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Migration/mobility and vulnerability to HIV among male migrant workers: Tamil Nadu 2007-08

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MIGRATION/MOBILITY AND VULNERABILITY TO HIV AMONG MALE MIGRANT WORKERS

**Tamil Nadu
2007–08**

Migration/mobility of at-risk individuals, particularly the relocation of individuals or their frequent visits away from their home areas for economic opportunity, has been viewed as a strong cofactor in accelerating HIV prevalence in India. Little is known, however, about the patterns of mobility of at-risk populations in India, the nature and extent of the interaction among them, and the implications of such migration for the HIV pandemic. This lack of understanding has been an impediment in planning effective HIV-prevention programmes for these vulnerable populations.

A research study designed to increase understanding of the patterns and motivating factors of migration and mobility of at-risk populations of male migrant workers and sex workers and to examine the links of migration and mobility with HIV risk was conducted in four states of India experiencing high HIV prevalence, namely Andhra Pradesh, Karnataka, Tamil Nadu, and Maharashtra. This report presents the findings from the male migrant workers study on volume and patterns of migration and their linkages with HIV risk. The study among male migrant workers in Tamil Nadu was implemented by the Department of Population Studies, Annamalai University in Tamil Nadu and the Population Council in New Delhi.

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Annamalai University

Annamalai University was founded in 1929 and is one of the oldest institutions of higher learning with faculties in the arts, science, Indian languages, education, music, engineering, agriculture, medicine, dentistry, and other disciplines offering a wide range of courses. The University focuses on teaching, research, and extension activities. The Centre for Population Studies, which was instituted in 1976 by Dr. S. Chandrasekar, offers masters' and doctoral degree programs in population studies. The faculty in the Centre are trained in social science research and involved in outreach activities to benefit rural communities in and around the university campus.

Population Council

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FOREWORD

There is a growing recognition of the importance of migration in the spread of HIV infection. However, empirical research in this area has been negligible. Although intrastate and inter-state migration of men is common in India, little is known about their patterns of migration

and the links of such mobility to HIV infection. Consequently, it has not been possible to design programs to prevent the spread of HIV infection in this vulnerable population group.

During November, 2006 - November, 2007, the Population Council undertook a study to examine the patterns of male migration and its links with HIV risk. The goal was to provide evidence to inform the design and implementation of HIV interventions for male migrant workers. The study was undertaken in collaboration with the Tata Institute of Social Sciences, Karnataka Health Promotion Trust, the Annamalai University and TNS India Pvt Ltd. It was conducted in 21 destination districts of four high HIV prevalence states namely Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh.

Ethnographic and survey research methods were employed to collect data on the volume, patterns, and routes of migration, and sexual risk behaviors. Data were collected from over 12,000 male migrant workers. Support provided by Avahan, Avahan's partner NGOs, the National AIDS Control Organisation, State AIDS Control Societies, other international and national organizations, and most importantly from the study participants themselves, was invaluable in conducting this study.

The study documents the volume and patterns of mobility of male migrants within and across districts and across states. It examines the social dynamics within the contract system that employs these men as laborers with the objective of exploring opportunities for implementing programs for the prevention of HIV infection in this vulnerable population. It documents the sexual risk behaviors and addictive behaviors of male migrants. The study shows that there is a clear need for implementing interventions to prevent HIV infection in migrant workers. A majority of these men report symptoms of sexually transmitted infections. They have multiple sexual partners. They report having sex with sex workers and with other women. A notable proportion

report the use of alcohol in conjunction with risky sexual behaviors. Furthermore, their self perception of HIV risk is low and few use condoms. A significant proportion of the men report having sex with women at the worksite indicating the need to provide HIV prevention interventions at the worksite for both men and women. They also report having sex with non-marital partners in the place of origin indicating the need for implementing interventions to prevent HIV infection before they migrate.

The study shows that in a majority of male workers, movement is facilitated by contractors in various occupations. These workers often move within the contract systems along with their male peers. The patterns of mobility within contract systems vary by state. However, there is a hierarchical structure within the system that connects individual workers to the industrial establishments at the state and national levels via groups of contractors. These findings signify that the contract system could provide an important entry-point for implementing HIV prevention interventions for male migrant workers.

This pioneering research study provides important evidence that should be used at both the national and state levels for the design and implementation of program strategies for the prevention of HIV infection in male migrant workers and their partners at the place of origin as well as at the place of destination. This important research-based evidence is valuable for the national and state-level AIDS control organizations of the government to inform the design of policies and implementation of programs. The research findings are also relevant for NGOs and others engaged in programs for the prevention and control of HIV and AIDS.

Dr. Saroj Pachauri MD, PhD.
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EXECUTIVE SUMMARY

In India, Tamil Nadu is counted among the states with high HIV prevalence, together with Andhra Pradesh, Karnataka, Maharashtra, and Manipur. Although surveillance data indicate a decrease in the rate of new infections, the Integrated Behavioral and Biological

Assessment (IBBA) recorded more than 2 percent prevalence of infection among the clients of female sex workers in selected districts of Tamil Nadu (NARI and FHI 2007). Evidence has revealed that the clients of sex workers are predominately single workers living in one place who are not part of a sex-work network. Examination of district-level migration data from the 2001 census indicates, however, that migration has a positive association with HIV prevalence among antenatal clinic attendees (Population Council 2008). Available data, therefore, indicate that the issue of men's mobility is an important consideration for HIV-transmission-prevention programs. In order to identify the precise locus of risk for appropriate program intervention, a sufficient understanding about the nature and pattern of men's migration and mobility and the extent of their risky sexual activity must be determined.

The present study was undertaken by the Population Council in partnership with Annamali University, Tamil Nadu, to study the broad patterns and motivating forces driving migrant men's mobility and the contexts that determine and influence their engaging in high-risk activities that increase their vulnerability to HIV.

The specific objectives of the study are:

- to determine the patterns and driving factors of migration/mobility among men who migrate for the purpose of work in the state of Tamil Nadu;
- to describe the characteristics of vulnerable subpopulations among migrant men; and
- to examine the determinants of high-risk sexual behaviour among the subpopulations of migrant men with particular emphasis on the role of mobility in risky sexual behaviour.

The study was conducted in six districts of Tamil Nadu that attract men from within and outside the state: Chennai, Coimbatore, Kancheepuram, Pudukkottai, Thriuvallur, and Trichi. District-level characterization maps were drawn in order to identify areas and sites where male migrant workers congregate and to obtain an estimate of the number of these workers and the types of occupations that they have. This information was used to select the sites for detailed study using qualitative and quantitative methods. For the qualitative phase of the study, research methods included: key-informant interviews, geographical and route mapping for mobile and migrant populations, in-depth interviews, and focus-group discussions.

From the six districts selected, 46 key-informant interviews and 268 in-depth interviews were conducted. Mobility maps were drawn for the participants selected for the in-depth interviews.

Following the qualitative research, a survey was conducted among recent male migrants (those who have remained at their current location within the past two years and who have moved to two or more places for work in the past two years). A two-stage sampling method was employed for approaching and screening the men at their work sites or residential locations. A total of 6,730 men were screened, of whom 3,036 were found to be eligible for the detailed survey concerning patterns of mobility, sexual behaviour, and characteristics associated with HIV vulnerability.

The results indicate large interdistrict movements of working men in Tamil Nadu with a little variation across districts and greater mobility among younger men. Male migrants work at a variety of occupations, performing predominantly hard, menial labour such as factory jobs, construction, mining, stonecutting, fishing, and daily-wage work. The jobs migrants hold are district-specific. Some migration is occupation-specific and seasonal. Around three-fourths of the male migrants surveyed were aged 20-34. Almost all the migrant workers surveyed were literate, having, on average, seven years of education. One-third of the men were from the scheduled tribes or scheduled castes. A majority (two-thirds) of them were unmarried. Half of the currently married men were living apart from their wives in their current locations. Almost all of the migrant workers were exposed to television. More than

half have seen “blue” films, and 90 percent had seen some form of pornographic material such as posters, photographs, or sex magazines in the month prior to the survey. High rates of alcohol consumption were common among the migrant workers, likely because of the nature of their work and their limited access to recreational activities.

For about one-third of the migrants, their first experience of moving for work purposes was facilitated by an agent, broker, or contractor. One-fifth of the workers moved to another location because of a contractual obligation to an agent who moved them to where work was available.

The data on migrant workers' sexual behaviour are presented separately for currently married and currently unmarried (including those who are widowed/divorced/separated) men to differentiate the sexual activity of the two groups. Compared with unmarried workers, the currently married men are more sexually active. Little variance in activity is found by educational attainment. Variation in nonmarital sexual activity by district and occupation is clear, however. Mobile men in Chennai and men engaged in daily-wage work, stonecutting, and mining, and married construction workers are relatively more likely than others to have engaged in risky sex. Married men who are more mobile than others are at higher risk of HIV infection, whereas the number of location changes does not significantly affect single men in this way. Regardless of marital status, men who work under the contract system are more likely to engage in risky sexual activity. Condom use is found to be low among the migrant men in Tamil Nadu regardless of their marital status. Migration routes show a strong association with risky sexual behaviour. One-third of the total number of men surveyed reported having had sex in a least one of the four locations where they had moved in the past two years. Men engaged in construction work and daily-wage labour are found to have had risky sex more often on their migration route than men in other occupational categories. Among many factors, the low availability of partners is frequently reported. Working under the contract system is associated with migrant men's risky sexual activity along the migration route. Migrants use condoms more frequently with commercial partners than with casual partners, a finding that indicates the men's perception of the risk inherent in having sex with sex workers. Men who stay overnight away from home for work are more likely than those who do not to endanger themselves by

having sex without a condom. Almost nine-tenths of the migrant workers surveyed reported experiencing at least one type of *gupt rog* (venereal infection) symptom, and more than half of them reported experiencing at least one STI-like symptom. The survey results indicate a high level of HIV knowledge among respondents.

Research results suggest further examination of the contract system under which many of the migratory labourers work as a potential focus for program intervention. Places of origin offer another possible point of intervention because of the workers' strong connections with their home districts.

I

INTRODUCTION

Tamil Nadu, the sixth-most-populous state in India, accounts for approximately 6 percent of the country's population. The growth in population in Tamil Nadu during 1991-2001 is second lowest, after Kerala, among the group of states with a population exceeding 20 million in 2001

(Athreya 2001)¹. Among the districts reporting relatively high growth rates are several experiencing rapid industrial growth that requires large in-migration of male workers.

Tamil Nadu is among the Indian states with high prevalence of HIV infection, together with Andhra Pradesh, Karnataka, Maharashtra, and Manipur. Results of the Integrated Behavioral and Biological Assessment survey conducted in 2007 recorded more than 2 percent HIV prevalence among the clients of female sex workers in selected districts of Tamil Nadu (Chennai: 2 percent, Madurai: 2.5 percent, Salem: 4.2 percent) (NARI and FHI 2007). Recent surveillance data from Tamil Nadu indicate that the rates of new HIV infections have decreased, suggesting that prevention programmes are having some effect. Nonetheless, the population of the state remains at high risk for infection, particularly the clients of sex workers, many of whom are migrant labourers.

The India AIDS Initiative, Avahan, supported by the Bill & Melinda Gates Foundation, has placed special emphasis on high-risk populations, including female sex workers, to check the spread of the HIV/AIDS pandemic. As part of the initiative, a study was conducted of male migrant workers, many of whom are likely the clients of female sex workers in numerous locations. The patterns of and factors driving migration for such men in Tamil Nadu are not fully understood. Examination of district-level migration data from the 2001 census showed that levels of migration have a weak but positive association with HIV prevalence among antenatal clinic attendees (Population Council 2008). Without sufficient knowledge of the migration patterns of

¹Athreya, Venkatesh. 2001. "Census 2001: The Tamil Nadu Picture." *Frontline*. Volume 18, No. 9.

male workers and the nature and extent of their interaction with female sex workers and consequent vulnerability to HIV infection, determining the appropriate design of intervention programmes to reduce risky behaviour of mobile populations is not possible. The present study was undertaken by the Population Council in partnership with Annamalai University to answer some of the questions about patterns of migration and mobility among male migrant workers and their interactions with female sex workers in Tamil Nadu as they relate to the HIV pandemic.

Some of the key questions that this study addresses are:

- What types of jobs do migrant men perform in high-migration districts?
- Which districts and other states do migrant workers come from?
- What are the men's migration routes and duration of stay in each location?
- What is their connection to their places of origin? Why do they migrate?
- What is the nature of their sexual activity in their current location and along their migration routes?
- How often and with which partners do they use condoms?
- How are the migrants' degree of mobility and related factors associated with their HIV vulnerability and risk?
- What structure and dynamics govern the male workers' migration especially in terms of the labour-contract system?

1.1 Objectives

The goal of the study is to describe the patterns of migration of men in the selected high in-migration districts as they relate to HIV-transmission risk and to assess factors concerning migration at the individual, family, and community levels.

The specific objectives of the study are:

- to understand the patterns of and motivations for migration/mobility of men who move away from home for work in the state of Tamil Nadu;
- to describe the characteristics of subpopulations among migrant men who are particularly at risk for acquiring HIV infection; and
- to examine the determinants of risky sexual behaviour among the subpopulations of migrant men with particular emphasis on the role of migration as a factor in such behaviour.

II

STUDY DESIGN AND METHODS

The cross-sectional design of the study involved the following major steps and included both qualitative and quantitative methods as outlined below:

- (1) identification of major migration-destination districts, including intermediate destination points with concentrations of male migrant workers (MMWs);
- (2) profiling of destination sites, including intermediate sites within the study districts using qualitative research methods; and
- (3) gathering of quantitative data at the destination sites, including intermediate sites.

The fieldwork was conducted from February to August 2007 in two phases; qualitative and quantitative. Before the initiation of fieldwork, 2001 census data were analysed to identify the districts (also referred to here as “study areas”) that attracted migrant workers during 1991/2001. Migrants from the top six study districts identified from the census-data analysis were characterized using qualitative data followed by a quantitative survey.

2.1 Identification of study areas

Major destination sites and intermediate points were identified using the analysis of 2001 census data. The 2001 Census of India, like previous censuses, collected information on migration for all individuals by place of birth and last residence. Data on last residence, together with details such as duration of stay at the current location, provided a means of identifying major migration-destination areas that attract male workers. The six most popular destination districts in Tamil Nadu were selected for this study: Chennai, Coimbatore, Kancheepuram, Pudukkottai, Thiruvallur, and Trichy (see Map 1). These districts host a large concentration of migrant workers, as indicated by the census analysis and confirmed by key informants and anecdotal information. The selected districts include a diversity of industrial sectors and occupational groups within a varied geography.

Map 1 : Study districts in Tamil Nadu State, India, 2007

Chennai District is an urban center of Tamil Nadu with many areas populated by male migrant workers. Perambur in Chennai is known for small-scale industries such as manufacturers of railroad-carriage, truck, and train-engine parts. The Coimbedu area is known for its small-scale vendors, many of whom are migrants from other states. As a result of the continuous growth of Adayar and Gundy within Chennai, great demand exists for labourers, especially for construction and infrastructure projects including information-technology (IT) projects. Nearly a thousand industries are situated in Chennai.

Among the attractions of Coimbatore is its salubrious climate. The district is known as “poor man's Ooty” (the queen of India's hill stations). It is the centre of manufacturing of motor-pump sets, various engineering products, and handloom and textile goods. A large number

of technical institutions in Coimbatore cater to the growing needs of the region. Thirupur City in Coimbatore District encompasses more than 700 small and large industrial work sites, particularly for textile manufacturing.

Close to Chennai, Kancheepuram district is well known for both small- and large-scale industries. It draws migrants for construction work, motor-manufacturing industries, and other factories. The district takes pride in hosting major production units of international industrial groups.

To the southwest of Chennai, Thiruvallur is known for retail spending. Tiruvallur District also has many brick factories (in Poonamallee) and other small-scale industries. It is one of the fastest-developing districts in Tamil Nadu in terms of industrial growth, with factories representing many of India's leading industries.

Thiruchirapalli District, commonly called Trichy, is in the central region of Tamil Nadu on the banks of the Cauvery River. As a result of its continuous growth, local demand is great for migrant labour in construction and infrastructure-related projects. The district contains many industries, including sugar factories, distilleries, tanneries, engineering companies, cement plants, and automobile-service units. In 1996, 707 industries were registered in the district.

Located at about 50 kilometres from Trichy, Pudukkottai District is well known for its large number of granite-mining sites. The sugar-cane industry employs many seasonal labourers, the district also attracts migrant workers for stonecutting and mining.

2.2 *Characteristics of study districts*

The first phase of research following the census-data analysis and district selection involved profiling the selected districts to map sites within each district where MMWs either work or reside; to estimate the number of men working at each site, and to identify their occupations. In addition, data were also collected concerning the workers' places of origin, and information was gathered about HIV-prevention programmes serving the areas where they were concentrated. To obtain this information, discussions were held with officials from revenue

departments, district-level administrators, heads of nongovernmental organizations (NGOs), police officials, and heads of professional associations. At each site, interviews were conducted with individuals knowledgeable about the workers, including labour-union leaders, local association leaders, contractors, industry security men, and NGO staff.

More than 200 small and large male migrant worker sites were identified that included industrial and residential areas with migrants in multiple or single occupational categories. These lists of sites were used to select primary sampling units (PSUs). PSUs were formed by combining small areas or by segmenting the large areas so that each PSU held approximately 5,000 workers. A total of 58 PSUs were formed based on the size of the worker sites, of which 23 (referred to as "study sites") were selected randomly for detailed qualitative and quantitative study.

The qualitative data were collected in three stages. First, a description of study sites within each selected district was generated by means of interviews with local key informants, including migrant men, in order to map the physical locations of migrant groups, including places where men have access to video parlours and sex workers, and to develop profiles of migrant men working in different locations. Second, in-depth interviews were conducted with selected migrants to generate individual mobility maps and to collect information about their lifestyles and sexual behaviours. Third, group interviews were held with selected groups of migrant men based on occupational categories and/or places of origin in order to understand the dynamics of group-mobility patterns.

The purpose of this detailed qualitative research was twofold: (1) to identify individual, community, and structural factors that determine the migration of male workers and also influence their sexual risk-taking and vulnerabilities; and (2) to supply primary sampling units (PSUs) for the quantitative survey. A total of 314 interviews (46 key-informant interviews and 268 in-depth interviews) were conducted in the six study districts. All interviews employed a purposive selection of respondents to cover individuals from a range of occupations that migrant men engaged in each study district. All interviews were conducted after taking written informed consent from study participants; verbal consent was taken for respondents who were not willing to sign or could not read or write.

The qualitative data were gathered by a team of 13 experienced and specially trained male investigators. The information from key informants, in-depth interviews, and mobility maps were collected in the Tamil language. These interviews were translated into English and analysed with the help of Atlas.ti, a computer-based text-search program.

In the second phase, a quantitative survey was conducted among selected male migrants to determine the facilitating factors for migration and the men's sexual activity along their migration routes.

2.3 *Quantitative data-collection procedure*

The purpose of the survey was to examine the relationships between migration/mobility-related factors and the migrants' risky sexual activities. For the purpose of the survey, a male migrant worker was defined as an "eligible respondent" and included in the study if he had moved to his current work location in the previous two years and had moved to two or more locations for work in the previous two years. The study sample was limited to consenting male migrant workers aged 18 and older.

2.4 *Sample size*

To examine the relationship between degree of mobility and risky sexual behaviour among recent male migrants, 2,500 interviews were conducted in the selected districts of Tamil Nadu. A total of 6,730 men were approached at selected PSUs and screened for eligibility for the detailed survey. Forty-five percent ($n = 3,036$) of the men contacted at the study sites were eligible for the in-depth study.

2.5 *Sampling design*

In each PSU, the study adopted two types of sampling procedures for selecting respondents. The workers from the residential colonies (established either on legal land belonging to the employer or on illegal land where small hutments were constructed) were selected using a two-stage systematic sampling procedure. The migrants from the workplaces were selected using a facility-based sampling procedure.

In the residential colonies, a two-stage systematic sampling procedure was used. First, a sketch of the area was drawn, and the lanes/small pockets/areas within each larger area were listed. Using the probability-proportion-to-size procedure, the number of houses to be selected in each large area were predetermined. At the first stage, the sublanes or small areas were selected systematically from the lists. For the second stage, the first house was randomly selected and subsequent houses were selected based on a calculated interval.

To select male migrant workers from their work settings for the survey, if the facilities had lists of their workers, the lists were used to select men for interviewing. If no lists were available, respondents were selected randomly from the work areas.

The men selected were screened to identify those who fit the criteria for recent migration. The screening interview collected information on age, place of birth, duration of residence at their current location, the number of places to which they had moved for work in their lifetime, and the number of places they had moved for work in the past two years. This information was useful for estimating the male migration by duration in each district.

The survey administered to participants included: a socioeconomic and demographic profile; living conditions; media exposure; life style; awareness of support services; migration/mobility history; connection to place of origin; sexual activity with sex workers and non-sex workers; if married, sexual behaviour with spouse; condom use in current and previous locations; sexually transmitted infections; and knowledge of and risk perception concerning HIV/AIDS.

Quantitative surveys in all the study areas were carried out with the help of personal digital assistants (PDAs) by 12 trained and experienced male interviewers. Interviewers were specially trained in the ethical conduct of interviews. As noted above, informed consent was obtained from all respondents. Data quality was ensured through a supervisory structure that provided regular feedback in the field, data cleaning in the office, and, if necessary, a revisit to the field. Processing operations

carried out for survey data included daily loading of the data onto a laptop computer, weekly uploading of data to the Population Council database, quality checks, feedback to the field team, cleaning, and tabulation. The Statistical Package for Social Sciences (SPSS) was used for data-consistency checks and analysis.

2.6 Degree of mobility

In this study, migrant and non migrant men are not compared. Therefore, a variable “degree of mobility” was constructed with the following two categories: “worked in two places” and “worked in three+ places.” The other indicators of mobility used in the study are “stayed overnight away from home while at current location during the past month” (no, yes); “commutes between workplace and residence, but did not stay overnight away from home in the past month” (no, yes); and “moved to current location under contract” (no, yes).

2.7 Definitions of other key variables

Measures of risky sexual activity were derived from responses to questionnaire items. Each respondent was asked to provide information about his sexual behaviour during his lifetime (ever) and in the past year (present). The questions concerned whether he had had sex with a sex worker or sex with either a regular or casual unpaid partner in the past 12 months, and how many partners he had in the past 12 months. The response to the last question was dichotomized and coded as two or more extramarital sex partners or one or no partner in the past 12 months. Respondents were asked whether they had had sex with a sex worker or a non-sex partner in each of the locations to which they had moved in the past two years and at their place of origin. This number was used to measure the spread of the HIV pandemic in relation to workers' mobility and tabulated by the men's type of occupation and whether they worked under contract.

To examine further the possible implications of working under the contract system, the questions about whether the respondent's contract status were categorized as follows: (1) respondent never worked under contract, (2) respondent worked under contract the first time he moved

for work but not currently, (3) respondent working under contract currently but not when he moved for work the first time, and (4) respondent was working under contract² at the time of his first move and is currently under contract. The last three categories of this variable were combined (ever under contract, never under contract) to discover the proportion of workers who could be covered, if the contract systems are targeted for HIV-prevention programmes by their sociodemographic and economic characteristics.

²Data on this variable were limited to information about those working under the contract system for either their first move for work or currently.

III

PATTERNS OF MIGRATION/ MOBILITY

Responses to the screening questionnaire from randomly selected migrant workers (N = 6,730) from the selected PSUs were used to generate the estimate of the size of vulnerable subpopulations and their mobility for each study district.

Forty-five percent (n = 3,036) of the men interviewed were found to have been living in their current location for less than two years and to have moved for work to at least two locations in the past two years (see Table 1 in the Appendix). This subpopulation is referred to here as "recent male migrants." This proportion is more or less similar across all the study districts. Migrant men in the selected locations are mainly 20 to 29 years old. The majority of men in that age group have greater mobility than other respondents.

3.1 *Patterns of mobility*

Of the total sample of 3,036 recent male migrants, 91 percent reported that their place of origin was within the state of Tamil Nadu. The main districts of Tamil Nadu that serve as sources of male migrants to the six study districts are: Thiruvannamalai (8 percent), Salem (7.6 percent), Villupuram (6.5 percent), Thanjavur (5.6 percent), Pudukkottai (3.2 percent), Cuddalore (3.2 percent), and Dindigul (3.1 percent).

In addition to a large interdistrict male migration, the data revealed some important patterns in migration routes.

3.2 *Migration routes*

Data concerning the men's current locations and on the previous two places where they moved for work were used to construct the principal routes of their migration. These routes are shown on maps 2 to 7 in the text. The thickness of the line represents the volume of migration, and the arrows indicate its direction. The dashed-line arrow indicates the interstate mobility and the solid arrows indicate interdistrict movements within the state.

A significant proportion (almost two-fifths) of the recent male migrants who are currently working in Chennai moved between the districts of Chennai, Kancheepuram, and Tiruvallur (see Map 2). About 30 percent of the migrants in Chennai went to or came from the districts of Coimbatore, Erode, or Salem. The pattern of the men's mobility also shows connections among Chennai, Villupuram, Thiruchirappally, Karur, and Coimbatore. The map indicates a circular movement of men from Chennai to Coimbatore via other districts, many returning to the place where they started their journey. Men who travelled outside the state for work went to the neighbouring states of Andhra Pradesh, Karnataka, and Pondicherry.

Map 2 : Migration routes of recent male migrants currently working in Chennai District, Tamil Nadu State, India, 2007

Source : Survey of recent male migrants (n = 503).

Map 3 indicates that men currently working in Kancheepuram followed a pattern similar to that of those in Chennai. This map confirms the strong connections among Chennai, Coimbatore, Kancheepuram, and Tiruvallur.

Map 3 : Migration routes of recent male migrants currently working in Kancheepuram District, Tamil Nadu State, India, 2007

Source : Survey of recent male migrants (n = 501).

One-third of the migrant men currently working in Thiruvallur had previously worked in the districts of Chennai, Kancheepuram, and Villupuram (see Map 4). A similar proportion of men had worked in Vellore. About 15 percent of Thiruvallur respondents reported that they had either travelled to or come from the districts of Chennai, Salem,

Figure 1 : Seasonal migration routes of fishermen, Tamil Nadu State, India, 2007

3.3 *Mobility characteristics*

The survey collected information from all recent male migrant workers concerning their movements from one place to another (mobility types), their connection to their home location (in terms of their home visits), the reasons for their moving from place to place, and the facilitators, if any, of their mobility. Different patterns of mobility are found among men who travel for work. Some men change workplaces frequently, and some stay in one place for years. Moreover, some men move about within the locations where they currently work, that is, they spend a few nights per month away from their residence for work. Others commute on a regular basis between their residences and their workplaces.

More than two-fifths of the recent male migrant workers moved to three or more places during the past two years. Larger proportions of recent male migrants currently working in the districts of Chennai (62 percent) and Kancheepuram (53 percent) reported that they had moved to more than three places in the past two years (see Table 2). Little more than one-third of the recent male migrants stayed overnight away from home in the one month prior to the survey. Staying overnight away from home or from a current location seems to be more common among migrants

working in the districts of Pudukkottai, Tiruvallur, and Coimbatore. The majority of the men interviewed did not commute between their residence and workplace. This finding suggests that recent male migrants are likely to stay in or near to their workplaces.

Table 2a shows which home locations the migrants moved from for work opportunities in the study districts. For 30 percent of recent male migrants, their first move was facilitated by contractors. The highest proportions of those migrating under work contracts were found in Kanchipuram (48 percent) and Chennai (40 percent). In Trichy District, 31 percent reported that their first move was facilitated by a contractor.

About half of the men have no specific schedule for visiting their homes, and about a fourth go home for a visit many times in a year.

"I have one brother and one sister; both are married. My father and mother are living alone in my native place. My father is an agricultural coolie, and there no regular income for him. Here (in Coimbatore District) I earn 200 rupees daily, and I can save only 70 to 80 rupees, because the cost of living is very high. Earlier, I used to go home frequently, but now I do not go that frequently because I want to save more money. I now go home during festivals. Yes, I have a girlfriend at home." (Age 24, currently in Coimbatore District working in parcel service for the past six months, native of Dharmapuri District)

"I have two younger sisters and one younger brother. All of my family members are living in my native place. My brother and sisters are studying in school. My parents are working as agricultural coolies. They get very little money. I finished intermediate education (12th standard) and could not continue my studies because of poor economic conditions that forced me to go to work. First, I worked as a mambattiyai (labourer) in Murugappa Polytechnic construction, Avadi, Chennai. The mason (the contractor also) comes from my native place and arranged the work for me the first time. After two months, I became a mason and was involved in construction work for nine months. After the first construction job was over, I was engaged in the construction of buildings of various types in Chennai for seven months. At present, I am working as a mason at the Hyundai car company, doing construction work for the past three months. Now I earn 200 rupees per day. I am also earning an extra amount for overtime. I used to visit my parents at home once every two months. My family is currently dependent upon me." (Age 23, construction worker, currently in Kancheepuram District, native of Vellore District)

3.4 *Reasons for migration/mobility*

To the question concerning why they move from place to place, respondents mentioned several reasons that include “push” factors (reasons for leaving the sending location) and “pull” factors (reasons for moving to the destination location). The predominant reasons the migrants gave were better income and better work opportunities (as shown in Table 3). Other reasons include being moved by a contractor, attraction to a particular city or town, moving to a known location, and the availability of skilled work.

The in-depth interviews also revealed that better work opportunities and better salaries were the migrants' strongest motivations or moving to their current locations. Some described the involvement of contractors or brokers (middlemen) who helped them to migrate for work (see Figure 2).

Figure 2 : Percentage of recent male migrants, according to their main reasons for moving to their current locations, Tamil Nadu State, India, 2007

Two interstate migrants reported:

"My family is still in Vijayawada, Andhra Pradesh. After finishing my 10th standard, I had to work in a boiler company, because my family did not have any money for my studies. After five years of working there, I learned from an advertisement about the opportunity for skilled work in the boiler industry in Guntur. After one year, I moved to Kakinada for the same work. Then I moved on the recommendation of a person from my home district to Chennai to join in bridge-construction work. After one year, I moved to Trichy for another bridge-construction job. Compared with salaries in my own state, here I have a good salary and fewer work hours." (Age 25, 10th standard education, native of Vijayawada in Andhra Pradesh, currently working in Trichy District)

"I am from Orissa. Soon after my studies, I met a contractor from Orissa through my friend. First, I worked in a gas company at Bhuvaneshwar for five years. Then I joined an aluminium factory at Shanth Nagar, Orissa. One person died there from drinking the aluminium-polluted water. After that, all the workers were afraid and we all quit the company. Then my uncle told me about a job in construction work in Cuttack, Orissa. I took that job and worked as a crane operator with my uncle. There I met a broker for crane-operator work and other related work in Tamil Nadu. Most of the Orissa State men are working under his control. Fifteen labourers joined at the same time when I moved to this place (Kancheepuram District), and we are all currently staying in a rented room. Here I get a good salary for fewer working hours." (Age 25, crane operator, working in Kancheepuram District, native of Sinthadara, Orissa)

The data suggest that poverty is an important push factor for migration (33 percent overall). The percentage for this factor is higher for Coimbatore (55 percent) and for Pudukkottai (48 percent). Other push factors include being in debt at home, being fed up with work and low wages, drought, and family pressure.

IV

PROFILE OF RECENT MALE MIGRANTS

4.1 Socioeconomic and demographic background

Three-fourths of the recent male migrants surveyed were between 20 and 29 years old (see Figure 3), with an average age of 25. Almost all the men interviewed in the survey were literate and had an average education attainment of seven years (see Table 4). More than 90 percent of male migrants across all the districts have a secondary or higher education.

Figure 3 : Age distribution of recent male migrant workers, by study district, Tamil Nadu State, India, 2007

One-third of the men surveyed belong to scheduled castes or tribes (SC/ST); two-thirds are not currently married. Half of the total number of currently married men are living without their wives at their current location. A relatively higher proportion of married migrants in Chennai (63 percent) reported living apart from their wives at their current location than did the respondents in the other study districts (Kancheepuram: 59 percent; Trichy: 54 percent; Coimbatore: 53 percent; Pudukkottai: 44 percent; and Tiruvallur: 32 percent).

4.2 Migrants' occupations

Male migrants in Tamil Nadu work at a variety of jobs. Almost half of the workers surveyed in the study districts were employed in factory jobs (see Table 5). The other types of occupations respondents held included construction work (23 percent), mining (7 percent), stonecutting (5 percent), fishing (5 percent), daily-wage labour (5 percent), as *hamalis* (local term used for loading/unloading produce in the marketplace) (4 percent), and other categories (5 percent).

Figure 4 : Percentage of recent male migrants surveyed, by their occupational category, Tamil Nadu State, India, 2007

Occupation vary by district. In the districts of Pudukkottai and Thiruvallur, most migrant men, many from outside the state, work as stonecutters and miners. Chennai is a commercial trading centre, and therefore, many migrant men work there either as *hamalis* in market areas or as daily-wage labourers.

Between 30 and 70 percent of the migrants surveyed work in factories across all the study districts. The proportions of factory workers are high in Coimbatore (70 percent) and low in Pudukkottai (30 percent).

4.3 *Migrants' exposure to the mass media and sex-related materials, and their use of substances*

To inform program designers, determining the types of mass media that male migrants are exposed to is important so that future media campaigns promoting safe-sex practices and HIV awareness can make use of these channels. The survey results show that 90 percent of the respondents read newspapers or magazines and/or listen to radio; 78 percent have watched television and 58 percent have seen movies in the month prior to their interview (see Table 6).

Ninety percent of the migrants reported having been exposed to at least one kind of pornographic material (sex posters or photographs, sex magazines or books, or adult films) in the month prior to their interview (see Figure 5). A little more than half of the men surveyed reported seeing blue films or adult movies in cinema halls or video parlours in that month.

Figure 5 : Percentage of recent male migrants surveyed, by their exposure to pornography, Tamil Nadu State, India, 2007

The use of alcohol is almost universal among the men surveyed; more than four-fifths of the men reported having drunk alcohol at least once in the month prior to the survey (see Figure 6). District-level variations are found

in alcohol use. Drinking is relatively frequent among men in the districts of Pudukkottai and Coimbatore compared with those in the districts of Chennai and Kancheepuram. The in-depth interviews with the men in Pudukkottai reveal their reasons for high alcohol consumption: the nature of the work they do (stonecutting and mining) and their peer-group relationships.

Figure 6 : Percentage of recent male migrants who reported using substances in the month prior to the survey, Tamil Nadu State, India, 2007

Four percent of the men interviewed in Chennai and 3 percent of those in Kancheepuram reported using injecting drugs in the month prior to the survey.

Significant numbers of men interviewed in depth also described being exposed to pornographic materials with friends.

"In my school days, I used to watch blue films. I stayed in a hotel reading sex books, which many of my friends used to buy when they went to market. So I read a lot of such books in my school days. Here, in the Paris Corner area, streetside booksellers have many sex books and magazines, and I buy them sometimes. Nowadays, DVDs are available with very good blue films. My friends and I watch them in my

room. Whenever I am in the mood, I watch a blue film in my room."
 (Age 21, IDI respondent, Chennai District, has been working as a sentry in Chennai for nine months, native of Tiruvannamalai District)

Some men spoke of their exposure to pornography and linked it with their drinking alcohol in a group.

"For this type of work (construction), I have moved to four locations. Where I'm working now is the fourth place (Trichy District). I have many friends here. All of us are working on the same construction job. We all stay in one room. We have television and a video player in our room. When we go out to Thuvakudi area and Trichy City, we buy blue films on DVDs. Whenever we are free, we watch blue films and also drink beer. I first drank beer in my friend's room when I was about 17 years old. At that time, my friend told me that if you drink beer, your body will strengthen and expand. Construction work is very heavy, so every day my body is in pain, and I drink liquor to forget the pains. Yes, I drink alcohol daily. On weekend days, we go to the Trichy market to purchase vegetables and rice. While there, I also drink liquor and watch blue films at the cinema." (Age 26, currently in Trichy District, construction worker, native of Tiruvannamalai District)

V PATTERNS OF SEXUAL ACTIVITY AND VULNERABILITY TO HIV

The survey data on sexual activity is presented below for currently married and unmarried male migrants separately. The unmarried men include those who are widowed, divorced, and separated. Of those who are not currently married, 12 percent reported that they had had

sex with women during the past 12 months (see Figure 7). Six percent reported having had sex with sex workers, and 10 percent reported having had sex with non-sex workers. Among the recent male migrants who are currently married, 17 percent reported having had sex with women other than their wives (8 percent with sex workers and 15 percent with non-sex workers).

Figure 7 : Percentage of recent male migrants who reported having sex with nonmarital partners, by marital status, Tamil Nadu State, India, 2007

The proportion of recent male migrant workers having nonmarital sex increases with age (as shown in Table 7). No differences are found in sexual behaviour according to education or income.

The survey revealed significant variations in the workers' sexual activity according to the district where they were working. Relatively high proportions of the migrants in Chennai (regardless of their marital status) reported having had nonmarital sex, compared with any other study district. A significantly higher proportion of men working for daily wages, stonecutting, and mining, and of married men in construction work reported having had nonmarital sex, compared with those in other occupations.

Higher proportions of men exposed to pornography reported having had nonmarital sex (not married: 13 percent; currently married: 20 percent), compared with men who reported that they had not been exposed to pornography (not currently married: 4 percent; currently married: 8 percent). Similarly, higher proportions of those who reported drinking alcohol said that they had engaged in nonmarital sex, compared with men who said that they do not drink.

The proportion reporting extramarital sex is greater among married men whose wives did not accompany them to their current workplace, compared with men whose wives are staying with them. This finding suggests that married men living apart from their wives are at the highest risk of having sex with sex workers, compared with single men and men whose wives are staying with them.

The in-depth interviews also revealed that the married migrants' extramarital activity is associated with wives' absence. As one respondent remarked:

"I have been working here for the past year. I am married, but my wife is living in my home district. I went there two months ago. I have sex here with a vilai madhur (a sex worker) in Chennai. The Moore Market area has many such women, and they are available for the night. Most of the auto drivers and railway porters come to the Moore Market area at night and have sex with these women. Whenever I am in the mood, I go there. I know one woman with whom I always have sex. She is good and takes only 50 rupees from me." (Age 23, Chennai District, working as air cleaner, native of Coimbatore District)

Some men explained in detail about the connection between their wives' absence and their extramarital sexual activity. Some of the men had had sex with sex workers and also with their female coworkers.

"I came here seven months ago. I have moved to more than 15 places for work in my life. I am married and have two children; they live in my home district. I went to all these places along with our group and I go home to see my wife and children once in every six months. I had sex in almost all the places with a vilai madhur. Many times I don't go to those women but have sex with the women who come to work with me on site. Because I am a supervisor, I get them free of cost and easily." (Age 32, currently in Kancheepuram District, working as a *mastri* (supervisor) in construction, native of Sivaganga District).

5.1 Migration/mobility characteristics and sexual activity

The results suggest that degree of mobility is linked with currently married men's sexual activity. The more mobile they are (that is, the greater number of places they have moved to for work), the more likely they are to engage in high-risk sexual activity (see Figure 8). For example, among currently married migrants, higher proportions of those who moved to three or more places reported having had sex with extramarital partners, compared with those who had moved to only two places (see Table 8).

Figure 8 : Percentage of recent male migrants who reported having had nonmarital sex, by their marital status and degree of mobility, Tamil Nadu State, India, 2007

Compared with unmarried men, married migrants reported having had more sexual partners when they had to commute between their workplace and residence.

From the programme point of view, it is important to understand the sexual behaviour of male migrants working under contract, because contractors might represent a channel for reaching the workers with an intervention. Male migrants who are currently under contract reported having more sexual encounters regardless of marital status, although this proportion was higher (21 percent) for married men than for unmarried men (16 percent) (see Figure 9). Likewise, male migrants who first migrated for work under contract reported having had more sexual encounters with different partners. The proportion reporting multiple sexual partners was higher among currently married migrants (22 percent) than among married migrants (16 percent).

Figure 9 : Percentage of recent male migrants who reported having had nonmarital sex, by their marital and contract-employment status, Tamil Nadu State, India, 2007

In the qualitative interviews, respondents spoke about the contract system and how the group that moves within a contract network influences individuals' sexual behaviours and involvement in sex with co-workers. As one respondent said:

"I am staying here with people from my village (the Theni District). We all are working on the construction of this building. We all go in a group wherever we go, and we first went to Madurai District on contract to construct a building, then to Trichy to construct one bridge. After that we were under contract for building the Trichy-Madurai national highway. Our mastri (group leader) takes us wherever there is work. No, I don't have sex with vyabhicharri (sex workers), but only with women working in our sites. I have sex with such women only. [Respondent pointed to a woman and said, "You see that woman? I had sex with her yesterday"]. During working hours, I speak with them, telling them about all my family matters, including sex with my wife. In the evening before we finish work, I secretly tell a woman that I want to have sex with her. If she agrees, we go to a private place within the construction site and have sex. All my friends do this. If any one of us in the group have sex with a woman working at the site, all the others talk to her and also have sex with her." (Age 28, Trichy District, construction worker, returned to Trichy four months before interview, native of Theni District)

5.2 Non-use or inconsistent use of condoms

More than half of the currently unmarried migrants and nearly two-thirds of the married migrants reported that they did not use condoms consistently during the past two years (see Figure 10). Migrants' condom use varied, however, depending on type of sex partner, indicating the importance of men's perception of their level of risk of acquiring HIV or an STD according to partner. The data suggest that male migrants use condoms more consistently during sex with sex workers than with non-sex workers (Table 9). More than three-fourths of the men, regardless of marital status, said that they did not use condoms consistently in sex with non-sex workers.

Figure 10 : Percentage of recent male migrants who reported inconsistent condom use, by marital status and type of partner, Tamil Nadu State, India, 2007

The results also indicate that a higher degree of mobility, staying overnight away from home, and working under the contract system are associated with inconsistent condom use among those migrant men who have had nonmarital sex.

5.3 Symptoms of STIs and perception of HIV risk

Eighty-nine percent of recent male migrants reported having experienced at least one symptom of *gupt rog* (literally, “secret illnesses,” referring to sexual health problems that constitute both STI-like and other performance-related issues of men’s sexual health) in the past 12 months (see Figure 11). More than a half reported that they had at experienced at least one STI-like symptoms during the past 12 months (see Table 10). A substantial proportion of men reported having sexual contact with non-sex workers. Despite this fact, migrant men in the study districts of Tamil Nadu perceive no personal risk of acquiring HIV infection.

Figure 11 : Percentage of recent male migrants surveyed who reported having experienced *gupt rog* or STI-like symptoms in the past 12 months, and percentage who perceived that they are at high/ moderate risk of acquiring HIV infection, Tamil Nadu State, India, 2007

5.4 Workers' sexual activity along the migration routes

The data on sexual behaviour information along the migration routes suggests that one-third of the total survey sample had sex in at least one of the four places where they had moved to in the past two years. More currently married than unmarried men reported having had sex in two or more locations (see Figure 12). Among currently married men, although higher proportions of men whose wives were staying with them at their current locations reported having had extramarital sex than did those who were living apart from their wives. The two groups did not differ in terms of the number of locations where they had sex (see Table 11).

Higher proportions of men involved in construction work (15 percent) and daily-wage work (29 percent) reported having had sex in two or more locations in the past two years, compared with men in other occupations. The qualitative interviews also gave evidence of the

greater availability of sexual partners for those in construction work because the female workers were motivated to earn extra money “on the job” and also exchanged sex for access to employment.

Figure 12 : Number of locations along the migration route in which the recent male migrants surveyed reported having had pre- or extramarital sex, by current marital status, Tamil Nadu State, India, 2007

The contract system under which many migrants work is found to be associated with their sexual activity along the migration routes. For example, substantially higher proportions of men who are currently under contract (15-22 percent) reported having had nonmarital sex in two or more places in the past two years, compared with men not currently working under contract.

Further analysis was undertaken to determine at which locations the migrants had sex with nonmarital sex partners (see Table 12). The results clearly indicate that 21 percent of the migrants surveyed reported having had sex with nonmarital partners at the men's places of origin. Ten percent had sex in their home districts as well as in at least one of three places to which they had moved for work in the past two years.

The proportion of men who had nonmarital sex in their places of origin increased with age and income. This finding suggests a need for further study at the places of origin to determine the extent of people's vulnerability to HIV, because sex work may be more prevalent in the sending areas, offering sex to returning migrants who come home periodically with extra spending money. Differences in nonmarital sexual activity along the migration routes are evident between currently married and unmarried men. Among those who are currently married, higher proportions of men whose wives are not staying with them (24 percent) reported having had extramarital sex in their current location, compared with men whose wives were staying with them (11 percent). More men (37 percent) whose wives were staying with them, however, reported having had extramarital sex in their places of origin, compared with men whose wives were not staying with them (22 percent). More of the men whose wives were staying with them at their current work location (16 percent) reported having had extramarital sex in their home district as well as in at least one of the three places where they had moved for work in the past two years, compared with men whose wives were not staying with them at their current work location (13 percent).

Substantially higher proportions of men engaged in construction work and other daily-wage work reported having had sex in their places of origin (see Figure 13). A substantial proportion of men currently working under contract reported having had sex in their places of origin as well as in at least one of the three places they moved to for work in the past two years and did so with greater frequency than the men not under contract.

Figure 13 : Percentage of recent male migrants surveyed who reported having had nonmarital sex, by their occupation and the location along their migration route where they had sex, Tamil Nadu State, India, 2007

In the in-depth interviews, many migrants reported having had nonmarital sexual relations in their places of origin. As one respondent remarked:

"My native place is in Salem District; here I am working as a fitter in a moulding company. I have worked here for the past year, and I am staying with my friends. Daily, we drink liquor. My friends have sex with vyabhicharris here. But I never go to that type of place, because I have a woman in my native place. I go there frequently, and whenever I go there, I go to her home and have sex with her. She is simply sitting in her home. I give money to her sometimes for running the house. Once a week I make a phone call and speak with her."
(Age 26, working in Tiruvallur District, native of Salem District).

5.5 Migrants' knowledge of HIV transmission and prevention

Among male migrant workers in Tamil Nadu, knowledge of HIV transmission is relatively good. The majority of the respondents (79 percent) reported that having sex with an HIV-positive person is one

way to become infected with HIV (see Table 13). The other reasons the men mentioned are: having sex with multiple partners (78 percent), with sex workers (57 percent), or without condoms (36 percent); using infected needles (18 percent) and infected blood (26 percent) (see Figure 14).

Figure 14 : Percentage of recent male migrants surveyed who reported ways of acquiring HIV infection, Tamil Nadu state, India, 2007

Half of the migrants interviewed said that abstaining from pre or extramarital sex is a way to prevent becoming infected with HIV (see Figure 15). More than 90 percent of the men mentioned that having only one sexual partner can prevent HIV transmission. Fewer than half of the total number of respondents mentioned that using condoms during every act of sexual intercourse is a way to prevent HIV transmission. Knowledge about HIV transmission and prevention is more or less uniform across the districts of Tamil Nadu.

Figure 15 : Percentage of recent male migrants surveyed who reported ways of protecting themselves from HIV infection, Tamil Nadu State, India, 2007

VI

IMPLICATIONS FOR THE HIV-PREVENTION PROGRAMME

This study shows that the predominant mobility patterns among male migrant workers are interdistrict movements within Tamil Nadu State. These men are employed in variety of occupations. Patterns of mobility suggest that a strong connection exists between the study

districts and certain districts that “export” male workers, namely Cuddalore, Erode, Salem, Thanjavur, Thiruvannamalai, and Villupuram. The data concerning the sexual activity of male migrants indicate that a significant proportion reported having had sex with sex workers and with non-sex workers. These men tend to use condoms consistently with sex workers, but their condom use is much less consistent during sex with women whom they identify as “not sex workers” (such women include construction workers, vegetable or fruit vendors, and others) is low. A significant proportion of these men reported having had sex in more than one of their work locations and with women in their home areas. Other factors that were associated with increased nonmarital sex are increased degree of mobility, staying away from home overnight, being married, not being accompanied by their wives to the location where they moved for work, and being associated with the contract-labor systems.

For the HIV-prevention programme, knowing more details about the types of contract systems and the networking of contractors that exist in Tamil Nadu would be useful for promoting safer sexual practices. The data show that approximately two-fifths of male migrants can be reached by a programme implemented in connection with contract systems (see Figure 16 and Table 14).

Figure 16 : Anticipated HIV-prevention programme coverage of male migrants, if programmes are implemented through the contract system, Tamil Nadu State, India

Qualitative research data indicates a network linking construction workers with masons, mastris, and contractors in Tamil Nadu. The construction labourers are connected to small mastris who put up individual buildings or work under other types of small contracts. These mastris are linked to contractors who give them work. For a big project, the contractor contacts the mastris to hire the number of construction workers needed. The contractor receives payment from the builder or company and a commission from mastris and workers. Figures 17 and 18 illustrate the contract network system of the construction industry and the bonded labourers network of the stonecutting industry.

Figure 17 : Contract-network system of the construction industry, Tamil Nadu State, India

Figure 18 : Bonded-labourer network of the stonecutting industry, Tamil Nadu State, India

The textile industry in Coimbatore District, particularly in Tirupur city, attracts many male migrant workers. Several private companies conduct interviews for the industry employers in the region. These companies have a network connected both with the industries and with the small-scale contractors or key individuals in the economically backward districts of Ramanathapuram, Sivaganga, and Virthunagar. The hiring company takes a bond from each male migrant worker for a minimum of one year.

The fishermen are organised into groups and they have a strong network at specific sites in Tamil Nadu. They have associations through which they operate for fishing and selling. Their work is seasonal, so that during the time they are not fishing, they return to their home locations to work at something else.

6.1 *Focus on places of origin*

A substantial proportion of recent male migrants reported that they had had sex with nonmarital partners at their home locations. The study found that certain districts and states are the sending locations from which most of the male migrants move to find work in the study districts. The states that are most connected in this way to Tamil Nadu are, within Tamil Nadu, Cuddalore, Dharmapuri, Ramanthapuram, Salem, Thanjavur, Thiruvannamalai, and Villupuram. Overall, about 10 percent of the respondents came from the states of Andhra Pradesh, Karnataka, Kerala, Orissa, and Pondicherry.

Considerable proportions of the recent male migrants surveyed are currently married, and half of these men are living alone in their work locations. Regardless of their marital status, the migrants are strongly connected to their home locations. The study data indicate that the migrants engage in the same amount of sexual activity at their places of origin and their work locations, activity that continues when they return home. This finding suggests that HIV-prevention interventions might benefit from focusing on the local sexual networks of male workers in their home locations.

APPENDIX

Table 1 : Percentage of recent male workers, by selected background characteristics, according to numbers of locations they have moved to, Tamil Nadu State, India, 2007

	Number of locations moved to since leaving home for work for the first time		Number of locations moved to for work in the past two years		Average number of moves	Total sample (N)
Characteristic	1+	2+	1+	2+ ^a		
District where working						
Chennai	85.9	65.3	74.2	43.5	2.67	(1,157)
Coimbatore	71.2	51.3	58.5	45.8	2.39	(1,121)
Kanchipuram	82.1	62.2	73.4	43.0	2.59	(1,165)
Pudhukkottai	71.8	54.9	61.2	48.1	2.26	(1,059)
Thiruvallur	79.7	59.4	68.5	47.0	2.34	(1,067)
Trichy	78.1	51.9	60.6	43.8	2.43	(1,161)
Residence						
Urban	79.0	57.4	66.3	44.4	2.48	(5,293)
Rural	75.4	58.2	65.8	47.6	2.33	(1,437)
Age group (years)						
≤19	30.8	18.1	25.8	13.7	2.72	(725)
20–24	88.9	65.2	75.5	54.0	2.48	(2,105)
25–29	84.9	61.9	73.1	49.6	2.36	(2,271)
30–34	89.7	74.4	76.1	58.2	2.41	(661)
35+	66.9	48.7	53.2	29.9	2.59	(968)
Total	78.2	57.5	66.2	45.1	2.00	6730

Source : Screening questionnaire

^aPercentages are shown for respondents who moved for work in the past two years to two or more places, who are older than 18, whose birthplaces are not in the district where they are currently working, and who have been living at the current location for less than two years.

Table 2 : Percentage distribution of recent male migrants, by mobility-related characteristics, according to district, Tamil Nadu State, India, 2007

Characteristic	Trichy	Coim-batore	Thiru-vallur	Puduk-kottai	Chennai	Kanchi-puram	Total
Number of places moved to for work in past two years							
2	59.1	61.2	67.5	73.3	37.6	46.5	57.5
3+	40.9	38.8	32.5	26.7	62.4	53.5	42.5
Stayed overnight away from home for work in the past month							
No	60.8	56.3	56.0	49.1	85.5	76.6	64.1
At least once	39.2	43.7	44.0	50.9	14.5	23.4	36.0
Commutes between residence and workplace							
No	98.0	78.4	98.6	81.7	94.6	99.6	91.8
Yes	2.0	21.6	1.4 ^a	18.3	5.4	0.4 ^a	8.2
First-time move for work facilitated by contractor							
No	69.3	93.4	71.5	76.4	60.2	51.7	70.4
Yes	30.7	6.6	28.5	23.6	39.8	48.3	29.6
Visits home							
Once per year	0.9 ^a	0.7 ^a	0.2 ^a	0.7 ^a	2.0 ^a	1.1 ^a	1.0
A few times a year	33.4	18.5	27.9	26.4	28.0	24.5	26.5
Many times a year	15.1	33.7	18.7	27.3	21.8	21.1	23.0
No specific schedule	50.6	47.1	53.1	45.6	48.2	53.3	49.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(N)	(508)	(513)	(502)	(509)	(503)	(501)	(3,036)

^aPercentages based on fewer than ten cases.

Note: Recent male migrants in this and the following tables are those who moved to the current location for work in the past two years and who also have moved to two or more locations in the past two years.

Table 2a : Percentage distribution of recent male migrants surveyed, by their places of origin, according to their current work locations in the six study districts, Tamil Nadu State, India, 2007

Home district	Study districts						(N)
	Chennai	Coim-batore	Tiruv-allur	Kanche-epuram	Trichy	Puduk-kottai	
Chennai	7.4	8.6	21.9	29.7	6.1	2.4	(383)
Coimbatore	10.5	12.1	6.4	6.6	12.8	4.5	(268)
Cuddalore	2.0	0.6	1.4	1.6	1.4	5.3	(62)
Dharmapuri	1.4	0.8	1.4	0.8	2.6	0.4	(37)
Dindigul	0.8	2.9	1.2	2.0	3.0	1.2	(56)
Erode	6.0	17.9	1.6	3.8	5.5	2.8	(191)
Kanchipuram	14.7	1.2	21.5	0.8	3.7	1.2	(217)
Kanyakumari	—	0.4	0.4	1.0	0.4	4.5	(34)
Karaikal	0.2	0.2	0.6	0.4	0.2	0.8	(12)
Karur	3.0	6.0	1.0	1.4	7.3	9.2	(142)
Krishnagiri	1.2	2.5	2.8	0.6	1.8	2.4	(57)
Madurai	2.4	6.0	1.2	3.2	4.7	5.9	(119)
Nagapattinam	1.2	0.8	0.2	0.6	0.8	7.7	(57)
Nilgiris	—	1.2	0.4	1.0	0.8	—	(17)
Pudukkottai	—	0.4	0.4	0.6	4.1	0.2	(29)
Ramanathapuram	0.2	0.2	0.8	—	0.6	3.7	(28)
Salem	3.6	7.0	7.2	3.6	9.6	2.9	(172)
Sivagangai	0.8	0.8	1.2	0.2	2.6	2.6	(41)
Teni	0.2	0.2	—	—	0.4	1.2	(10)
Thanjavur	1.2	—	1.6	2.0	3.9	8.3	(86)
Thiruchirapalli	7.4	8.8	3.6	5.0	3.3	14.3	(215)
Thiruvallur	13.1	1.8	1.4	15.6	2.6	0.8	(177)
Thiruvannamalai	2.8	0.4	2.4	1.6	1.4	2.2	(54)
Tirunalveli	0.4	1.0	1.0	0.2	0.4	0.8	(19)
Vellore	4.0	1.2	4.8	2.6	1.6	1.2	(78)
Villupuram	4.0	0.8	3.8	2.6	1.2	0.8	(66)
Virdhanagar	0.2	1.4	0.6	0.2	1.8	1.0	(26)
Other states	11.5	15.0	9.4	12.2	15.6	12.0	(383)
Total	100.0	100.0	100.0	100.0	100.0	100.0	—
(N)	(503)	(513)	(502)	(501)	(508)	(509)	(3,036)

— = Not applicable.

Source: Survey of recent male migrants.

Table 3 : Percentage of recent male migrants surveyed, by their reasons for moving from their home locations, according to district where they are currently working, Tamil Nadu State, India, 2007

Reason	Trichy	Coim-batore	Thiru-vallur	Puduk-kottai	Chennai	Kanchi-puram	Total
Reasons for moving to current location							
Better income	89.8	97.5	88.4	95.1	92.6	91.0	92.4
Better work opportunities	85.6	98.1	89.0	93.7	72.6	77.6	86.1
Long-term work contract	9.8	6.6	7.2	11.2	4.2	72.4	18.6
Contractor moved them	28.7	3.5	24.5	23.6	15.9	23.6	20.0
Attraction to the city	4.1	7.8	7.0	2.4	15.1	9.0	7.6
Moving to a place they know	8.3	13.1	6.2	12.8	3.0	1.0 ^a	7.4
Family move	1.0 ^a	1.0 ^a	0.2 ^a	7.7	1.0 ^a	0.8 ^a	2.0
Availability of skilled work	10.4	14.8	6.6	19.8	2.4	4.4	9.7
Reasons for leaving previous location							
Poverty	19.5	55.2	19.9	47.5	34.0	19.0	32.5
Low wages	1.4 ^a	20.1	3.2	17.9	2.8	1.0 ^a	7.7
Family pressure	3.0	3.7	0.6 ^a	4.9	8.0	0.8 ^a	3.5
Floods	0.0	0.0	0.0	0.0	0.2 ^a	0.2 ^a	0.1 ^a
Unemployment	4.1	1.6 ^a	1.6 ^a	1.4 ^a	5.0	1.8 ^a	2.6
Debt	2.0	0.0	2.0	0.0	3.8	0.6 ^a	1.4
Fed-up with work	0.4 ^a	8.2	0.6 ^a	10.6	0.4 ^a	0.0	3.4
Drought	2.4	1.0 ^a	0.6 ^a	1.4 ^a	4.4	1.2 ^a	1.8
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(N)	(508)	(513)	(502)	(509)	(503)	(501)	(3,036)

^aPercentages based on fewer than ten cases.

Table 4: Percentage distribution of recent male migrants, by selected sociodemographic characteristics, according to the district where they are currently working, Tamil Nadu State, India, 2007

Characteristic	Trichy	Coim-batore	Thiru-vallur	Puduk-kottai	Chennai	Kanchi-puram	Total
Age group (years)							
?19	2.0	4.3	1.4 ^a	4.3	4.0	3.6	3.3
20–24	41.9	50.3	40.0	28.9	28.0	35.3	37.4
25–29	36.6	39.4	37.3	43.6	27.2	38.3	37.1
30–34	14.8	4.5	12.5	14.1	17.1	12.6	12.6
35+	4.7	1.6 ^a	8.8	9.0	23.1	10.2	9.6
Average	26.00	24.37	26.28	26.85	26.71	26.43	26.1
Education							
Illiterate	0.2 ^a	0.4 ^a	0.8 ^a	0.2 ^a	4.8	1.4 ^a	1.3
Primary	3.9	2.7	3.8	22.4	6.6	5.6	7.5
Secondary	45.7	44.6	45.0	53.6	47.1	43.9	46.7
High school+	50.2	52.2	50.4	23.8	41.6	49.1	44.6
Religion							
Hindu	92.7	96.9	91.0	83.9	98.4	99.2	93.7
Non-Hindu	7.3	3.1	9.0	16.1	1.6 ^a	0.8 ^a	6.3
Caste							
Scheduled caste/scheduled tribe	32.7	30.2	38.4	22.6	33.6	43.1	33.4
Other	67.3	69.8	61.6	77.4	66.4	56.9	66.6
Marital status							
Married	28.9	17.0	29.7	41.8	50.9	34.9	33.9
Unmarried	71.1	83.0	70.3	58.2	49.1	65.1	66.1
Wife is staying with respondent							
Yes	45.6	47.1	67.8	56.3	37.5	41.1	49.2
No	54.4	52.9	32.2	43.7	62.5	58.9	50.7
Income (rupees)							
≤2,000	0.0	0.6 ^a	2.0	0.0	0.6 ^a	0.0	0.5
2,001–3,000	4.9	5.5	6.4	7.3	17.5	8.4	8.3
3,001+	95.1	94.0	91.6	92.7	81.9	91.6	91.2
Median income	4,500	4,500	4,000	4,500	4,000	4,200	4,283
Type of house							
Pucca	25.8	37.8	24.3	16.3	25.2	37.5	27.8
Semipucca	31.5	42.9	21.3	22.8	28.4	16.2	27.2
Kacha	42.7	19.3	54.4	60.9	46.3	46.3	45.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(N)	(508)	(513)	(502)	(509)	(503)	(501)	(3,036)

^a Percentages based on fewer than ten cases.

Table 5 : Percentage of recent male migrants surveyed, by their occupations, according to the district where they are currently working, Tamil Nadu State, India, 2007

Occupation	Trichy	Coim-batore	Thiru-vallur	Puduk-kottai	Chennai	Kanchi-puram	Total
Factory work	50.8	70.3	44.8	29.5	30.4	54.9	46.8
Construction	29.5	20.3	30.3	—	29.8	25.1	22.5
Fishing	—	—	—	29.7	—	—	5.0
Hamalis (loading/unloading)	—	—	5.0	—	19.9	—	4.2
Daily-wage labour	9.8	—	—	—	19.9	—	4.9
Stonecutting	9.8	—	—	19.8	—	—	5.0
Mining	—	—	19.9	21.0	—	—	6.8
Agriculture	—	—	—	—	—	—	—
Hawking	—	—	—	—	—	—	—
Driving	—	—	—	—	—	—	—
Art/design work	—	—	—	—	—	—	—
Salaried/private	—	9.7	—	—	—	—	1.6
Other	—	—	—	—	—	20.0	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(N)	(508)	(513)	(502)	(509)	(503)	(501)	(3,036)

— = 0.0 percent.

Other = roadwork, petty trading, mining, brickwork, granite work.

Table 6 : Percentage of recent male migrants surveyed who reported being exposed to the mass media, to sex-related materials, and by their consumption of substances in the month prior to the survey, Tamil Nadu State, India, 2007

Exposure in the past month	Trichy	Coim- batore	Thiru- vallur	Puduk- kottai	Chennai	Kanchi- puram	Total
Media exposure							
Read newspaper/magazines	91.1	93.8	88.4	86.4	83.5	90.2	88.9
Saw movies in cinema halls/video parlours	64.0	56.7	59.2	45.4	62.8	62.3	58.4
Watched television	77.4	86.5	76.1	72.5	76.7	76.4	77.6
Listened to radio/FM	93.3	98.1	84.7	95.1	93.6	91.2	92.7
Sex-related materials							
Poster/photographs	80.7	87.3	83.3	81.5	89.3	87.8	85.0
Magazines/books	41.1	56.7	38.6	41.8	36.6	44.1	43.2
Adult movies/blue films	50.0	69.2	48.0	58.3	49.5	49.1	54.0
Any pornographic materials	85.4	94.0	86.9	87.2	91.3	89.6	89.1
Substance use							
Bhang/ganja	24.0	21.6	23.5	26.9	28.0	22.4	24.4
Injecting drugs	0.6 ^a	0.8 ^a	1.2 ^a	1.6 ^a	4.0	3.2	1.9
Desi-daru/toddy alcohol	26.8	28.1	33.1	43.2	22.7	30.7	30.8
Beer/foreign liquor	89.4	93.8	74.5	91.0	69.8	76.8	82.6
Any alcohol	89.4	94.0	74.5	93.1	70.6	77.0	83.1
(N)	(508)	(513)	(502)	(509)	(503)	(501)	(3,036)

^a Percentages based on fewer than ten cases.

Table 7 : Percentage of recent male migrants surveyed, by selected background characteristics, according to current marital status and type of sex partner, Tamil Nadu State, India, 2007

Characteristic	Not currently married				Currently married			
	SW	NSW	Any partner	(N)	SW	NSW	Any partner	(N)
Age group (years)								
≤24	2.5	6.8	8.1	(1,199)				
25+	10.4	14.8	18.3	(804)				
≤29					7.0	12.2	13.2	(385)
30+					8.9	16.0	19.9	(642)
Median age	25.0	25.0	25.0	—	31.0	31.0	31.0	—
Education								
Illiterate	28.6 ^a	42.9 ^a	42.9 ^a	(7)	0.0	12.5 ^a	12.5 ^a	(32)
Primary	2.9 ^a	8.7 ^a	10.7	(103)	2.4 ^a	12.0	14.4	(125)
Secondary	4.3	9.8	12.3	(889)	6.6	12.3	15.2	(528)
High school+	7.1	10.2	12.2	(1,010)	13.5	19.3	22.5	(342)
Income level (rupees)								
≤3,000	6.7	12.4	14.5	(193)	4.0	8.0	9.3	(75)
3,001–5,000	4.3	8.5	10.9	(1,598)	6.5	13.4	16.4	(794)
5,001+	15.1	19.3	20.2	(218)	18.4	24.1	26.6	(158)
District								
Trichy	3.6	9.1	9.7	(361)	3.4 ^a	10.2	10.2	(147)
Coimbatore	7.0	9.4	13.4	(426)	4.6 ^a	10.3 ^a	10.3 ^a	(87)
Tiruvallur	4.5	9.6	10.8	(353)	4.7 ^a	12.1	14.1	(149)
Pudukkottai	4.1	11.1	12.5	(296)	7.5	15.5	16.9	(213)
Chennai	10.5	15.4	19.0	(247)	12.9	21.1	26.2	(256)
Kanchipuram	5.5	7.4	9.8	(326)	10.9	12.0	17.7	(175)
Occupation								
Construction	4.0	7.6	8.8	(420)	8.0	16.0	19.8	(262)
Daily-wage labour	9.0 ^a	19.4	23.9	(67)	12.0	27.7	30.1	(83)
Industry	5.2	9.6	11.4	(1,107)	9.9	11.5	14.1	(313)
Stonecutting	9.0 ^a	20.9	20.9	(67)	6.0 ^a	11.9	11.9	(84)
Fishing	2.2 ^a	6.6 ^a	7.7 ^a	(91)	0.0	8.3 ^a	8.3 ^a	(60)
Other	10.1	12.1	17.9	(257)	7.6	15.1	18.7	(225)
Exposure to pornography								
No	0.8 ^a	3.0 ^a	3.8 ^a	(132)	1.5 ^a	6.0	7.5	(200)
Yes	6.1	10.5	12.8	(1,877)	9.8	16.7	19.8	(827)
Alcohol consumption								
No	0.5 ^a	1.3 ^a	1.5 ^a	(399)	2.7 ^a	8.9	8.9	(112)
Yes	7.0	12.2	14.9	(1,610)	8.9	15.3	18.5	(915)
Wife is staying with respondent								
Yes	—	—	—	—	3.8	9.5	10.9	(497)
No	—	—	—	—	12.3	19.4	23.6	(530)
Total	5.7	10.1	12.2	(2,009)	8.2	14.6	17.4	(1,027)

^a Percentages based on fewer than ten cases. — = Not applicable.

SW = Sex worker. NSW = Non-sex worker. Any partner = Either sex worker or non-sex worker.

Table 8 : Percentage of recent male migrants surveyed, by migration/mobility characteristics, according to marital status and type of sex partner, Tamil Nadu State, India, 2007

Migration/mobility characteristic	Not currently married (n = 2,009)				Currently married (n = 1,027)			
	SW	NSW	Any partner	(N)	SW	NSW	Any partner	(N)
Number of locations moved to for work during past two years								
2	5.5	10.7	12.2	(1,180)	7.7	14.1	15.0	(568)
3+	6.0	9.2	12.3	(829)	8.7	15.3	20.5	(459)
Stayed overnight away from home while at current location in past month								
No	7.4	11.3	13.8	(1,207)	8.5	14.7	17.5	(939)
Yes	3.2	8.2	10.0	(802)	4.5	13.6	17.0	(88)
Commutes between workplace and residence, but has not stayed away overnight								
No	5.9	10.4	12.6	(1,847)	5.1	11.9	14.6	(590)
Yes	3.7 ^a	5.6 ^a	8.0	(162)	12.4 ^a	18.3	21.3	(437)
Currently under contract								
No	5.1	8.4	10.6	(1,401)	5.1	11.9	14.6	(590)
Yes	7.2	13.8	16.0	(608)	12.4	18.3	21.3	(437)
Worked under contract for first move from location of origin								
No	4.9	8.9	11.0	(1,521)	5.3	11.5	14.2	(620)
Yes	8.4	13.7	16.2	(488)	12.5	19.4	22.4	(407)
Total	5.7	10.1	12.2	12.2	8.2	14.6	17.4	17.4

^a Percentages based on fewer than ten cases.

SW = Sex worker. NSW = Non-sex worker. Any partner = Either sex worker or non-sex worker.

Table 9 : Percentage of recent male migrants surveyed who reported nonuse or inconsistent use of condoms by migration/mobility characteristics, according to marital status and type of sex partner with whom they engaged in nonmarital sex, Tamil Nadu State, India, 2007

Migration/mobility characteristic	Not currently married (n = 2,009)			Currently Married (n = 1,027)		
	SW	NSW	Any partner	SW	NSW	Any partner
Number of locations moved to for work during past two years						
2	15.4	74.4	56.6	31.8	68.8	55.3
3+	18.0	85.5	53.9	34.2	89.7	69.2
Stayed overnight away from home while at current locations in the past month						
No	13.5	76.3	48.5	31.3	78.1	60.0
Yes	26.9 ^a	83.3	70.0	47.1 ^a	80.0	72.1
Commutes between workplace and residence but has not stayed away overnight						
No	15.6	77.6	54.7	31.3	76.6	59.5
Yes	33.3 ^a	100.0 ^a	69.2 ^a	100.0 ^a	100.0	100.0
Currently under contract						
No	21.1	86.4	58.4	33.3	90.0	70.9
Yes	9.1 ^a	67.5	51.0	35.2	68.4	55.4
Worked under contract for first move from location of origin						
No	20.3	86.6	59.6	39.4	85.4	71.6
Yes	9.8 ^a	62.7	46.8	31.4	71.8	54.4
Total	16.5	78.6	55.5	34.5	78.5	62.9
(N)	(19)	(158)	(136)	(29)	(117)	(112)

^a Percentages based on fewer than ten cases.

SW = Sex worker. NSW = Non-sex worker. Any partner = Either sex worker or non-sex worker.

Table 10 : Percentage of recent male migrants surveyed who reported having experienced *gupt rog* or STI-like symptoms in the past 12 months and who perceived that they are at high/moderate risk of acquiring HIV, by migration/mobility characteristics, Tamil Nadu State, India, 2007

Migration/mobility characteristic	<i>Gupt rog</i> symptoms	STI-like symptoms	Perceived high/ moderate risk of acquiring HIV	(N)
Number of places moved to during past two years				
2	93.9	63.4	0.4	(1,748)
3+	82.1	37.7	1.9	(1,288)
Stayed overnight away from home while at current location in the past month				
No	87.5	51.8	1.0	(1,943)
Yes	91.2	53.8	1.0	(1,093)
Commutes between workplace and residence but has not stayed away overnight				
No	88.9	52.2	1.1	(2,786)
Yes	88.0	55.6	0.0	(250)
Currently under contract				
No	89.3	52.4	1.4	(1,991)
Yes	88.0	52.6	0.4 ^a	(1,045)
Worked under contract for first move from location of origin				
No	89.7	50.7	1.1	(2,141)
Yes	86.8	56.8	0.8 ^a	(895)
Total	88.9	52.5	1.0	(3,036)

^a Percentages based on fewer than ten cases.

Table 11 : Percentage distribution of recent male migrants surveyed, by selected characteristics, according to number of locations where they had nonmarital sex along their migration routes, Tamil Nadu State, India, 2007

Characteristic	Number of locations ^a					Total	(N)
	0	1	2	3	4		
Age group (years)							
≤19	90.9	9.1 ^b	0.0	0.0	0.0	100.0	(99)
20–24	78.8	16.4	2.1	1.1	1.6	100.0	(1,137)
25–29	59.4	23.3	8.3	2.5	6.6	100.0	(1,126)
30–34	58.2	21.8	11.9	3.4	4.7	100.0	(385)
35+	58.8	22.5	9.0	4.2	5.5	100.0	(289)
Marital status							
Unmarried	71.9	18.8	4.0	1.8	3.4	100.0	(2,009)
Married	58.8	22.2	10.5	2.8	5.6	100.0	(1,027)
Wife is staying with respondent							
Yes	52.7	27.2	13.5	3.4	3.2	100.0	(497)
No	64.5	17.5	7.7	2.3	7.9	100.0	(530)
Occupation							
Construction	67.7	17.9	8.7	2.2	3.5	100.0	(682)
Daily-wage labour	52.7	18.0	10.7	9.3	9.3	100.0	(150)
Industry	70.8	19.4	4.1	1.4	4.3	100.0	(1,420)
Stonecutting	70.2	19.2	2.6 ^b	1.3 ^b	6.6	100.0	(151)
Fishing	72.2	19.9	4.6 ^b	2.0 ^b	1.3 ^b	100.0	(151)
Other	59.8	25.3	9.3	2.5	3.1	100.0	(482)
Contract status							
Never under contract	72.6	19.1	4.1	1.6	2.7	100.0	(1,768)
Worked for first-time move under contract but not currently	66.2	22.8	5.4	3.2	2.4 ^b	100.0	(373)
Did not work not work for first-time move under contract, but is now under contract	57.4	24.7	10.8	1.8 ^b	5.4	100.0	(223)
Under contract both at first-time move for work and currently	58.2	19.2	10.9	3.1	8.6	100.0	(672)
Total	67.5	20.0	6.2	2.2	4.2	100.0	(3,036)

^a Based on migrants' reports of their sexual activity at their current location, previous two locations, and their place of origin.

^b Percentages based on fewer than ten cases.

Table 12 : Percentage of recent male migrants surveyed, by selected characteristics, according to locations where they had nonmarital sex along their migration routes in the past two years, Tamil Nadu State, India, 2007

Characteristic	Current location	Previous location 1	Previous location 2	Place of origin	Place of origin and one of the other three locations	(N)
Age group (years)						
19–24	8.1	5.4	4.1	11.0	3.1	(1,236)
25–29	17.1	16.1	13.8	26.6	13.6	(1,126)
30–34	19.0	15.3	13.2	27.0	14.8	(385)
35+	20.8	11.1	13.8	29.4	13.5	(289)
Income (rupees)						
≤3,000	13.1	7.5	3.0	13.8	7.1	(268)
3,001–5,000	12.7	10.2	9.1	20.3	8.3	(2,392)
5,001+	22.9	19.7	18.9	27.4	18.6	(376)
Marital status						
Unmarried	12.2	9.7	7.8	16.2	6.9	(2,009)
Married	17.4	14.0	13.7	29.1	14.5	(1,027)
Wife is staying with respondent						
Yes	10.9	13.1	16.5	36.8	16.3	(497)
No	23.6	14.9	11.1	21.9	12.8	(530)
Occupation						
Construction	13.0	11.4	9.4	22.0	10.4	(682)
Daily-wage labour	27.3	24.7	19.3	33.3	23.3	(150)
Industry	12.0	9.9	8.7	18.3	4.8	(1420)
Stonecutting	15.9	13.2	9.3	16.6	9.3	(151)
Fishing	7.9	9.9	7.3	15.2	6.0	(151)
Other	18.3	10.0	11.4	24.3	9.8	(482)
Contract status						
Never under contract	11.1	7.9	7.1	16.6	6.0	(1,768)
Worked for first-time move under contract but not currently	15.5	9.4	7.8	20.1	7.5	(373)
Did not work for first-time move under contract, but is now under contract	17.0	14.3	13.5	28.3	13.5	(223)
Under contract both at first-time move for work and currently	19.6	19.6	16.7	28.9	18.3	(672)
Total	14.0	11.2	9.8	20.6	9.5	(3,036)

Table 13: Percentage of recent male migrants surveyed, by their knowledge of HIV transmission and prevention, according to district where they are currently working, Tamil Nadu State, India, 2007

Responses	Trichy	Coimbatore	Thiruvallur	Pudukkottai	Chennai	Kanchipuram	Total
How does a man become infected with HIV?							
Sex with multiple partners	69.7	83.4	70.5	77.2	88.7	79.8	78.2
Sex with someone having HIV	75.4	85.6	73.3	81.1	77.9	79.2	78.8
Sex with sex workers	56.1	55.4	57.8	51.5	63.8	56.7	56.9
Sex without condoms	36.6	36.8	29.5	38.3	38.8	35.5	35.9
Infected needles	22.2	25.1	18.7	27.5	7.2	9.8	18.4
Infected blood	22.4	30.2	20.9	32.4	23.1	25.9	25.8
Common toilet/bath places	1.0	1.2	1.0	0.2	0.4	0.2	0.7
Sharing utensils/clothes	0.6	0.4	1.4	0.6	0.4	0.0	0.6
Kissing a HIV positive person	3.1	0.6	2.6	0.2	2.8	0.8	1.7
Mosquito bite	2.0	2.7	0.8	4.1	4.8	0.6	2.5
Barber shop visit	0.6	9.0	0.0	1.4	0.4	0.0	2.2
How can HIV transmission be prevented?							
Having only one sex partner	96.5	94.0	92.4	96.7	90.3	92.0	93.7
Abstaining from pre- or extramarital sex	48.6	56.5	53.0	55.4	44.5	53.3	51.9
Using a condom for every act of intercourse	40.9	43.3	44.8	39.5	60.6	51.1	46.7
Using antibiotics before sex	6.5	2.1	5.8	2.6	9.9	7.2	5.7
Abstaining from sex all the time	1.2	0.0	1.4	0.6	4.6	2.2	1.6
Taking injections with a clean needle/ syringe/other injecting equipment	0.0	0.0	0.8	1.4	0.6	0.2	0.5
Having a good diet	0.2	0.0	0.2	0.0	0.8	0.0	0.2
Avoiding people who are HIV+	2.0	2.5	2.4	2.8	6.0	2.4	3.0
Not visiting female sex workers	1.6	2.5	1.4	2.4	6.0	3.0	2.8
(N)	(508)	(513)	(502)	(509)	(503)	(501)	(3,036)

Table 14: Percentage of recent male migrants surveyed who reported that they were working under the contract system, Tamil Nadu State, India, 2007

Occupation	Never under contract	Not under contract for first-time move for work but currently under contract	Under contract for first-time move for work but now not under contract	Under contract for both first-time move for work and currently	Total	Anticipated programme coverage of male migrant workers, if implemented through contract system	(N)
Construction	43.1	16.7	8.4	31.8	100.0	56.9	(682)
Daily-wage labour	9.3	12.0	8.7	70.0	100.0	90.7	(150)
Industry	71.6	9.6	6.5	12.3	100.0	28.4	(1,420)
Stonecutting	51.7	22.5	9.3	16.6	100.0	48.3	(151)
Fishing	86.8	0.0	0.7	12.6	100.0	13.2	(151)
Other	48.5	14.7	9.5	27.2	100.0	51.5	(482)
Total	58.2	12.3	7.3	22.1	100.0	42.8	(3,036)

Photographs by : V.L. Thomas
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