transmission of HIV/STI for women (Schensul et al. 2007).

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**Table 13.2. Women's reported gynaecological and related symptoms**

| SYMPTOMS AND CLUSTERS                                | FREQUENCY | PERCENTAGE (N = 260) |
|--|-----------|----------------------|
| <i>Cluster 1: Kamjori</i>                            | 210       | 80.8                 |
| Lower backache                                       | 126       | 48.5                 |
| Headache   | 116       | 44.6                 |
| Pain in body   | 94        | 36.2                 |
| Giddiness (Dizziness)                                | 67        | 25.8                 |
| Pain/cramps during menses                            | 57        | 21.9                 |
| Pain in lower abdomen                                | 53        | 20.4                 |
| Loss of appetite                                     | 42        | 16.2                 |
| Palpitations   | 40        | 15.4                 |
| Chest pain   | 38        | 14.6                 |
| Irregular menses                                     | 34        | 13.1                 |
| <i>Cluster 2: Safed Pani</i>                         | 81        | 31.2                 |
| <i>Cluster 3: Tenshun</i>                            | 73        | 28.1                 |
| Anxiety  | 73        | 28.1                 |
| Depression   | 56        | 21.5                 |
| <i>Cluster 4: Sexual Dysfunction</i>                 | 25        | 9.6                  |
| Loss of sexual desire                                | 13        | 5.0                  |
| Pain in vagina                                       | 9         | 3.5                  |
| Sexual dissatisfaction                               | 9         | 3.5                  |
| <i>Cluster 5: Vaginal and urinary tract symptoms</i> | 18        | 6.9                  |
| Burning urination                                    | 18        | 6.9                  |
| Itching in and around vagina                         | 15        | 5.8                  |
| Pain while urinating                                 | 13        | 5.0                  |
| Obstructed urine flow                                | 9         | 3.5                  |

In terms of available health facilities, women can choose to travel to a public hospital involving high costs and time commitment, or to services in the community, which include the public urban health centers and private allopathic and nonallopathic providers. Treatment patterns for women in the survey sample showed considerable variation based on symptoms. The predominant pattern is for women with *safed pani* and those with *kamjori* to seek treatment most often (34% and 33% respectively), compared to a lesser proportion of women seeking treatment for vaginal and urinary tract problems (20%), with only a limited number of women seeking treatment for psychological distress (5%) and none for sexual dysfunction (0%). Those women who are not able to access treatment must live with the problem. The high rates of treatment for the most frequent symptoms indicate that it is important to engage women for risk reduction intervention where they seek health care, since for many women in the study communities mobility on a regular basis is restricted to proximity to home.

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## Culturally Based Symptoms as a Marker of Sexual Risk

The formative research showed a significant correlation between *gupt rog* symptoms and men's sexually risky behavior (Schensul et al. 2007). The formative research also showed that there was a significant relationship between greater *stree rog* symptoms, women's negative life situation, and HIV/STI risk. Therefore, men's and women's culturally based symptoms can be markers for sexual risk. In addition, these symptoms are a motivator for men and women to seek care, primarily from the practitioners of Indian systems of medicine in their communities. These and other results developed in the formative stage of the research led to a multilevel intervention involving community education, provider training, and altered provider treatment procedures for current patients.

## Focal Intervention Concepts

The preliminary research of Verma et al. and the RISHTA formative research led to a series of core foci on which the intervention plan was developed. These concepts centered on the high degree of utilization on the part of community residents of nonallopathic private practitioners drawn from a holistic tradition of medicine, the development of a model of individual treatment and community education drawn from that holistic tradition, and from an understanding of community social and political organization.

## Indian Systems of Medicine

The syndromes of *gupt rog* and *stree rog* represented the starting positions for the development of culturally based interventions. The next step was to identify approaches to these syndromes that would make cultural sense and thus be in accord with the local understanding of disease prevention efforts. We found that the holistic understanding in traditional Indian systems of medicine (Schensul et al. 2006b) provided just such an approach. There are several medical traditions in India including those derived from within the Indian civilization(s) and those that find their origins in other cultures. The most popular of the traditional medical traditions are *Ayurveda* and *Siddha*, although there are many other practices including yoga, magico-religious practices and supernatural healing, bone setting, and midwifery. Several "imported" medical traditions are *Unani*, homeopathy, naturopathy, and allopathy. *Ayurvedic*, *Unani*, homeopathic, and allopathic providers are the dominant treatment resources available to residents in the Mumbai study communities.

*Ayurveda* (the "science of life" in Sanskrit) stems from ancient Indian culture through the *veda* tradition. According to *Ayurveda*, the human body is a microcosmic replica of the universe, containing elements, humors, and

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substances, one of which called *sukra*, enters into the formation and cycle of sperm and ovum. When *sukra* is disturbed, it results in reproductive and sexual health problems; in the same way, any disturbance in the equilibrium of the elements, humors, and substances results in disease. *Ayurvedic* medicine is considered holistic in its focus on a balanced state of the body, mind, and emotions, as well as environmental, social, moral, and spiritual welfare (Basham 1976; Dash 1999; Lad 1990; Ministry of Health and Family Welfare 2004; Obeyesekere 1976). The main principle of treatment is thus to maintain or restore equilibrium. *Ayurvedic* medicine promotes a preventive and positive health approach, and when treatment is needed, it is aimed at avoiding causative factors such as risky behaviors and unbalanced diet.

*Unani* (meaning "Greek" in Arabic) is derived mainly from the Greco-Hellenic and Islamic civilizations. According to *Unani* medicine, all beings are made up of basic elements, temperaments, qualities, humors, and forces. In this healing system, health is a state of the body in which there is equilibrium of these components, and when this equilibrium is disturbed, disease occurs. The main goal of *Unani* medicine is to achieve an optimal balance (*eukrasia*) for each person. *Unani* treatment is based on the *contraria contrariis* principle, "to treat a disease by its opposite" (e.g., a "hot" disease is cured with a "cold" medicine). *Unani* medicine is also considered holistic in its consideration of physical and mental activity, environment, and diet, which contribute to the preservation of health (Dols 1984; Leslie 1976; Ministry of Health and Family Welfare 2004).

Homeopathy (derived from the Greek *homois*, "similar," and *pathos*, disease/suffering) was developed in Germany and first appeared in the midst of the medical experimentation in India in the nineteenth century. According to homeopathy, "miasm" (from the Greek, to pollute), is the main cause of all diseases. The human body contains an innate vital force that is weakened during illness. Treatment is based on *similia similibus* principle (Latin, "like are cured by like"); a remedy, which by its "nature" is most similar to the symptom, is prescribed and administered to the patient in a minimum dose. This remedy stimulates the "vital force" or existing defense mechanism of the body, which fails when disease occurs. Homeopathy is also considered holistic in its concern with environmental, social, and emotional determinants on which action is taken for better treatment (Gala 2000; Jacobs and Moscovitz 1996; Leslie 1976; Ministry of Health and Family Welfare 2004).

While a greater number of Muslim patients seek care with *Unani* providers, there is considerable use by members of the various ethno-religious groups of the providers from each of the medical disciplines. Selection of a private provider is primarily based on location and relationship rather than on discipline. In fact, analysis of reported use of providers on the baseline survey instrument indicated that close

to three quarters of men and women misidentified the discipline of their private provider. In addition, there is considerable

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evidence (Schensul et al. 2006b) that the treatment methodologies of over 80% of the nonallopathic providers are primarily focused on allopathic medicines (particularly antibiotics) resulting in a symptom–prescription orientation that undermines the holistic traditions of these disciplines.

There are a small number (less than 10%) of private providers in the 3 study communities who are allopaths with MBBS or MD degrees. The majority of allopathic services is provided by 2 urban health centers and 3 smaller health posts run by the Mumbai Municipal Corporation with faculty, residents, and students from a Mumbai-based Medical College. These governmental primary care services are primarily geared to the needs of new and expectant mothers and young children. This orientation leaves little room for women's *stree rog* symptoms and as a result, women prefer presenting these problems to the nonallopathic private practitioners. The allopathic health service system has had little respect for *gupt rog* symptoms and their perceived etiology. As a result, men are the highest utilizers of private, nonallopathic services and very low users of public allopathic services.

## The Narrative Intervention Model

At the core of the projects is the Narrative Intervention Model (NIM), a theory-driven, ecological approach that addresses men's and women's sexual health symptoms and their link to cultural, relational, and psychological factors that increase the risk for HIV/STI. The NIM builds on the saliency of the holistic approach embodied in several Indian systems of medicine. We developed the NIM as a model for culture-specific intervention for HIV/STI risk reduction and prevention, which integrates principles and strategies from narrative therapy (Eron and Lund 1996), cognitive therapy (Beck 1976), multicultural or culturally sensitive approaches to counseling and therapy (Ivey and Ivey 2003), and cognitive-behavioral approaches to sexual risk prevention and risk reduction (Azjen and Fishbein 1980; Fisher and Fisher 1993). The theoretical underpinnings of NIM reflect the social and cultural origins of people's systems of belief and behavior (Nastasi et al. 2000), bioecology (Bronfenbrenner 1999), and anthropology (Good 1994; Kleinman 1986; Pelto and Pelto 1997; Wallace 1961).

The NIM posits that behavior, specifically behavior related to sexual health, is influenced by the interaction of biological, psychological, and cultural factors, and that through repeated experiences, individuals and communities develop narratives or scripts that guide their behavior. These assumptions have implications for behavior change efforts, in this case, the development of health-promoting and risk-reducing behaviors related to HIV/STI prevention. First, understanding a person's cognition and behavior requires knowledge of the individual's social–cultural history, which can be represented as

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their personal story, their individual as well as community narrative. Through the use of focused interpersonal interactions, trained practitioners can help individuals to (a) identify the story related to the presenting problem, (b) critically examine the psychological and social–cultural factors that influence or maintain the problem, and (c) create a revised narrative that leads to solving the problem. This process leads to the development of a revised personal narrative that supports health-promoting and risk-reducing behaviors related to HIV/STI prevention and treatment. The narrative approach requires that interventionists make use of a process of conceptual revision in which ideas and beliefs linked to risky sexual behavior are challenged through the introduction of alternative culturally rooted views, and risk reduction narratives are constructed through dialogue. These principles are applied in interventions directed both at doctor–patient relationships and at community education.

## Community Dynamics

We found that the 3 study communities had a wide range of communal, collective advocacy organizations that represent potential partners in the intervention process. These include governmental functionaries (the lowest level of government officials in Mumbai) and their community offices; political parties, including local and national parties; nongovernmental organizations (NGOs) providing health, literacy, and other services; *mandals* (community-based organizations) that include those for youth, women (*mahila*), and men (*purush*); and Hindu temples, Islamic mosques, and associated religious organizations and schools, both public and private. The 3 communities included 2 government-run allopathic urban health centers and smaller health worker–staffed health posts conducted by the Mumbai Municipal Corporation (local Mumbai government) and police stations in each of the communities. Each of the communities is divided into sections and lanes providing reference points for community coverage. This high degree of organization provided many opportunities for RISHTA to gain permission for the project with community gatekeepers that included political, organizational, government, and religious leaders; describe the goals and nature of the projects to community groups; enlist aid for conducting formative research (including providing sites for the collection of blood and urine for STI testing); and generate the active involvement of community members in the community

education component of the intervention. In addition, RISHTA worked closely with organizers of festivals (e.g., *Ganpati, Diwali, Eid*) and other community-wide celebrations to include RISHTA presentations and materials. The early involvement of these community collaborators provided both a venue for dissemination of research, evaluation of results, and recruitment of community groups and individuals who could provide sustainability of the RISHTA interventions.

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## Intervention for Men

A year and a half (2001–2002) of formative research led to the development of a multilevel intervention at the community, provider, and patient levels. Implementation at each level was based on the holistic approach, drawn from Indian systems of medicine and cognitive learning theory, and embodied in the NIM.

## Community Level

Community-level intervention has involved a series of community-familiar mechanisms to deliver messages concerning the factors that contribute to men's sexual risk. These mechanisms have included street dramas and follow-up meetings, community meetings, opinion leader meetings, individual consultation and referral, informal group discussions, poster competitions and exhibitions, involvement in festivals, and the development of written materials on topics related to sexual risk.

1. In collaboration with a local NGO with experience in developing and performing street dramas, RISHTA presented over 200 performances with 3 scripts in each of the lanes (roadways for travel in the community that serve to designate neighborhoods) in the 3 communities. Street dramas have become a significant part of rural and urban community life in India. The scripts depicted the linkages of *gupt rog* to alcohol use, hypermasculinity, poor marital relationships, intimate partner violence, and behavior risky for *gupt rog*. The street dramas were presented in each section of the 3 communities on a rotating basis; when all sections were covered, additional scripts were generated, and continued to rotate through the communities.
2. Follow-up meetings were held on the day after a street drama to collect reactions from men who attended the street plays and to identify their questions related to sexual health. The answers to questions and further discussion were provided in a second community meeting that took place within the following week.
3. Community meetings were held on a regular basis with informal community-based organizations (*purush mandals*) and more formal community-based NGOs to provide information on sexual risk reduction and to recruit members of these organizations into participation in community-level education.
4. Opinion leader meetings were held with a panel of official and informal leaders in each of the three study communities to gauge community reaction to RISHTA programs and to receive feedback on new program initiatives.

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5. Individual consultation and referral were provided by RISHTA field staff to community men with sexual health questions or problems. It is estimated that over 3000 men have contacted the RISHTA staff for these problems and have received informal advice concerning the nature of the problem and referral.
6. Informal group discussions have been utilized by RISHTA field staff to provide education, referral, and marketing of project activities to clusters of men as they form in tea shops, bars, and other community gathering locations.
7. Special community projects have included a poster competition, conducted with over 60 local secondary school students, emphasizing HIV/STI prevention measures and factors involved in sexual risk and exhibitions of the posters in community gatherings, which have attracted over 7,500 people. The poster competition generated pictorial materials for communication on sexuality and sexual health. The posters are displayed once a month in the 3 communities.
8. RISHTA has also participated in all festival events in the 3 communities involving education and risk reduction, referral, and marketing of the interventions.
9. Our qualitative data indicated that men in the study communities have many questions about masturbation, nocturnal emission, and STDs and



**Figure 13.1. A street drama performance, depicting a wife and husband having a fight as a result of his coming home after drinking with his friends.**

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their treatment. As a result, a 40-page book was developed and printed by the RISHTA team that addressed sexual health problems and their solutions. This book provides insights in a lay language that best meets the informational needs of the men in the study communities. Copies were distributed to men who were contacted during meetings, poster exhibition sessions, or street plays. Men have found the book useful in clarifying many apprehensions with regard to sexual health. Finally, there have been a series of brochures developed on the project domains of lifestyles, masculinity, STDs and their treatment; these have been distributed to men in the communities.

## Provider Intervention

The formative research identified the treatment seeking behavior of men with *gupt rog* problems and found that the greatest majority sought care from *Ayurvedic*, *Unani*, and homeopathic providers in their communities. There were several reasons for focusing on the local practitioners of Indian systems of medicine. *Gupt rog* symptoms were a centerpiece of their practice and the various healing disciplines provided herbal and other remedies for these problems. In contrast, the public allopathic system (present in urban health centers and health posts) had little respect for *gupt rog* problems; their focus was maternal and child health.

As a result, it was decided that the provider level intervention would consist of two alternatives: in one community all the practitioners of Indian systems of medicine would be trained in the NIM approach to *gupt rog* problems and the reduction of sexual risk, while in a second community, a "male health clinic" (MHC) would be organized at the urban health center and allopathic staff trained in the NIM approach to *gupt rog* and management of STDs (WHO 1997).

## The Nonallopathic Providers

The RISHTA program convened a meeting of all of the *Ayurvedic*, *Unani*, and homeopathic providers in the community to discuss the training program and its objectives. There was almost unanimous support for the training and an appreciation for the opportunity to learn more about HIV and other STDs.

While the practitioners were well-versed in *gupt rog* problems, the nature of their "practiced medicine" (Schensul et al. 2006b) had moved away from the holistic approach that characterized their training. The NIM approach was viewed as a return to their holistic tenets that had been left behind in the rapid integration of allopathic medications in their practice. In October 2003,

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a 4-day training program was organized for the practitioners of the Indian systems of medicine. The curriculum was based on the results of the formative research and covered an introduction to the RISHTA project; a review of men's sexual health problems (*gupt rog*) with data from the baseline survey; an examination of the factors that contribute to, co-occur, and result from *gupt rog*; treatment of *gupt rog* through the use of NIM, to include attention to biological, psychological, and sociocultural factors; etiology, treatment seeking, treatment, and prevention of *gupt rog*; education and counseling for prevention of sexual risks; appropriate testing and treatment of STIs through syndromic management; referrals for medical, psychological, and social services as needed; and creation of a support system for providers in implementing the NIM, consisting of RISHTA intervention staff.

Results from evaluations, conducted before and after the training, indicate that the training was positively received and that the holistic perspective drew providers back to their disciplinary roots. RISHTA conducted refresher training, which was held in each quarter from 2004 to 2006, on syndromic management of STDs, and the processes of counseling and education. In the interim between refresher sessions, RISHTA field staff stayed in regular contact with the trained providers, assisting in referrals and responding to questions concerning the NIM process.

## Male Health Clinic

In December 2003, the "male health clinic" (MHC) opened in another of the study communities. The MHC is based in the urban health center run by the Mumbai Municipal Corporation and staffed by a local medical college in Mumbai. The head of the Department of Social and Preventive Medicine and her faculty were very positive about a new approach to men and sexual risk. With a relatively small amount of financial support from the RISHTA project (<\$5,000), a special clinic, the Male Health Clinic (MHC), was organized for men in the hours after work during the weekdays and on the weekend. The MHC is open 3 days per week (Monday, Friday, and Sunday) from 5 PM to 8 PM, times that were convenient for working men. The clinic was announced to the community through street dramas and meetings held in the community. The MHC was available to men of any age and with any presenting problem. The data from the patient records show that since the opening of the MHC, there has been a steady flow of male patients into what has been an almost exclusive female health clinic. From December 2003 to January 2006, the clinic saw close to 4,000 patient visits, an average of 14 patients for each clinic session, of whom 56.3% presented with sexual health problems and 12.9% were diagnosed with an STI. Of those with sexual health problems, 57.9% were in the 21 to 40 age-group and 74.2% (156) were married. The results indicated

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that an MHC in a government urban health clinic, in a community where men tend to avoid the governmental facilities, is capable of attracting men, of whom a significant percentage will present with a sexual health problem.

Physician faculty and interns were trained in NIM jointly with providers of the Indian systems of medicine. While this joint training at first seemed problematic, considering the antipathy between allopaths and traditional providers, it turned out to be positive. The NIM was a model that was well accepted by the allopaths, who felt that their approach to patients was becoming too narrow, and by the nonallopaths, who also found the approach salient. Allopaths accepted the greater expertise of the nonallopaths in relation to *gupt rog*, while the nonallopaths accepted the greater expertise of the allopaths in the realm of STDs. Allopaths participated in all 4 days of the initial training and all the refresher sessions alongside the nonallopathic providers.

## Evaluation Design for Men

The intervention used a quasi-experimental design (Campbell and Stanley 1966) in which all 3 study communities received community-level education, 2 of the communities were "experimental" (the community with the MHC and the community with trained traditional providers), and the third community was the control, not receiving either of the additional services. To assess multilevel differences between the 3 communities and between the patients of the different providers using and not using NIM, the following data collection methods were used:

- The baseline survey of a systematic random sample of 2,407 married men from 21 to 40, drawn evenly from the 3 communities has been compared with a separate random sample of 2,710 randomly selected men administered the follow-up survey to assess community-level trends and impact of the RISHTA project.
- A panel (cohort) sample of 403 men who responded to the baseline survey have also been administered a follow-up survey to assess individual change at the community level.
- A patient sample of 537 men from 21 to 40 years of age presenting to providers with *gupt rog* problems was drawn randomly from the practices of the allopathic and nonallopathic providers trained by RISHTA and the untrained private allopaths and nonallopaths in the control community. Each of the sampled men received a pre-treatment interview, a post-treatment interview (within 48 hours) and a 6-month follow-up interview.

- A random sub-sample of men responding to the baseline (641) and the follow-up survey (902) participated in blood draws and collection of urine

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specimens to test for the presence of acute and lifetime HSV-2, acute and lifetime exposure to syphilis, and current gonorrhea and Chlamydia infection (HIV testing was not conducted; it was estimated that there would be a six times greater rate of STDs than HIV and as a result, STDs would be a better indicator of sexual risk behavior).

## Intervention for Women

The Women's Supplement provided an opportunity to collect formative research on married women and their relative sexual risk of contracting HIV/STI from their husbands. It also provided the opportunity to develop a pilot women's health clinic to provide women with gynecological examinations, as well as drawing blood and collecting urine for STI testing. The pilot women's health clinic was conducted at the same urban health center where the MHC was established. The procedure for examination of married women involved female field staff conducting the survey interview and then establishing a day for the women to come to the clinic in the early afternoon (a period where women had some free time). Of the 260 women who were administered the survey, 193 participated in the gynecological examination and STI testing. Most of the women who did not participate did not do so because of the decisions made by husbands and mothers-in-law. Once at the clinic, we found that almost all women had never had an internal pelvic examination and had only come to the urban health center in the past for prenatal care and well-child care. The procedure at the clinic involved a medical history with a female intern, an internal examination with a gynecologist (not regularly available at the urban health center), examination of cervical specimens in the laboratory organized for the pilot clinic, and urine collection and blood draw by a trained phlebotomist. The positive reception to the women's health clinic both by the married women in the sample and by the faculty and staff of the clinic raised the possibility that a specialty clinic devoted to *stree rog* would make an important contribution to women's needs and be a "point of service" in which married women's sexual risk could be addressed.

Two additional formative research methods were utilized in assessing women's needs with regard to the potential for HIV/STI transmission in marriage; both of these methods recognized the need to involve husbands in women's health needs and risk reduction. The first method involved interviews with 51 couples. Each couple was provided a series of scenarios concerning the problems of "another couple" in the community (these scenarios were drawn from composites of problems related to sexuality, domestic violence, husband's alcohol use as identified in the women's and men's in-depth interviews). Field

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researchers took detailed notes on how the couple would resolve the problem as well as the interactive dynamics of the way couples dealt with each other in problem resolution. It became clear in these interviews that working independently with women would not fully address the issues of male dominance and risk taking and would present problems for women who sought risk reduction through unilateral action (El-Bassel et al. 2001; Becker and Robinson 1998; Padian, O'Brien, Chang, Glass, and Francis 1993).

A second approach was pilot testing of "couples' intervention." To assess feasibility and acceptability of a couples' intervention, we piloted a 7-session intervention with 21 married couples recruited from 1 of the study communities. Drawing on the results of men's, women's, and couples' interviews, we adapted the NIM to the objectives and format of the couples' intervention. The intervention targeted skills related to communication and negotiation, coping with tensions and conflicts, and sexual risk reduction within the marital relationship. Sessions of 60 to 90 minutes duration were conducted in small group format and held weekly in a centralized and easily accessible community location. The first 3 sessions were conducted with wives and husbands separately and the remaining 4 sessions were conducted jointly with husbands and wives. Sessions were facilitated by field staff (2 women, 2 men) who participated in development of the intervention program, with support from an experienced Mumbai-based social worker. Sessions with women were cofacilitated by female staff, male sessions by male staff, and joint (couples) sessions by female-male dyads. The initial 5 sessions addressed the following topics: (1) roles and responsibilities in marriage; (2) tensions in marriage; (3) sex in marriage; (4) negotiating roles and responsibilities in marriage (joint couple session); and (5) negotiating tensions in marriage (joint couple session). Participants requested and received 2 additional sessions focused on sexuality and sexual risk.

Evaluation addressed the capacity of field staff to implement and facilitate single- and mixed-gender group sessions, appropriateness of activities for married couples, response of couples to session content and activities (participation, acceptability), and perceived utility and relevance of the topics for their marital lives. Evaluation strategies included participant observation (by same-gender field staff member), structured group feedback activity at the conclusion of each session, and individual feedback from a sample of participants following each session. Evaluation data indicated a high level of feasibility. Sixteen of the 21 couples participated consistently across the 7 sessions. All the female and male participants reported a high level of interest and enthusiasm toward the program. They participated actively in session

activities and were supportive and cooperative in group activities. They indicated a high level of agreement regarding the appropriateness of session topics and activities and relevance to their daily lives.

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## Outcomes

Each of the 3 study communities was provided community education over a period of 3 years. The quasi-experimental design at the community level called for a comparison of the baseline and follow-up surveys for the 2 experimental communities vs. the control community and for the allopathic (MHC) experimental community vs. the nonallopathic experimental community. At the patient level, the design called for a comparison of the patients seen by the trained providers vs. those seen by the untrained providers and a comparison of the patients seen by the trained allopathic providers at the MHC vs. those seen by the trained nonallopathic providers. Among 16 indicators, the primary outcome indicators included extramarital sex, biologically determined STD status, intimate partner violence, alcohol use, STI knowledge, satisfaction with marital sexual life, and a masculinity scale ranging from "hypermasculine" to gender equitable.

Preliminary outcome results comparing the baseline at 2003 to the follow-up at 2006 show that all 3 communities had a dramatic decline in extramarital sex (12.5% to 2.9%,  $P < .001$ ) and a consequent reduction in gonorrhea and Chlamydia (4.2% to 1.7%,  $P = .013$ ). There was no significant difference between the 2 experimental communities and the control community on these outcomes. Given the design, we cannot conclude that community education in all 3 communities produced these dramatic results; however, informal feedback from surveys in other Indian communities has noted a decline in STDs, but not as dramatic as those in our study communities.

Other results support the basic hypotheses of this study. First, intimate partner violence showed a greater decline in the experimental communities vs. the control community, with reduction in the MHC community greater than that in the nonallopathic community. Second, there was significantly greater gender equity among the experimental communities than in the control community, with the MHC community showing greater equity than the nonallopathic community. Finally, marital sexual satisfaction showed a greater increase in the experimental communities than in the control community and there was greater satisfaction in the nonallopathic community than in the MHC community.

At the individual level, those who reported direct exposure to community education showed a significantly lower rate of extramarital sex than those who had no exposure. Those individuals who utilized the trained providers showed a significantly lower rate of extramarital sex than those who saw either no provider or an untrained provider. Finally, those individuals who were exposed to both community education and trained providers showed the greatest decrease in extramarital sex.

From the individual patient level, the data indicate (1) a significant reduction in alcohol use by the patients of trained vs. untrained providers, with

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trained allopaths showing the greatest reduction; (2) a significant increase in STD knowledge among the patients seen by the trained vs. untrained providers, with the nonallopathic providers showing the greatest increase; and (3) a significant reduction in extramarital sex among the patients seen by the trained vs. the untrained providers, with Chlamydia and gonorrhea showing the greatest reductions in the nonallopathic community.

The results indicate that the experimental communities where provider training has taken place have shown better outcomes at the community level than the control community where there has been no provider training. The comparison of the 2 experimental communities has shown that each approach has specific strengths and that training of both types of providers will achieve complimentary outcomes. In terms of patients, those using trained providers have shown better outcomes than those using untrained providers. Similar to the community-level results, patients of both trained allopaths and trained nonallopaths show complementary outcomes that suggest the need to work with both types of providers. Finally, we saw the positive effects of both exposure to community education and to trained providers and the synergy that can result in greater sexual risk reduction.

## Sustainability and Dissemination

A significant portion of the final year of the project (2006–2007) was devoted to finding mechanisms for sustaining educational activities focused on sexual risk reduction within the study communities and replicating the RISHTA approach in other communities in India. In the beginning of the final year we began a process that we have labeled "ethnographic dissemination," which utilized our knowledge of the communities to disseminate research and evaluation results to opinion leaders, community-based organizations, and residents. In total, 21 dissemination sessions were conducted in the 3 study communities, focusing on presentation of baseline vs. follow-up results and evaluation of the community and provider level interventions. These presentations stimulated the development of 5 "community action

groups” that committed themselves to continuity of community education with special emphasis on street drama and community meetings with the support of community-based institutions and NGOs.

In terms of “replicability,” the project has had the good fortune of being in the right place at the right time when the National AIDS Control Organization (NACO) of the Ministry of Health and Family Welfare announced an initiative to involve nonallopathic providers in the prevention of HIV/AIDS. The RISHTA model, with special emphasis on the training of nonallopathic providers in NIM and in diagnosis and referral of STIs has become center stage

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in the NACO effort. RISHTA principal investigators, including Ravi Verma and Niranjana Saggurti, are now providing leadership for a technical assistance group involved in the implementation of training, counseling, and referral for nonallopathic providers. In August 2007, RISHTA held a national dissemination in New Delhi, where project results were presented by all of the collaborators to an audience of key policy makers and the RISHTA manual, *Health Care Practitioners’ Guide to Prevention of HIV/STIs: Narrative Prevention Counseling for AYUSH, Allopathic and Other Providers* (Population Council 2007) was officially released. The national dissemination and the manual were the stimulus for training programs to be conducted at the state level in various locations in India.

The Women’s supplement demonstrated the centrality of *stree rog* symptoms as a marker for sexual risk and a way of reaching married women to prevent HIV/STI transmission within marriage. It also identified the importance of male involvement in risk reduction for married women and in the need to upgrade clinical services related to women’s health. These developments provided the empirical base for a new NIH grant entitled, “Prevention of HIV/STI among married women in urban India” (RO1-MH75678). The components of the new grant include a focus on *stree rog* among married women, the development of an enhanced clinic in the urban health center for women with *stree rog* problems, and involvement of women and their husbands in couples’ intervention. This project was funded in September 2007 for a 5-year period, which will provide continuous funding for HIV/STI risk reduction for men and women in the same 3 communities for a period of 11 years.

## Conclusion

While the U.S.-based anthropologist has the role of principal investigator in this work, the projects described in this chapter are a transdisciplinary collaboration that includes public health practitioners, epidemiologists, demographers, psychologists, physicians, and microbiologists based in India, the United States, Canada, and the United Kingdom. The term “transdisciplinary” (see Schensul et al. 2006a) is used because the collaboration is not simply a set of specific tasks for each discipline but a shared and unified conceptual model involving the role of culture and local community dynamics, linked to extant theory, in the conduct of the research and the design of the intervention.

Anthropological leadership of public health projects is not a requirement for cultural and community relevant models. A more significant requirement is the need to avoid the domination by any one discipline and to pursue the creation of a more egalitarian project environment in which a variety of disciplinary perspectives can be considered in the development of a unified model. This

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notion is embedded in the “NIH Roadmap” (NIH 2007), a call to move beyond artificial discipline boundaries to further science and empirical research.

At the same time, it is necessary for anthropologists and members of public health disciplines alike to understand what anthropology can bring to the scientific table and to the design of public health interventions. In the projects in this chapter, these contributions are as follows:

1. A cultural perspective: Anthropologists see culture as a coherent body of behavioral guidelines, with consistency and saliency across generations, but also a dynamic process responding to environmental change and producing significant intracultural variation. Anthropologists have a cultural focus, which allows them to identify salient cultural behavior and beliefs on which to base endogenously derived interventions. In the case of the men’s component of the RISHTA project, these cultural elements were drawn from the “great traditions” of *Ayurvedic* and *Unani* medicine and belief systems about semen loss, *safed pani*, *kamjori*, and *gupt rog* that are widespread throughout South Asia. The development of an understanding of this medical culture and its salience for men and women made it a fundamental component of the intervention. HIV and other STDs are an increasingly important concern for Indian men and women, but *gupt rog* and *stree rog* problems were far more salient. At the same time *gupt rog* and *stree rog* provided a “doorway” to enter the realm of sexual risk and begin a dialogue with the study communities, the providers and the patients. The link with a cultural element(s) also means that Western theories (cognitive learning, social ecology) can be brought into an integrative model without imposing such theories on non-Western cultures.

2. A holistic perspective: Anthropologists use the concept of holism to signify their interest in a broad view of the problem under study and a view of that problem as a product of a number of interrelationships with different parts of the culture and community. This process of contextual understanding of public health problems and outcomes avoids reductionist thinking and seeks to identify both multilevel interventions and multivariate outcomes. The RISHTA project has viewed sexual risk in the context of community dynamics, the structure and nature of health care resources, the organization of the family, and the behavior of individual men and women. The interventions also take a holistic perspective in the process of providing community education, provider training, and impact on the patient-provider interaction. Finally, the holistic perspective calls for multiple outcomes that go beyond extramarital sex, STD status, and condom use to include behaviors such as alcohol use, risky activities with friends, access to pornographic materials and the nature of marital sex

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and attitudes that include gender equity, assessment as a spouse and sex partner, self-esteem, and other variables that measure significant parts of individual lives in a community context.

3. A local perspective: Anthropologists are concerned about the perspectives and worldview of the communities and individuals with whom they are involved. Much of the data that anthropologists collect involves face-to-face discussions and interviews with key informants (cultural and community experts) and residents in an effort to understand the "inside looking out" perspective on key aspects of the community and individual lives. In the RISHTA project, understanding of the subset of men who have problems in sexual performance, their rationale for seeking sex workers and other "compliant women" who will not challenge their performance, the threats of their performance problems to their masculine role and the function of intimate partner violence as a means of reasserting their male domination over their wives is derived from these kinds of interviews.
4. An emphasis on the micro-level: Anthropologists have traditionally focused their attention on geographic communities of a size that allows them to develop rapport with both leaders and residents, participate in and observe daily life, and generate support and collaboration among residents for research and intervention efforts. This focus means that anthropologists bring a perspective derived from the ecological context rather than treating research subjects as independent individuals. Further, the relationship develops expectations on the part of community residents that become a required part of the design of projects. RISHTA is now well known in the 3 communities, recognized for its role in research, intervention, and the sustainability of interventions. Anthropologists can play a significant role in research-resident collaboration and institutionalizing projects in communities rather than the more typical "drive-by" intervention.
5. The qualitative contribution: "Mixed" qualitative and quantitative data collection procedures have now moved into the mainstream of public health research. Despite this shift, the participant observation and in-depth interviewing that anthropologists have used in their qualitative methods have frequently been short-circuited by other disciplines as a means of simply adapting Western-derived instruments or using rapid methods such as focus groups to locally modify externally derived instruments and interventions. The methods used by RISHTA have involved a heavy investment of time and effort in securing observational and interview data that provide an independent understanding of the community and its residents and a complement to statistical methods by providing explanatory evidence for quantitative results.

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6. Culturally based interventions: The anthropological approach described in this chapter provides an argument for the continued development of culturally based interventions that are derived from a local setting and have an impact on that setting. While public health searches for global "magic bullets" in the realm of HIV and other prevention efforts, there is room and necessity for local interventions that use cultural elements that are salient to residents in addressing significant problems. At the same time, anthropologists need to become more involved and experienced in translating their work into intervention design. This orientation involves several steps: the application of both traditional and nontraditional anthropological methods to generate empirically validated results; the need to identify facilitating resources and collaborative organizations in the local community; the ability to disseminate research results to a variety of disciplinary representatives and community residents; participation in the translation of research results into intervention design that is locally relevant and innovative; modification of interventions to meet the realities of community needs and responses; participation in the evaluation of the intervention, both from the perspective of intervention improvement and assessing the validity of research results; and involvement in the sustainability of interventions for local communities and the replicability of interventions in other communities.

These projects have demonstrated the need for a cultural and community "hook" for intervention programs. The concepts of *gupt rog* and *stree rog* in the context of Indian systems of medicine have proved to be useful in our study communities. There are comparable cultural hooks upon which to hang intervention programs in all communities and groups and for all health issues. The identification of these hooks and their integration in intervention may be anthropology's greatest contribution to public health.

## References

Azjen I, Fishbein M (1980) *Understanding Attitudes and Predicting Social Behavior* . Englewood Cliffs, NJ: Prentice-Hall.

Bang R, Bang A (1991) Why women hide them: Rural women viewpoint of reproductive health infections. *Manushi* 69:27–30.

Bang R, Bang A (1994) "Women's Perceptions of White Vaginal Discharge: Ethnographic Data from Rural Maharashtra." In: *Listening to Women Talk about Their Health: Issues and Evidence from India*. J Gittelsohn, ME Bentley, PJ Pelto, M Nag, S Pachauri, AD Harrison, et al. eds. New Delhi: Har-Anand Publications, pp. 79–94.

Bang RA, Bang M, Baitule M, Chaudhury Y, Sarmukaddam S, Tale O (1989) High prevalence of gynaecological diseases in rural Indian women. *Lancet* 8629:85–88.

end p.389

Basham AL (1976) "The Practice of Medicine in Ancient and Medieval India." In: *Asian Medical Systems: A Comparative Study* . C Leslie, ed. Berkeley, CA: University of California Press, pp. 18–44.

Beck AT (1976) *Cognitive Therapy and Emotional Disorders* . New York: International Universities Press.

Becker S, Robinson JC (1998) Special communication—reproductive health care: Services oriented to couples. *International Journal of Gynecology and Obstetrics* 61:275–281. [Link >](#)

Bhatia J, Cleland J (1995) Self-reported symptoms of gynecological morbidity and their treatment in south India. *Studies in Family Planning* 26(4):203–245. [Link >](#)

Bhatti LI, Fikree FF (2002). Health-seeking behavior of Karachi women with reproductive tract infections. *Social Science and Medicine* 54:105–117. [Link >](#)

Bronfenbrenner U (1999) "Environments in Developmental Perspective: Theoretical and Operational Models." In: *Measuring Environment across the Life Span: Emerging Methods and Concepts*. SL Friedman, TD Wachs, eds. Washington, DC: American Psychological Association, pp. 3–28.

Campbell DT, Stanley JC (1963) *Experimental and Quasi-experimental Designs for Research* . Chicago: McNally.

Dash V (1999) *Fundamentals of Ayurvedic Medicine*. Delhi: Konark Publishers.

Dols MW (1984) *Medieval Islamic Medicine: Ibn Ridwan's Treatise on the Prevention of Bodily Ills in Egypt* . Berkeley, CA: University of California Press.

El-Bassel N, Witte SS, Gilbert L, Sormanti M, Moreno C, Pereira L, et al. (2001) HIV prevention for intimate couples: a relationship-based model. *Families, Systems, and Health* 19(4):379–397. [Link >](#)

Eron JB, Lund TW (1996) *Narrative Solutions in Brief Therapy* . New York: Lyle Stuart.

Fisher WA, Fisher JD (1993) "A General Social Psychological Model for Changing AIDS Risk Behavior." In: *The Social Psychology of HIV Infection*. JB Pryor, GD Reeder, eds. Hillsdale, NJ: Erlbaum, pp. 127–153.

Gala D (2000) *Homeopathy for Common Diseases* . Mumbai: Navneet Publishers.

Gangakhedkar RR, Bentley ME, Divekar AD, Gadkari, D, Mehendale SM, Shepherd ME, et al. (1997) Spread of HIV infection in married monogamous women in India. *Journal of the American Medical Association* 278:2090–2092. [Link >](#)

Garg S, Sharma N, Bhalla P, Sahay R, Saha R, Raina U, et al. (2002) Reproductive morbidity in an Indian urban slum: Need for health action. *Sexually Transmitted Infections* 78(1):68–69. [Link >](#)

Gittelsohn J, Bentley ME, Pelto PJ, Nag M, Pachauri S, Harrison AD, et al. (1994) *Listening to Women Talk about Their Health: Issues and Evidence from India*. New Delhi: Anand Publications.

Good BJ (1994) *Medicine, Rationality, and Experience: An Anthropological Perspective* . Cambridge, UK: Cambridge University Press.

Hawkes S, Santhya KG (2002) Diverse realities: sexually transmitted infections and HIV in India. *Sexually Transmitted Infections* 78:1–8.

International Institute for Population Sciences (IIPS) (2000) *National Family Health Survey: India (NFHS-2)* . Mumbai: IIPS, Measure DHS+, and ORC MACRO.

Ivey AE, Ivey MB (2003) *Intentional Interviewing and Counseling: Facilitating Client Development in a Multicultural Society* . 5th ed. Pacific Grove, CA: Brooks/Cole.

end p.390

Jacobs J, Moskowitz R (1996) "Homeopathy." In: *Fundamentals of Complementary and Alternative Medicine* . MS Micozzi, ed. New York: Churchill Livingstone, pp. 87–99.

Jejeebhoy S, Koenig M (2003) "The Social Context of Gynaecological Morbidity: Correlates, Consequences and Health Seeking Behaviour." In: *Investigating Reproductive Tract Infections and Other Gynaecological Disorders* . S Jejeebhoy, M Koenig, C Elias, eds. Cambridge, UK: Cambridge University Press, pp. 30–81.

Kambo IP, Dhillon BS, Singh P, Saxena BN (2004) Self reported gynaecological problems from twenty three districts of India (ICMR task force study). *Indian Journal of Community Medicine* 29(1):8.

Kleinman A (1986) *Social Origins of Distress and Disease* . New Haven, CT: Yale University Press.

Koenig M, Jejeebhoy S, Singh S, Sridhar, S (1998) Investigating women's gynaecological morbidity in India: not just another KAP survey. *Reproductive Health Matters* 6(11):84–95. [Link](#)

Kulhara P, Avasthi A (1995) Sexual dysfunction on the Indian subcontinent. *International Review of Psychiatry* 7(2):231–240. [Link](#)

Lad V (1990) *Ayurveda: The Science of Self Healing* . Twin Lakes, WI: Lotus Press.

Leslie C (1992) "Interpretation of Illnesses: Syncretism in Modern Ayurveda." In: *Paths to Asian Medical Knowledge*. C Leslie, A Young, eds. Berkeley, CA: University of California Press, pp. 177–208.

Mann JM, Tarantola D, Netter TW (1992) *AIDS in the World: The Global AIDS Policy Coalition* . Cambridge, MA: Harvard University Press.

Ministry of Health and Family Welfare (2004) Department of Ayurveda, Yoga and Naturopathy, Unani, and Siddha. <http://indianmedicine.nic.in/>

NACO (2004) HIV estimates in India (based on HIV Sentinel surveillance). [www.naco.nic.in/indianscene/esthiv.htm](http://www.naco.nic.in/indianscene/esthiv.htm)

Nastasi BK, Varjas K, Schensul SL, Silva KT, Schensul JJ, Ratnayake P (2000) The Participatory Intervention Model: a framework for conceptualizing and promoting intervention acceptability. *School Psychology Quarterly* 15:207–232. [Link](#)

National Institutes of Health (nd) NIH roadmap. <http://nihroadmap.nih.gov/interdisciplinary> . Accessed October 5, 2007.

Nichter M (1981) Idioms of distress: Alternatives in the expression of psychosocial distress. *Culture, Medicine and Psychiatry* 5:379–408. [Link](#)

Nichter M (1989) "Lay Perceptions of Medicine: A South Indian Case Study." In: *Anthropology and International Health: South Asian Case Studies*. M Nichter, ed. Dordrecht, Netherlands: Kluwer Publishers, 187–213.

Newmann S, Sarin P, Kumarasamy N, Amalraj E, Rogers M, Madhivanan P, et al. (2000) Marriage, monogamy and HIV: A profile of HIV-infected women in south India. *International Journal of STD and AIDS* 11:250–253. [Link](#)

Obeyesekere G (1976) "The Impact of Ayurvedic Ideas on the Culture and the Individual in Sri Lanka." In: *Asian Medical Systems: A Comparative Study*. C Leslie, ed. Berkeley, CA: University of California Press, pp. 201–226.

Oommen N (1996) *Poverty and Pathology: Comparing Rural Rajasthani Women's Ethnomedical Models with Biomedical Models of Reproductive Morbidity: Implications for Women's Health in India*. Ann Arbor, MI: UMI Dissertation Services.

Oommen N (2000) "A Decade of Research on Reproductive Tract Infections and Other Gynaecological Morbidity in India: What We Know and What We Don't Know." In: *Women's Reproductive Health in India*. R Ramasubban, SJ Jejeebhoy, eds. New Delhi: Rawat Publications, pp. 236–271.

end p.391

Padian NS, O'Brien TR, Chang YC, Glass S, Francis D (1993) Prevention of heterosexual transmission of human immunodeficiency virus through couple counseling. *Journal of Acquired Immune Deficiency Syndromes* 6:1043–1048.

Pais P (1996) HIV and India: looking into the abyss. *Tropical Medicine and International Health* 1(3):295–304. [Link](#)

Patel BC, Barge S, Kolhe R, Sadhwani H (1994) "Listening to Women Talk about Their Reproductive Health Problems in the Urban Slums and Rural Areas of Baroda." In: *Listening to Women Talk about Their Health Issues and Evidence from India* . J Gittelsohn, ME Bentley, PJ Pelto, M Nag, S Pachauri, AD Harrison, et al. eds. New Delhi: Har-Anand Publications, pp. 131–144.

Patel P (1994) "Illness Beliefs and Health-seeking Behavior of the Bhil Women of Panchmahal District, Gujarat State." In: *Listening to Women Talk about Their Health Issues and Evidence from India*. J. Gittelsohn, ME Bentley, PJ Pelto, M Nag, S Pachauri, AD Harrison, et al. eds. New Delhi: Har-Anand Publications, pp. 55–66.

Patel V, Oomman N (1999) Mental health matters too: Gynaecological symptoms and depression in South Asia. *Reproductive Health Matters* 7(14):30–38. [Link](#)

Pelto PJ, Joshi A, Verma R (1999) *The Development of Indian Male Sexuality* . Population Council: South and Southeast Asian Regional Office.

Pelto PJ, Pelto GH (1997) Studying knowledge, culture and behavior in applied medical anthropology. *Medical Anthropology Quarterly* 11(2):147–163. [Link](#)

Prasad J, Abraham S, Akila B, Joseph A, Jacob KS (2003) Symptoms related to the reproductive tract and mental health among women in rural southern India. *National Medical Journal of India* 16(6):303–308.

Ramasubban R, Rishyasringa B (2001) "Weakness (*ashaktapana*) and Reproductive Health among Women in a Slum Population in Mumbai." In: *Cultural Perspectives on Reproductive Health*. CM Obermeyer, ed. New York: Oxford University Press, pp. 13–37.

Schensul SL, Hawkes S, Saggurti N, Verma RK, Narvekar SS, Nastasi BK, et al. (2007) Sexually transmitted infections in men in Mumbai slum communities: The relationship of prevalence to risk behavior. *Sexually Transmitted Diseases* 34(7):444–450.

Schensul SL, Mekki-Berrada A, Nastasi BK, Saggurti N (2006b) Healing traditions and men's sexual health in Mumbai, India: The realities of practiced medicine in urban poor communities. *Social Science and Medicine* 62(11):2774–2785. [Link](#)

Schensul SL, Nastasi B, Verma, R (2006a) Community-based research in India: A case example of international and transdisciplinary research. *American Journal of Community Psychology* 38(1–2):95–111.

Schensul SL, Verma RK, Nastasi BK (2004) Responding to men's sexual concerns: research and intervention in slum communities in Mumbai, India. *International Journal of Men's Health* 3(3):197–220. [Link](#)

Tabachnick B, Fidell L (1996) *Using Multivariate Statistics*. New York: HarperCollins.

UNAIDS (2004) *India: Epidemiological Fact Sheets on HIV/AIDS and Sexually Transmitted Infections* . Geneva: UNAIDS/WHO.

UNAIDS (2007) *AIDS Epidemic Update, December 2007* . Geneva: UNAIDS/WHO.

end p.392

Verma KK, Khaitan BK, Singh OP (1998) The frequency of sexual dysfunctions in patients attending a sex therapy clinic in North India. *Archives of Sexual Behavior* 27(3):309–313. [Link](#)

Verma RK, Rangaiyan G, Singh R, Sharma S, Pelto PJ (2001) A study of male sexual health problems in a Mumbai slum population. *Culture, Health and Sexuality* 3(3):339–352. [Link](#)

Verma RK, Schensul SL (2004) "Male Sexual Health Problems in Mumbai: Cultural Constructs that Present Opportunities for HIV/AIDS Risk Reduction." In: *Sexuality in the Time of AIDS: Contemporary Perspectives from Communities in India* . RK Verma, PJ Pelto, SL Schensul, A Joshi, eds. New Delhi: Sage Publications, pp. 243–261.

Vuylsteke B, Sunkutu R, Laga M (1996) "Epidemiology of HIV and Sexually Transmitted Infections in Women." In: *AIDS in the World II: The Global AIDS Policy Coalition*. JM Mann, DJM Tarantola, eds. New York: Oxford University Press, pp. 97–109.

Wallace AFC (1961) *Culture and Personality* . New York: Random House.

Weiss E, Gupta GR (1998) *Bridging the Gap: Addressing Gender and Sexuality in HIV Prevention* . Washington, DC: International Center for Research on Women.

Weller S, Romney A (1988) "Systematic Data Collection." Series #10 In: *Qualitative Research Methods*. J. Maaren, P. Manning, and M. Miller, eds. Thousand Oaks, CA: Sage Publications.

WHO (1997) *Management of Patients with Sexually Transmitted Diseases* . Geneva: Global Programme on AIDS.

Wright S (1921) Correlation and causation. *Journal of Agricultural Research* 20:557–585.

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