
HIV and AIDS

Social and Behavioral Science Research (SBSR)

2008

Migration/mobility and vulnerability to HIV among male migrant workers: Andhra Pradesh 2007-08

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**MIGRATION/MOBILITY AND
VULNERABILITY TO HIV AMONG
MALE MIGRANT WORKERS**

**Andhra Pradesh
2007–08**

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

A research study to understand the patterns and drivers 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 with high HIV prevalence, namely Andhra Pradesh, Karnataka, Tamil Nadu, and Maharashtra. This report presents the findings from the study on volume and patterns of migration and their linkages with HIV risk in Andhra Pradesh. It was implemented by the Population Council in New Delhi, and the data were collected by TNS India Private Limited. The report was reviewed by colleagues at the International Center for Research on Women (ICRW) in New Delhi.

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**Suggested citation: Population Council. 2008.
Migration/Mobility and Vulnerability to HIV among Male Migrant
Workers: Andhra Pradesh. New Delhi: 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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ACKNOWLEDGEMENTS

The study on Migration/Mobility and Vulnerability to HIV among Male Migrant Workers was successfully completed during 200708. We wish to acknowledge here the efforts of a number of individuals who were involved in the study.

First, we are grateful to the Bill & Melinda Gates Foundation for its support for the study through Avahan, its India AIDS Initiative. We are thankful to Mr. Ashok Alexander, Director; Dr. Gina Dallabetta, Director Research, Avahan Project; and Ms. Jayanti Rajagopalan, Programme Officer, the Bill & Melinda Gates Foundation for their active support and involvement at all stages of the project. The views expressed herein are those of the authors, however, and do not necessarily reflect the official policy or position of the Bill & Melinda Gates Foundation and Avahan.

We would like to acknowledge the support of the members of the Technical Advisory Committee (TAC) for their overall guidance in the smooth conduct of the study. The contributions of the members, Dr. Prem Saxena, Dr. P.M. Kulkarni, Dr. Tarun K. Roy, Dr. R.R. Gangakhedkar, Dr. Rohini Pande, Dr. Gurumurthy Rangaiyan, Dr. Arvind Pandey, Dr. Rajatashuvra Adhikary, Dr. Shiva S. Halli, Dr. Tobi Saidel, and Dr. Shalini Bharat, were helpful both through their direct involvement in TAC meetings and through their interactions with individual members during the various stages of the project. Special thanks are due to Dr. Saroj Pachauri for chairing the Technical Advisory Committee and for guiding us at each stage of the project.

We would like to acknowledge the contribution and support of research team at the International Center for Research on Women (ICRW) for their review of the report and for feedback. We thank all the experts who participated in a series of workshops that were organized to prepare qualitative research tools, undertake training of the research teams, plan qualitative data analysis, and prepare questionnaires, the sample design, and the tabulation plan for the report.

We are thankful to our consultants Dr. Pertti J. Pelto, Senior Anthropologist, and Mr. Zaheer Ahmad Khan for their assistance.



Special thanks go to Mr. V.L. Thomas, Executive Assistant at the Population Council, for his excellent administrative support throughout the study and his expert assistance in creating the tables, graphs, and format for the report.

We would like to convey our special thanks also to Dr. Ajay K. Khera, Mr. Aslam Naved, and Ms. Lakshmi Murthy from the National AIDS Control Organization (NACO) and the authorities from Andhra Pradesh State AIDS Control Society (APSACS), Technical Support Units (TSUs), CARE India, Population Services International, India HIV/AIDS Alliance, and Hindustan Latex Family Planning Promotion Trust (HLFPPT) for their help in facilitating data collection and interpretation.

We acknowledge the contribution of Dr. Sridevi from TNS India Pvt. Ltd. for her interest and hard work in the coordination of the fieldwork. We also thank all the research investigators individually for their efforts in the gathering of data.

Most importantly, we are immensely grateful to the participants of this study who have, without hesitation, given their time and narrated their experiences and views regarding their mobility and vulnerability to HIV risk.





EXECUTIVE SUMMARY

HIV infection is widespread in Andhra Pradesh, the state that has recorded highest HIV prevalence (0.97 percent) among adults aged 15-49 in the general population among the non-hill states of India. HIV prevalence is 1.22 percent among men and 0.75 percent among

women, according to round three of the National Family Health Survey (NFHS-3) (IIPS and Macro International, 2007). According to India's HIV surveillance systems, 19 of the 23 districts recorded HIV prevalence of more than 1 percent among pregnant women attending antenatal clinics in 2005. Census data for Andhra Pradesh suggest a preponderance of intrastate migration in most of the coastal districts and large migration flows to the districts of Hyderabad and Rangareddy from other Indian states. The volume of migration increased over the years as did HIV prevalence among antenatal-care-clinic attendees in many districts. Without sufficient knowledge concerning migration patterns of male workers and of the nature and extent of their interaction with female sex workers and their resultant vulnerability to HIV infection, it is not possible to determine whether interventions are necessary or to design appropriate intervention programmes for reducing risky behaviour of mobile populations.

The present study was, therefore, undertaken by the Population Council in partnership with TNS India Pvt. Ltd. to study the broad patterns and drivers of mobility among male migrants in order to examine the contexts that determine and influence the high-risk activities that result in their increased or decreased vulnerability to HIV.

The specific objectives of the study are:

- (1) to understand the patterns and drivers of migration/mobility of men in the state of Andhra Pradesh who migrate for the purpose of work;
- (2) to describe the characteristics of vulnerable subpopulations among migrant men;



- (3) to examine the determinants of high-risk sexual behaviour among the subpopulations of migrant men, with particular emphasis on the role of mobility.

The study was conducted in five districts of Andhra Pradesh that attract men from within and outside the state: Krishna, Guntur, Hyderabad, Rangareddy, and Visakhapatnam. District-level characterization maps were drawn to identify the male migrant-worker areas/sites in each district and the data gathered to estimate the number of male migrant workers in each area and their occupations. This information was used to cluster and select the sites for detailed study for which qualitative and quantitative methods were employed. For the qualitative phase of the study, the methods used included key-informant interviews (KII), geographical and route mapping for mobile and migrant populations, and in-depth interviews (IDI).

In the five selected districts in the state, 104 key-informant interviews, and 124 in-depth interviews were conducted. Mobility maps were drawn for the individuals selected for the in-depth interviews.

Following the qualitative research, a survey was conducted among recent male migrants (those who have resided at their current location within the past two years and moved to two or more locations for work during that period). A two-stage sampling method was employed for approaching and screening the men at their work sites or residential locations. A total of 7,151 men were screened, of whom 2,770 were eligible for the detailed survey concerning patterns of mobility, sexual behaviour, and HIV vulnerability.

The results suggest a predominance of interdistrict movements of men within Andhra Pradesh. These recent migrants have demonstrated their significant mobility among most districts in coastal Andhra Pradesh and also to Hyderabad and Rangareddy Districts. Male migrants are employed in a variety of occupations, and their occupations are district specific.

About 80 percent of recent male migrant workers who were interviewed for the detailed survey were in the 20-34 age-group. Thirty percent were



illiterate. Slightly more than half of the recent male workers in the five study districts belonged to the scheduled castes or scheduled tribes, although this proportion differ slightly across districts.

Two-fifths of recent male migrants had seen adult movies/blue films in the month prior to the survey. Three-fourths of the study respondents reported that they have seen sex posters/photos during the past month. Exposure to pornographic literature is marginally higher in Krishna District, compared with other study districts. Almost all the male migrants reported that they had consumed alcohol in month prior to the survey.

About one-third of recent male migrants moved from their home area for the first time to find work with the help of agents, brokers, or contractors. About half were ever under contractual obligation, whereas 30-40 percent were currently under contract.

The data concerning the male migrants' sexual behaviour is presented for currently married and currently unmarried (including those who are unmarried and widowed/divorced/separated) men separately in order to clarify their nonmarital sex practices. Compared with currently married men, currently unmarried men are more frequently engaged in high-risk sexual behaviours, especially with sex workers. Daily-wage labourers, stonecutters, and fishermen appear to be the most vulnerable groups of the sample population. A strong positive association exists between individuals' degree of mobility and their sexual behaviour. Moreover, an increase in degree of mobility is linked to inconsistent or nonuse of condoms. Four-fifths of recent male migrants reported experiencing at least one type of *gupt rog* (venereal infection) symptom, and three-fifths reported at least one symptoms related to a sexual transmitted infection. The results also suggest limited knowledge of HIV infection among these recent male migrants.

The authors of this report recommend the use of work-contract systems for delivering HIV-prevention interventions, because a large majority of the recent male migrants in Andhra Pradesh work under contract.





I

INTRODUCTION

Andhra Pradesh is one of the non-hill states in India that recorded the highest HIV prevalence (0.97 percent) among adults aged 15-49 in the general population. HIV prevalence is 1.22 percent among men and 0.75 percent among women, according to round three

of the National Family Health Survey (NFHS-3) (IIPS and Macro International 2007). India's surveillance system also recorded the highest HIV prevalence among pregnant women receiving antenatal care (2 percent) and patients receiving treatment for sexually transmitted diseases (22.8 percent) in Andhra Pradesh in 2005 (NACO 2006). Nineteen of the state's 23 districts have recorded HIV prevalence at more than 1 percent among pregnant women attending antenatal clinics in 2005.

The districts with high HIV prevalence are also the destinations for large numbers of male migrant workers. An analysis of census data on migration and HIV prevalence suggested a weak but positive correlation in Andhra Pradesh (Verma, et al. 2007).

Andhra Pradesh, the fifth-most-populous state in India, accounts for 7.4 percent of the country's population. It ranks third, however, in the proportion of migrants, behind Maharashtra and Uttar Pradesh (Registrar General of India 2001). Census data suggest a preponderance of intrastate in-migration in the coastal districts of Krishna, East Godavari, Guntur, Nellore, West Godavari, Visakhapatnam, and Rangareddi. Large number of migrant workers flow between states to the districts of Hyderabad and Rangareddi for employment and education. On average, 30 percent of migrant males are between ages 20 and 29, and more than 50 percent are unmarried. These districts have recorded a high prevalence of HIV infection among individuals attending antenatal care (ANC) and sexual transmitted disease (STD) clinics. Districts that record high rates of outmigration, including Guntur, Karimnagar, Prakasam, also have high levels of HIV prevalence among the general population. Suspected linkages between migration and HIV require empirical validation, however.



Avahan, the India AIDS Initiative, 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. It proposed a study of male migrant workers, who are thought to be bridge populations for the spread of HIV. Examination of the district-level male migration data of the 2001 census showed that districts' volume of migration has a strong positive association with HIV prevalence among ANC and STD clinic attendees (Verma et al. 2007). Without sufficient knowledge of the migration patterns of male workers and of the nature and extent of their interactions with female sex workers and their resultant vulnerability to HIV infection, it is not possible to determine whether interventions are necessary and what the appropriate design of intervention programmes should be in order to reduce risky behaviour of mobile populations.

The present study was undertaken by the Population Council in partnership with TNS Pvt. Ltd. to answer questions about patterns of mobility among male migrants and about their interaction with female sex workers in Andhra Pradesh as they relate to the HIV pandemic.

Some of the key questions that this study addresses are:

- In what types of occupations are male workers engaged within the high-migration districts?
- From which other districts and other states do the workers migrate?
- What are their routes of mobility/migration and their duration of stay at each location?
- What is their connection to their home areas? Why do they migrate?
- What sexual behaviour do they engage in where they are working and along the migration routes?
- What is their level of condom use?



- How are their degree of mobility and related factors associated with HIV vulnerability and risk?
- What are the structure and dynamics of male worker migration especially in terms of labour contract obligations?

1.1 Objectives:

The overall goals of the study are to describe the patterns of male migration as they relate to HIV risk and to assess the factors of migration at the individual, family, and community levels.

The specific objectives of the study are:

- (1) to understand the volume, patterns, and drivers of male migration/mobility in the state of Andhra Pradesh for the purpose of work;
- (2) to describe the characteristics of vulnerable subpopulations among migrant men;
- (3) to examine the determinants of high-risk sexual behaviour among the subpopulations of migrant men with particular emphasis on the role of mobility.





II

STUDY DESIGN AND METHODS

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

- (1) identification of major destination districts, including intermediate destination points where male migrant workers are concentrated;
- (2) profiling of destination sites, including intermediate destination sites within each selected district using qualitative research methods; and
- (3) gathering of quantitative data at the destination, including intermediate destination points.

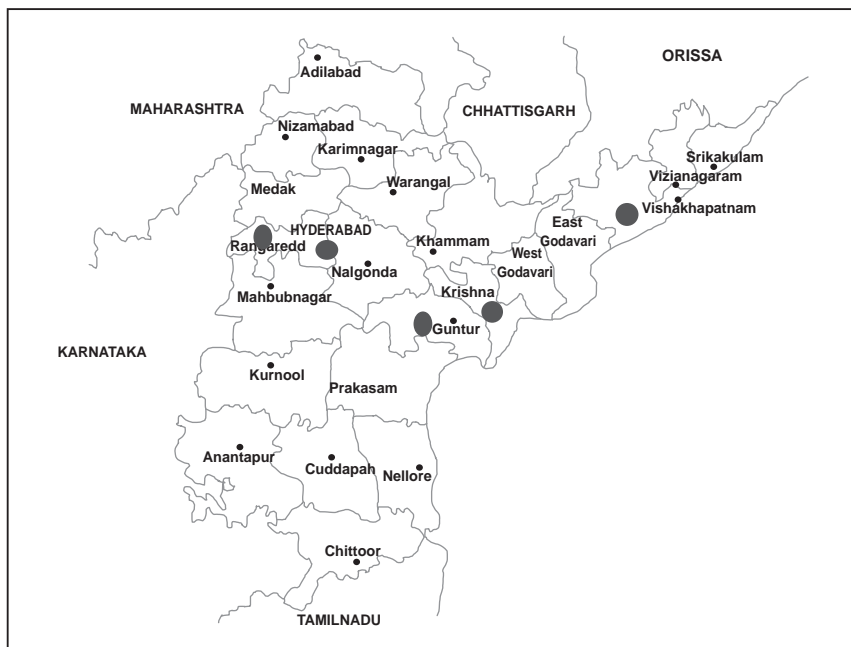
The fieldwork was carried out during March-June 2007. Before the initiation of fieldwork, data from the 2001 census were analysed to identify the districts (also referred to here as “study areas”) that attracted men during 1991-2001. Migrant men from the top five study districts identified in the census-data analysis were then characterised using primarily qualitative data followed by a quantitative survey.

2.1 Identification of study areas

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, along with details such as duration of stay at the current residence, provided useful insights for identification of major destination areas that attract male migrant workers. The top five destination districts in Andhra Pradesh were selected for this study, namely Krishna, Guntur, Hyderabad, Rangareddy, and Vishakapatnam.



Map 1 : Andhra Pradesh State, India, showing destination districts for male migrant workers.



These districts were selected for the study because of their large concentration of migrant workers, as indicated by the census analysis and confirmed by key informants and anecdotal evidence. Male migrants constitute 7 to 14 percent of the male population in these districts (RGI 2001). Selected districts featured a diversity of industrial sectors and occupational groups along with a varied geography. For example, Vijayawada in Krishna District includes a rail and road transport centre serving the entire country; Guntur is a key agricultural production and export centre; Visakhapatnam has agriculture-based and large-scale industries in addition to its port, and Hyderabad, capital of the state, accommodates some of the most expansive information-technology and infrastructure-related enterprises in the country.



2.2 Characterisation of study districts

After the census-data analysis and district selection, research began with the profiling of selected districts. The purpose of profiling was to map sites within each district where male migrant workers (MMWs) either work or reside, estimate the number of men working at each site; determine the types of occupations in which they are engaged; learn their places of origin, discover whether HIV-prevention programmes were operating locally, and determine the state of local economy. Discussions were held with officials from revenue departments, district-level administrators, heads of nongovernmental organizations (NGOs), police officials, and heads of professional associations. Moreover, at each site, interviews were conducted with individuals knowledgeable about MMWs, such as labour-union leaders, local association leaders, contractors, industry security men, and NGO staff.

The district-level descriptions helped to identify more than 66 small and large sites, including industrial and residential areas having multiple or single-occupation categories of men. These lists of sites were used to prepare a list of primary sampling units (PSUs), each having an estimated 5,000 MMWs. PSUs of this size were formed by combining small areas or by segmenting the large areas. Of 25 such PSUs, 21 (referred to here 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 through interviews with local key informants, including migrant men, to map the physical locations of migrant groups, to determine locations where men have access to video parlours and sex workers, and to develop a profile of migrant men working or residing in different locations and their mobility patterns. Second, in-depth interviews were conducted with selected migrants to generate individual mobility maps and to gather information about their lifestyles and sexual behaviours. Third, group interviews were held according to occupational categories and/or places of origin to clarify group-mobility patterns.

A total of 228 interviews, (104 with key informants and 124 in-depth interviews) were carried out in the five study districts. All respondents



were selected purposively to cover a wide range of migrants' occupations. All interviews were conducted after obtaining written informed consent from study participants or verbal consent (if the respondent was not willing to sign the consent form or could not read and write).

The qualitative data were gathered by a team of trained, experienced male investigators. The information from key informants, in-depth interviews, and mobility maps were collected in Telugu (the state language of Andhra Pradesh). The interviews were translated into English and analyzed with the help of Atlas.ti, a computer-based text-search program (Muhr, 1997).

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

2.3 *The quantitative data-collection procedure*

The purpose of the survey was to examine the relationship between drivers of migration/mobility and sexual risk-taking behaviour of migrant men. For the purpose of the survey, a male migrant worker was defined as an "eligible respondent" if he

- (a) had moved to his current work location in the previous two years and
- (b) had visited two or more places for the purpose of work in the previous two years.

The study was confined to consenting male migrant workers aged 18 or older.

2.4 *Sample size*

A sample of 2,500 participants per state was chosen from a total of 7,151 men. The men were approached at selected PSUs and screened for eligibility as defined above for the detailed survey. Thirty-nine percent ($n = 2,770$) of men contacted at the study sites were found to be eligible.



2.5 Sampling design

In each PSU, the study adopted two types of sampling procedures for selecting migrant men. Workers from the residential colonies (either legal land belong to the employer or illegally occupied land where small hutments were made for living) were selected using a two-stage systematic sampling procedure. Men from the workplaces were selected using a facility-based sampling procedure.

For the selection of workers in residential colonies, a two-stage systematic sampling procedure was used. First, a sketch of the area was drawn and the lanes and small pockets and areas within each of the larger areas were listed. Using the probability-proportionate-to-size procedure, the number of houses to be selected in each large area was predetermined. In the first stage, the sublanes or small areas were selected systematically from the list; in the second stage, houses were systematically selected from the selected sublanes and small areas.

For the selection of migrants in work settings, lists of workers, if available, were used to select the men for interview. Where no lists of workers were kept, the men were selected randomly from the areas where they work or socialize.

A screening tool was used to identify eligible respondents. Information was gathered concerning age, place of birth, duration of residence at the current location, number of places the respondent had moved to for work during his lifetime, and number of places he had moved to for work in the past two years. This information helped to estimate the volume of male migration by duration in each district.

The survey instrument administered to eligible respondents collected data on socioeconomic and demographic status, living conditions, media exposure, lifestyle, support services, migration/mobility history, connection to place of origin, sexual behaviour with sex workers and non-sex workers, sexual behaviour with spouse (if married), condom use in current and previous locations, sexually transmitted infections, and HIV/AIDS knowledge and risk perception.



Quantitative surveys were carried out in all the study areas with the help of personal digital assistants (PDAs) by 12 trained, experienced male interviewers who were instructed specifically in the ethical conduct of interviews. Informed consent was obtained from all respondents. Data quality was ensured through a supervisory structure that provided regular feedback in the field and data cleaning in the office. Revisits in the field were conducted when necessary. Data from survey respondents were loaded daily onto a laptop computer and weekly into the Population Council database. Data quality was checked, and feedback was provided to the field team. The statistical Package for Social Sciences (SPSS) was used for data-consistency checks and analysis.

2.6 Degree of mobility

For this study, no comparison between migrant and nonmigrant men is offered; therefore, a variable for respondents' degree of mobility was constructed with two categories: movement to two locations or to three or more locations. Other indicators of mobility used in the study are: stayed overnight away from home while at current residence 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 behaviours were derived from responses to questionnaire items. Respondents were asked about their lifetime sexual behaviour (ever) and during the past 12 months (present). Sexual behaviours at issue included having sex with a sex worker and having sex with either a regular or casual unpaid partner in the past 12 months. In addition, the respondents were asked to indicate the number of their sexual partners in the past 12 months. They were asked whether they had had sex with a sex worker or non-sex worker in each of the locations to which they had moved in the past two years, including at their place of origin.



In order to measure the reach of HIV-prevention programmes to those under the contract system, the questions on respondent's contractual status were used to categorize the workers as: men who had never moved for work under contract, men who had been under contract during their first move for work but not currently; men under contract currently but who had not been under contract for their first move, and men who were under contract for both moves. The last three categories of this variable were combined to determine the proportion of men that could be covered by an HIV-prevention programmes, if the contract system were targeted.



¹Data for this variable were limited to information about men under the contract system during either their first move for work or currently.



III

PATTERNS OF MIGRATION/ MOBILITY

Responses to the screening questionnaire from the men recruited for the study (N = 7,151) generated an estimate of the volume of recent migration for work in each district. Close to two-fifths of the men (38 percent) interviewed at migrant-worker sites were

found to be living at their current location for less than two years and to have moved to at least two places in the past two years (see Table 1). This group is referred to here as “recent male migrants.” On average, these men moved to 4.4 locations after leaving their places of origin. No major variations were found in the number of recent male migrants according to district or by rural/urban residence.

Following screening, the men who had moved to at least two places for work in the past two years and whose current location is not their native district were selected for a comprehensive interview concerning their mobility and vulnerability to HIV infection. Of the 7,151 men who were screened during the sampling procedure, 2,770 men were found eligible to participate in the in-depth survey. The findings presented in this report refer to the subpopulation of recent male migrant workers.

3.1 *Patterns of mobility*

Of the total sample, 2,712 (97 percent) reported that their place of origin was within Andhra Pradesh state (see Table 2a).

The other districts closest to the five study districts are as follows:

- **Guntur District:** Chennai of Tamil Nadu, East Godavari, Krishna, Kurnool, Nalgonda, Prakasam, Srikakulam, and West Godavri.
- **Hyderabad District:** Guntur, Khammam, Krishna, Mahabubnagar, Nalgonda, and Srikakulam.



- **Krishna District:** East Godavari, Guntur, Khammam, Mahabubngar, Nalgonda, Prakasam, and Srikakulam.
- **Rangareddy District:** East Godavari, Guntur, Khammam, Krishna, Mahabubngar, Nalgonda, Prakasam, and Srikakulam.
- **Visakhapatnam District:** East Godavari, Krishna, Guntur, Srikakulam, and Vijayanagaram.

In addition to the large interstate and interdistrict male migration, the data reveal patterns of intradistrict male migration/mobility.

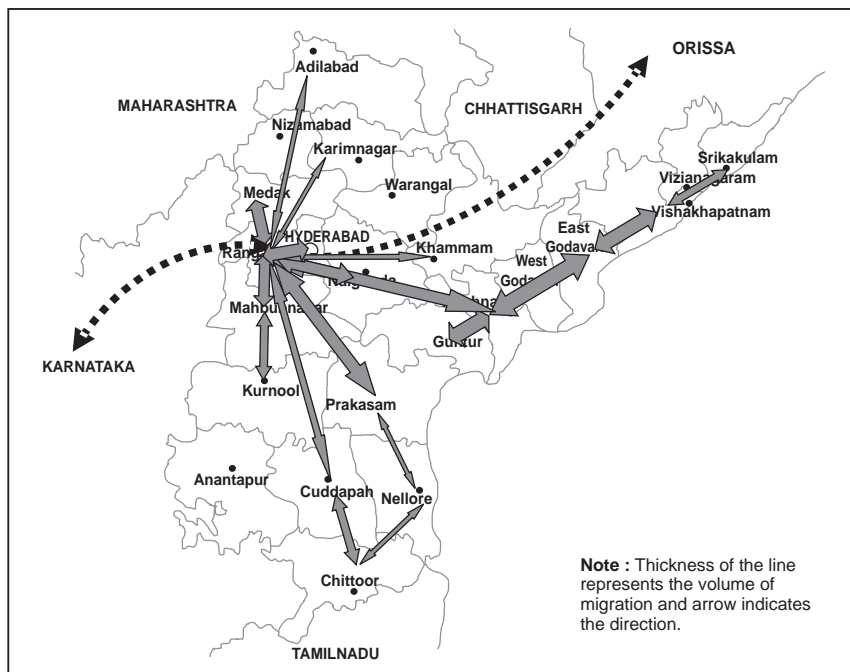
3.2 Routes of mobility

Data on the men's current location and on the previous two locations where the men had worked were used to construct maps of commonly used routes for migrant men, presented below. The thickness of the line represents the volume and the arrows indicate the direction of the men's mobility. The grey arrows indicate interdistrict mobility, and the black dotted arrows indicate interstate mobility of migrant men. Maps 2 through 6 present the routes of male migrant workers who were currently residing in the study districts.

Recent male migrants currently living in Rangareddy District reported being connected to the districts of East Godavari, Guntur, Krishna, and Visakhapatnam (see Map 2). The map also depicts men's connection to Chittoor, Cuddapah, and Prakasam. Men who work in industries located in Rangareddy District reported their being connected to the neighbouring states of Orissa and Karnataka.



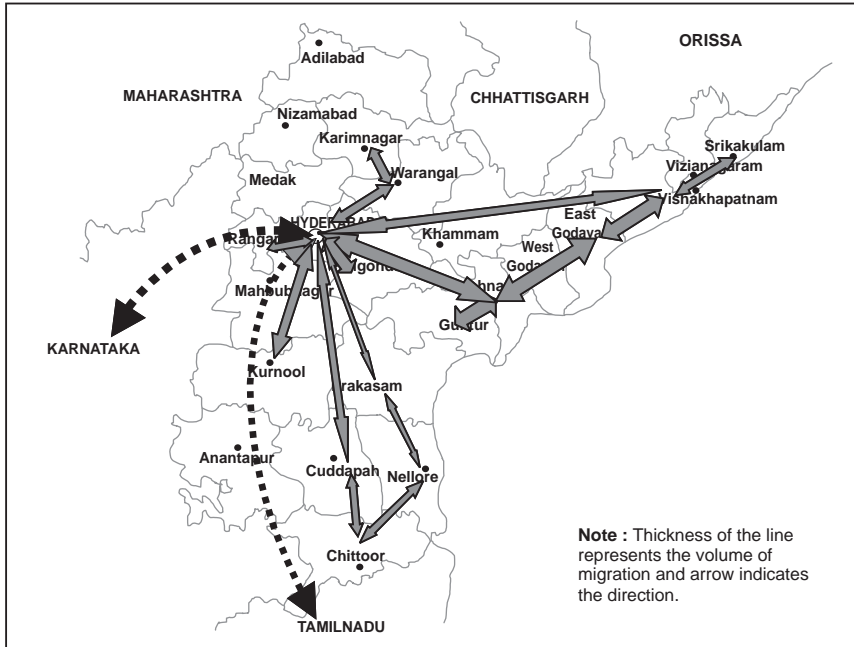
Map 2 : Migration routes of recent male workers currently living in Rangareddy District, Andhra Pradesh, India



Because Hyderabad is the state capital, considerable numbers of male workers move to and from the city through almost all the districts of the state (see Map 3). Most migrate to the coastal districts, especially to East Godavari, Krishna, and Visakaptnam. Some move to Hyderabad through Rangareddy and its neighbouring districts. Some in Hyderabad reported coming from the states of Karnataka and Tamil Nadu.



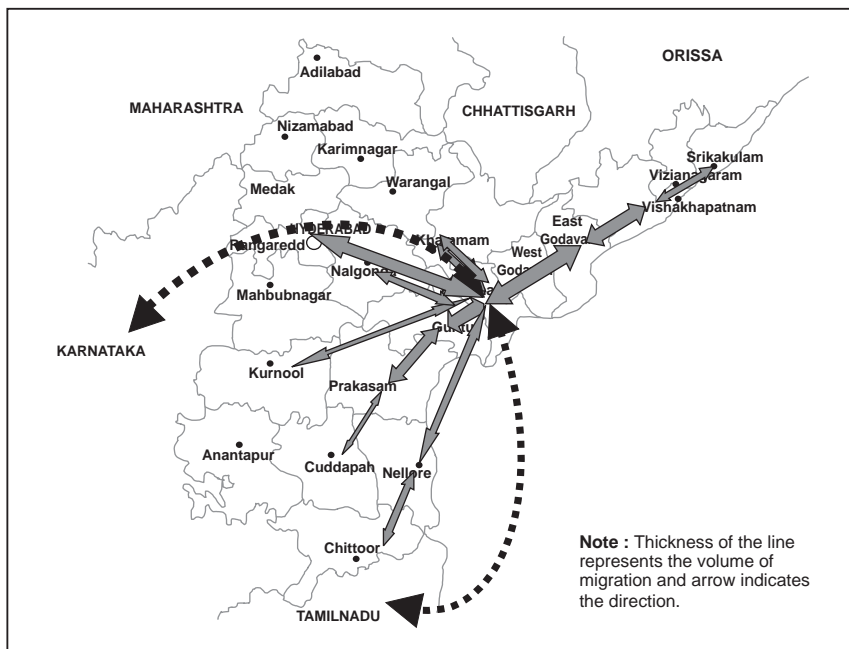
Map 3 : Migration routes of recent male workers currently living in Hyderabad District, Andhra Pradesh, India



The major interdistrict route taken by male workers in Krishna District are also in the coastal part of the state in East Godavari, Guntur, and Visakhapatnam (see Map 4). Many reported having a strong connection to the districts of Hyderabad and Krishna. Few male workers reported moving to the districts of Khammam and Nalgonda in the past two years. Most interstate migration occurred between Krishna District to the states of Karnataka and Tamil Nadu.



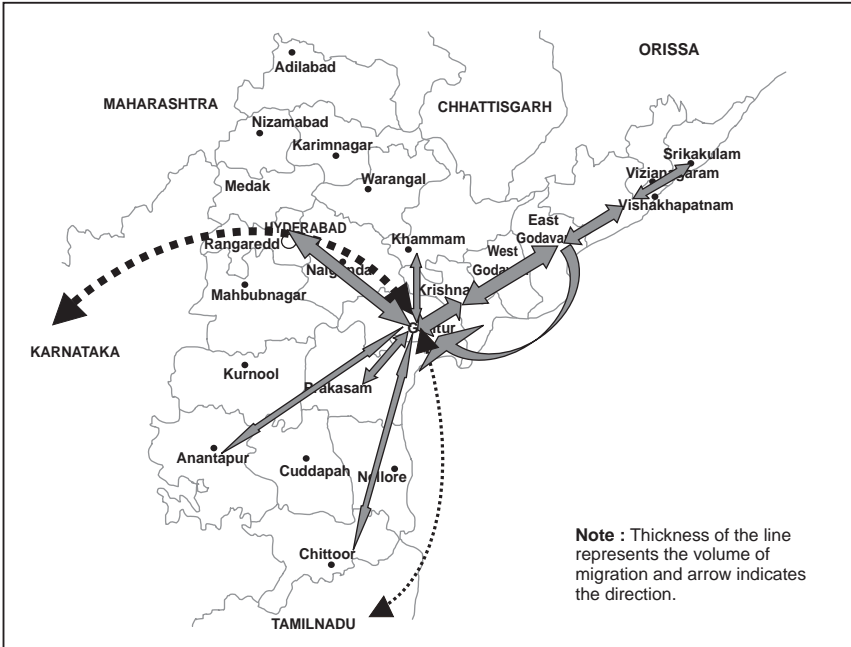
Map 4 : Migration routes of recent male workers currently living in Krishna District, Andhra Pradesh, India



Interdistrict movement of male workers currently living in Guntur is also found to be heavy between Guntur and the same three districts in the coastal part of the state (shown in Map 5). Workers in Guntur also reported of moving to the districts of Anantapur, Chittoor, Khammam, and Prakasam. Some workers in Guntur reported moving to the states of Karnataka and Tamil Nadu.



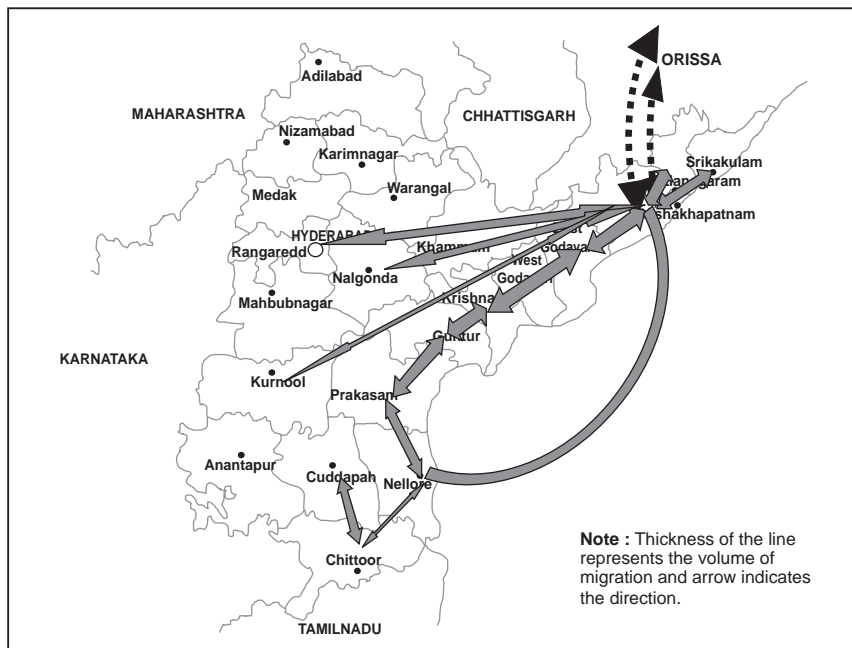
Map 5 : Migration routes of recent male workers currently living in Guntur District, Andhra Pradesh, India



Similar levels of interdistrict and interstate movement are reported by male workers currently living in Visakhapatnam District. Some of these workers also reported moving to the coastal districts (see Map 6). The volume of interdistrict movement is highest between Visakhapatnam and East Godavari, Krishna, Guntur, Hyderabad, and Srikakulam districts. Unlikely those in other districts, male workers of Visakhapatnam District also move to the states of Orissa and West Bengal.



Map 6 : Migration routes of recent male workers currently living in Visakhapatnam District, Andhra Pradesh, India



3.3 Frequency of workers' movement/migration

The migrants' patterns of moving for work vary from changing workplaces every few months to remaining for years in one place. Moreover, some men also move within the places where they are working; some spend a few nights per month away from their residence for their jobs, and others commute on a regular basis between their residence and their workplace.

Results compiled from the data suggest that more than half of the respondents moved to three or more locations in the past two years (see Table 2b). Comparatively, more men currently working in Krishna and Guntur moved to three or more places in the past two years than



did those from any other study district. On average, the men in Krishna and Guntur moved to 3.2 places in the past two years.

A little more than half of the workers surveyed reported that they stayed away from home overnight for work in the month prior to the survey. District-level variations are observed for their staying away from home overnight for work purposes. Higher proportions of male workers from the districts of Krishna (63 percent) and Visakhapatnam (61 percent) than of those in other districts reported this pattern, as shown in Table 2b.

Nearly two-thirds of the men surveyed reported that they commute between their residence and workplace daily. This pattern is found for more than 80 percent of respondents in Visakhapatnam District. The majority of the workers of this district are fishermen, who must commute between residence and workplace.

Thirty-eight percent of the workers surveyed reported that their first move was facilitated by a contractor. A higher proportion of recent migrant men (65 percent) moved for work for the first time with the help of contractors in Krishna District than did those in any other study district. The majority of migrant workers in Krishna District are sugarcane cutters and farm labourers, who are specialized in this type of semiskilled work and are usually contracted as a group.

The qualitative data also indicated that the men enter into contract systems and move with the help of contractors. As one respondent reported:

"My friend introduced me to the owner of this company as I came from Kerala. The owner first sent me to work at Thuni. Later I was sent to Vizag. He explained that I have to supervise the women workers here. I agreed and I took the job. I live in a room at the office. I have all the facilities I need here." (Factory worker, Dharmavaram, Visakhapatnam)

"I like the way the owners of this company treat us, and I am constantly working in this job. I came through a labour mestry (leader of labourers) who came to our place. He first gave us an advance, paid the train charges, gave us a shed to stay in with electricity and drinking water. I



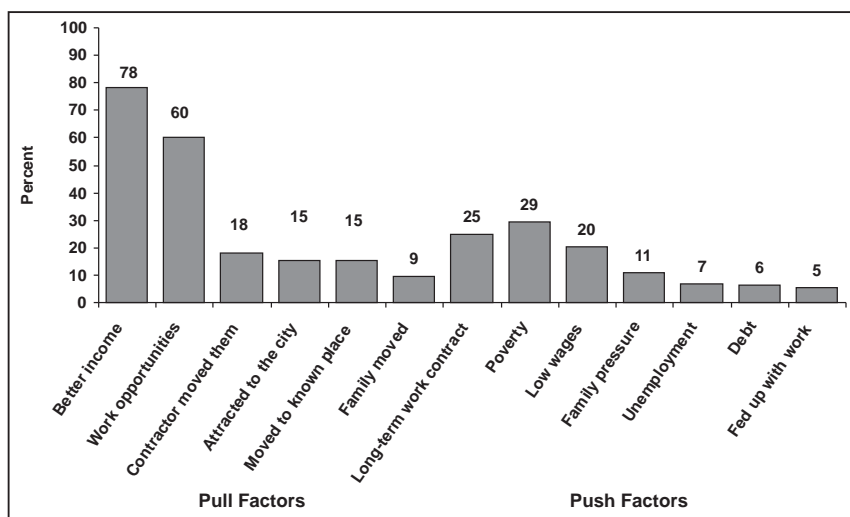
receive money when I need it, regular payment every week, less strain at the job, wages according to the work, and facilities near the residence." (Brick-industry worker, Karimkota, Visakhapatnam)

The migrant workers visit their homes with varying frequency; the majority said that they have no specific schedule for these visits. Overall, nearly three-fourths of the migrants visit their homes at no specific times; 13 percent travel to their homes few times in a year. For more than half of the migrants, their last visit to their home locations took place during the two months prior to the survey interview.

3.4 Drivers of the workers' mobility/migration

When asked why they move from place to place, the men reported reasons that include both push factors (reasons for leaving the sending place) and pull factors (reasons for moving to their destinations) (see Figure 1).

Figure 1 : Percentage of recent male migrants, according to their main reasons for moving to their current locations, Andhra Pradesh, India, 2007





Across all study districts, the men reported seeking better income and better work opportunities as their main reasons for moving to their current work location. The other major reasons they mentioned for moving include poverty and low wages in their previous location, especially for those who are currently living in Hyderabad and Rangareddy districts (see Table 3).

Obtaining a long-term work contract is another important pull factor for the male workers currently living in Guntur and Visakhapatnam districts, where a contractor-facilitated move was reported by about 36 percent of the men surveyed in Krishna District.

The responses to the in-depth interviews suggest the conditions from which some move to find work. As one respondent says:

"We make threads from fibres (janumu nara), cultivate rice, corn, and groundnuts. There was no proper rainfall and no good yield. In our village, we had debts and became poor. We did not have any support, so we are moving from place to place for a livelihood to fill our stomach." (Construction worker, Isukathota, Visakhapatnam)

"In our village, for agricultural work we used to get Rs.30 to 40, which is not sufficient for survival, and our debts increased. We went to Khammam where we did construction work. From there we came to Vijayawada. Since then I'm surviving in Vijayawada." (Daily-wage labourer, Vijayawada)

Concerning this reasons for moving, one respondent reported:

"The owners (contractor) will take care of us always and support us even during floods. We have all the facilities we need in the ship only. I migrate because my native place does not provide a living. Now, I get enough work, good wages, advances, and the owners support us in a crisis, and we get more days of work. I get a good yield in fishing, and the business is good. Even sexually I am satisfied." (Fisherman, Fisher Harbour, Visakhapatnam)



The following workers' statements indicate how seasonal mobility is associated with different occupations.

"I visit twice in a year for agriculture work and again I came for mango work to Nuzvidu. Again for agriculture work and at the time of sugarcane cutting work, I came to Junction. I stay six months in my village, four months in Nuzuveedu, and two months in Junction." (Industry worker, Delta sugar factory, Hanuman Junction, Krishna)

"I go to different places for fishing and return after three to six months. We land in the nearby ports while fishing and sell the yield there. We also visit sex workers there and go back to fishing. We don't earn much with this work. Our owners will give us the necessary equipment for fishing. I move through company work only. I have no specific season." (Fisherman, Fisher Harbour, Visakhapatnam)

"I have been living here for the three years. Before coming here, I stayed in my village doing agricultural work. I did that work for ten years. After that, I worked in a milk van for 12 years. I loaded and unloaded milk. That work was too hard, so I left that job. After my marriage, I left my village and came to Pidugurallu and started working in a limestone factory. I load and unload stocks. I have been doing this work for eight years, and I am earning some money for a decent living." (Migrant labourer, Piduguralla, Guntur)





IV

PROFILE OF RECENT MALE MIGRANTS

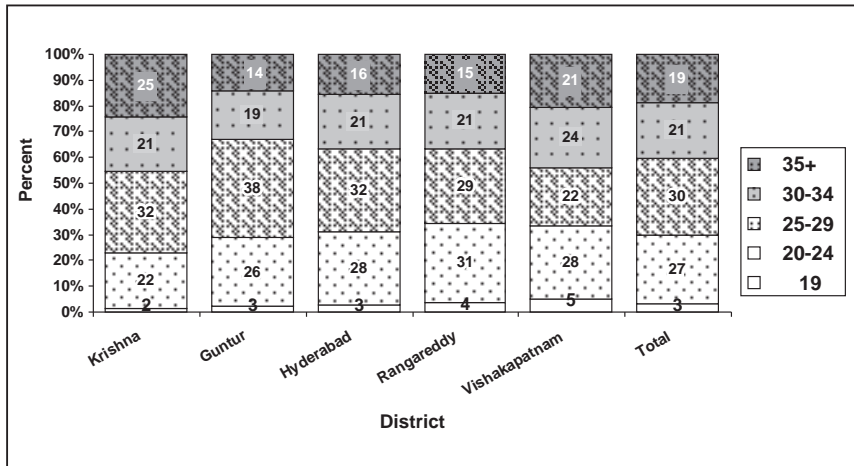
4.1. Sociodemographic characteristics

About 80 percent of the recent MMWs who were interviewed for the detailed survey are in the 20-34 age group. No major variations are found in the age distributions of these workers across the

five study districts (see Figure 2). Thirty percent of male workers in the study districts are illiterate. No major variations in literacy are found across the study districts (see Table 4).

Slightly more than half of the recent male workers in the five study districts belong to the scheduled castes or scheduled tribes; this proportion differs slightly across the districts.

Figure 2 : Age distribution of recent male migrants, by district, Andhra Pradesh, India, 2007



A little more than one-third of the interviewed recent male migrants are currently married. Forty percent of those who are married are living without their wives in their current location.



The income of half of the surveyed male workers ranged between Rs. 2,000 and Rs. 3,000; the mean income is Rs. 2,976 per month. Income levels of males in Hyderabad, Rangareddy, and Visakhapatnam districts are slightly higher than those in Krishna and Guntur districts.

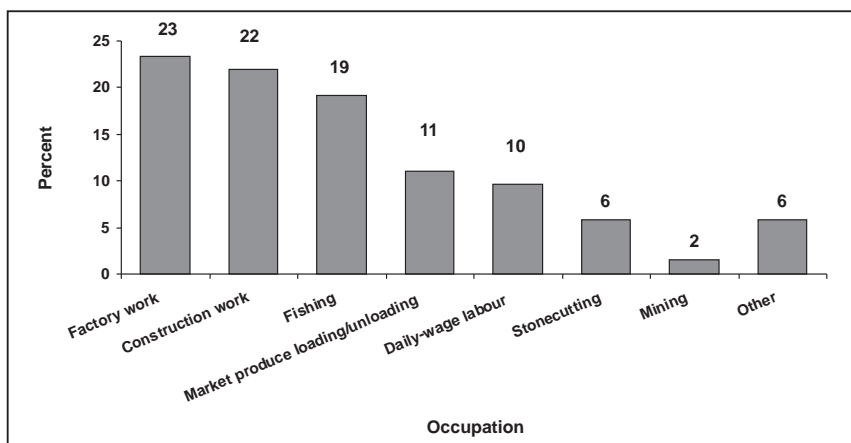
4.2 Living arrangements

About half of the recent migrant men interviewed are currently living alone. Two-fifths of the sample are living in *kaccha* housing (lacking a roof or concrete walls).

4.3 Occupations of recent male migrants

The range of jobs held by recent male migrants included work in factories, construction, fishing, loading and unloading market produce (*hamali*), daily-wage labour, and stonecutting. The three major kinds of jobs reported are in factories, construction, and fishing; one-fifth of recent migrant men surveyed work in each of these categories. Hamali and daily-wage work constitute around one-tenth of the job reported. One-fifth of the men surveyed reported that they work in as stonecutters or in other jobs outside of the major categories.

Figure 3 : Percentage distribution of recent male migrants, by occupational category, Andhra Pradesh, India, 2007





Occupations vary by district (see Table 5). For example, the majority of the recent male migrants in Krishna District work as hamalis and fishermen. In Guntur District, many men perform daily-wage labour or are stonecutters. In Hyderabad, infrastructure is developed rapidly, so that a majority of the recent migrant workers are engaged in construction work, daily-wage labour, and factory work. Because of the concentration of small and large-scale industries in Rangareddy and Medak districts, which are part of the Hyderabad Urban Development Authority (HUDA), the majority of recent male migrants in those districts engaged in factory work. Visakhapatnam District, which includes one of large natural seaports in India, employs a majority of the migrants as fishermen and dockworkers; infrastructure development attracts the second-largest proportion of migrants in this district to construction work. The presence of large-scale industries around Visakhapatnam city do not appear to attract many migrants because most are unskilled workers. The industries require skilled manpower.

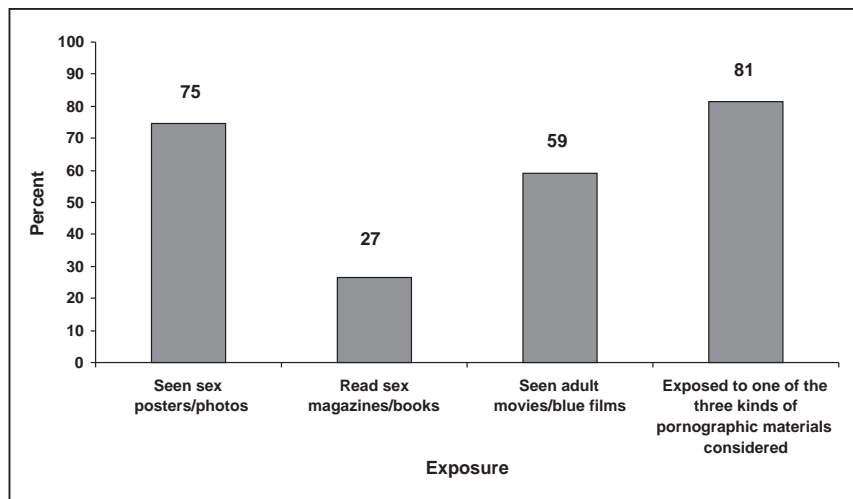
4.4 Exposure to mass media, sex-related materials, and consumption of substances

In order to understand male migrants' sexual behaviour, it is important to assess their exposure to sex-related materials, including photographs, magazines, and films and to substances such as alcoholic beverages, because high-risk behaviour is influenced by such exposure.

Three-fifths of the migrants surveyed reported that they had seen adult movies/blue films in the month prior to the survey, as shown in Figure 4. Three-fourths reported that they had seen sex posters/photos in the that period of time. A little more than one-fourth of the migrants surveyed reported that they had read sex magazines or books. The migrants' exposure to pornographic literature is marginally high in Krishna District, compared with that in to the other four districts studied (see Table 6).



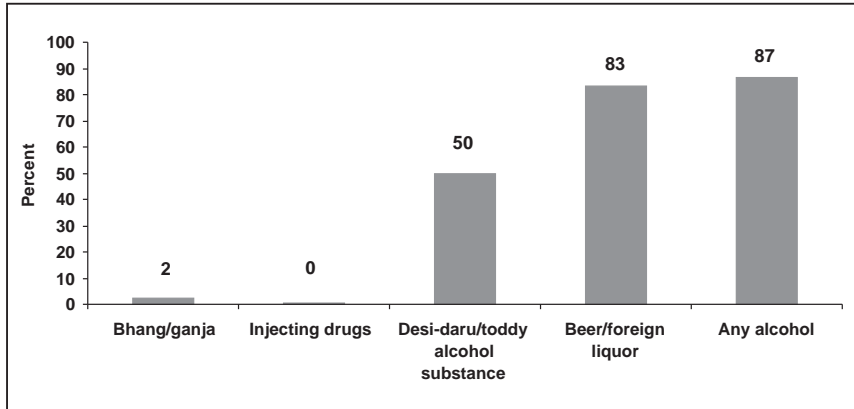
Figure 4 : Percentage of recent male migrants by their exposure to pornography in the month prior to the survey, Andhra Pradesh, India, 2007



The use of alcohol is widespread among recent male migrants; nearly 90 percent of the men surveyed reported drinking alcohol in the month prior to the survey (see Figure 5). Little district-level variation is found in the migrants' consumption of alcohol (see Table 6).



Figure 5 : Percentage of recent male migrants who reported having consumed alcohol or drugs in the month prior to the survey, Andhra Pradesh, India, 2007



The workers spoke about their exposure to the media during the in-depth survey:

"I didn't know about the importance of using a condom. When I met with women for sexual intercourse, I never used one. But now I have learned about condom use through television and friends, and whenever I go to sex workers, I use a condom. In the past, I was not aware of HIV/AIDS, but through television and coworkers and friends I have learned about it." (Hotel worker, Vijayawada)

"When we worked at Bangalore, there were some street plays and dramas put up to convey the message about AIDS. That's how I came to know of the disease. I saw SEED NGO people at Hyderabad spreading this message and teaching about the use of condoms. We visit the government hospital for health problems. I also tell my friends about this disease and ask them to use condoms." (Marble worker, Kotharoad, Visakhapatnam)

"In Hyderabad, Srikakulam, and Vijayanagaram, NGO and government workers have explained about HIV and AIDS. They told us about the importance of using condoms and how to use them. They demonstrated through street plays and at cinemas in panchayat (local government)



offices. Sadhana NGO, SEED, and AASA NGOs were very active in creating awareness. I learned about them fully recently. In the past, we just heard about AIDS, but did not know any details. We thought it was contagious. Now, we understood how it is transmitted. We visit government hospitals for treatment." (Construction worker, Isukathota, Visakhapatnam)

For the HIV-prevention program to succeed, knowing the types of mass media that the migrants are exposed to is particularly important, so that future media campaigns promoting safe-sex practices and HIV awareness can use these channels. Migrant men are frequently exposed to movies; most of them go to cinema halls/video parlours (see Table 6). Andhra Pradesh is the only regional state that produces large numbers of films in a regional language, Telugu. The state has more than ten regional television channels. With the current availability of mass-media facilities throughout the state, more than four-fifths of recent male migrants surveyed reported that they had seen movies and television in the month prior to the survey. More than half have read newspapers or magazines and listened to a radio/FM station during the past month. No major interdistrict variations were found in the migrants' exposure to the media, although exposure to newspapers and magazines is slightly higher in Hyderabad and Rangareddy districts.





V

PATTERNS OF SEXUAL BEHAVIOUR AND VULNERABILITY TO HIV

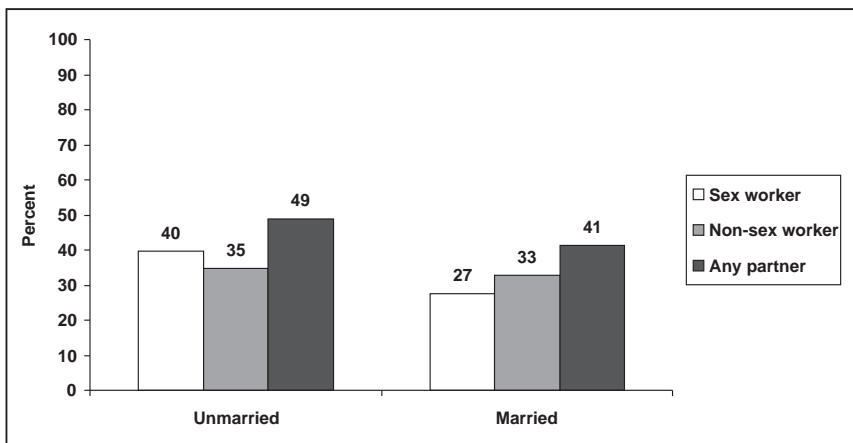
5.1 Sexual behaviour by background characteristics

The data on sexual behaviour is presented for currently married and not currently married (including those who are unmarried and

widowed/divorced/separated) migrant men separately in order to understand their nonmarital sex practices that involve risk factors.

Nonmarital sexual activity is reported more frequently among single male migrants than among currently married migrant men surveyed, as shown in Figure 6. Moreover, two-fifths of men who are not currently married reported having sex with sex workers; the corresponding proportion among currently married men is 27 percent. Sex workers were the most frequently sought partners among single migrants, whereas non-sex workers were the most frequent partners of currently married male migrants. Interestingly, the levels of nonmarital sex did not vary greatly between those married men who are living with their wives at their work location and those who are not (see Table 7).

Figure 6 : Percentage of recent male migrants reporting nonmarital sexual activity, by marital status, Andhra Pradesh, India, 2007





Significant proportions of men in various age groups reported engaging in nonmarital sexual activity regardless of their marital status. Single men in all age groups report having sex with any non-marital partner; however, more older single men (aged 25 and older) than younger ones (aged 19-24) engage in nonmarital sex (58 percent versus 47 percent). The trend is different among married men. The younger married men (aged 19-29) are more likely than the older ones (aged 30 and above) to have nonmarital sex (46 percent versus 39 percent) (see Table 7). Levels of nonmarital sex do not vary by socioeconomic characteristics. For example, between 45 and 52 percent of single male migrants across income groups reported having nonmarital sex; the corresponding proportions for married male migrants ranged from 32 to 43 percent.

Variations in the migrants' high-risk behaviour by occupation are evident from the study. A higher level of risky sexual behaviour among male migrants is reported by men working in the stonecutting industry. Also, married fishermen and single daily-wage and industry workers reported higher levels of risky sexual behaviour than did men in other occupations. Almost equal proportions of single and married construction workers reported engaging in nonmarital sex (44 percent of single men and 43 percent of married men).

Men exposed to pornographic materials reported higher levels of nonmarital sex than those who reported no such exposure (53 percent versus 23 percent among single migrants; 47 percent versus 11 percent among married migrants). These results suggest that exposure to pornographic materials is strongly associated with men's sexual behaviour.

As the dynamics of alcohol consumption and sexual risk-taking were being explored qualitatively, issues such as perceived sexuality and lifestyle were revealed. Two of the migrants' remarks are particularly relevant:

I generally give them (sex workers) 50 to 100 rupees whenever I go to them. I drink liquor before I go because it gives me courage to participate in sex if I drink." (Hotel worker, Chitti Nagar, (Vijayawada City)

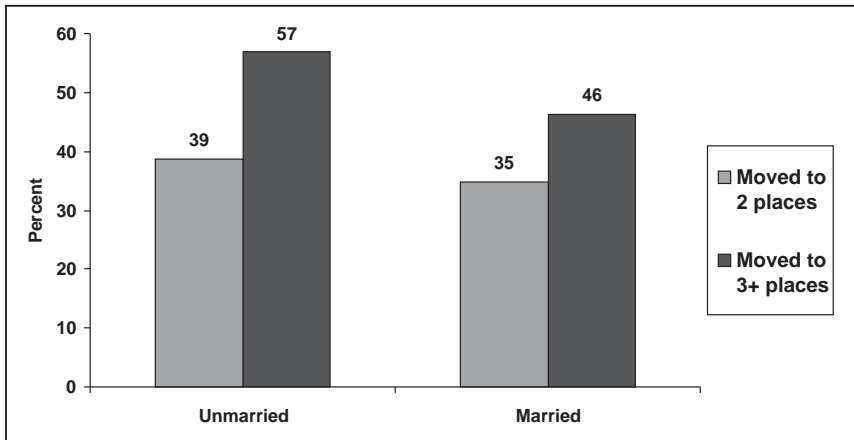


"In Vizag, I visit sex workers at NAD Kotha road (the red-light area) and Gopalpatnam Railway Station. I drink liquor sometimes and eat tobacco and betel nuts every day. We go to them on Sundays (our day off work). Some of us go in a group and some do it secretly." (Marble worker, NAD, Kotha road, Visakhapatnam)

5.2 Migration/mobility characteristics and sexual behaviour

In Table 8, information is presented concerning the linkages between mobility-related characteristics and sexual behaviour. The results suggest that degree of mobility is strongly associated with men's sexual behaviour. For example, among migrants who are not currently married, a higher proportion of those who moved to three or more different locations reported engaging in sex with nonmarital sex partners than did those who moved to only two places (see Figure 7).

Figure 7 : Percentage of recent male migrants who reported engaging in nonmarital sex, by degree of mobility and marital status, Andhra Pradesh, India, 2007



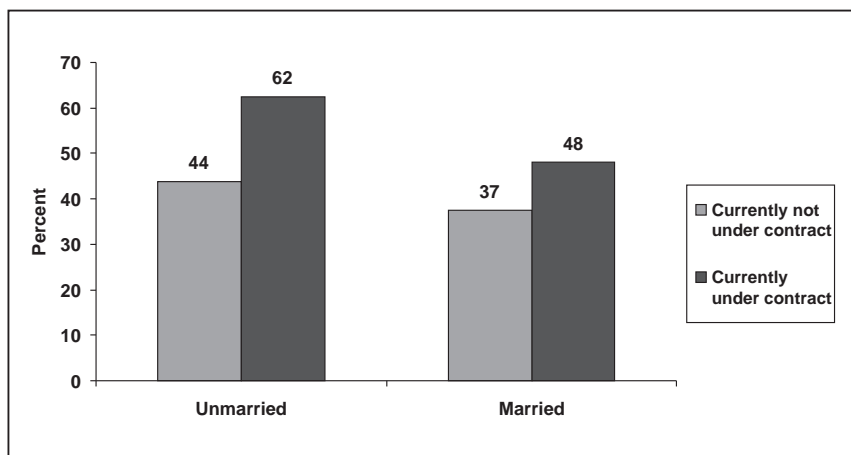
Spending the night away from home for work purposes was also associated with men's sexual behaviour. Compared with men who did not stay overnight away from home while living at their current location in the past month, those who stayed overnight reported engaging in



nonmarital sex with different sex partners. For example, about 45 percent of single migrant men reported having sex with sex workers if they also stayed away from home overnight; the corresponding proportion among those who did not stay away from home overnight is 36 percent. Similar levels of sexual behaviour are noted among currently married men.

Men currently under contract reported consistently higher sexual activity with all types of sex partners than those who are not under contract regardless of their current marital status (see Figure 8). Among currently unmarried men who are under contract, 62 percent reported that they had had sex, compared with 44 percent of those who are not under contract. Similarly, among currently married men, the extent of sexual activity is higher among those who are under contract (48 percent), compared with those who are not (37 percent).

Figure 8 : Percentage of recent male migrants who reported engaging in nonmarital sex, by their contract employment and marital status, Andhra Pradesh, India, 2007



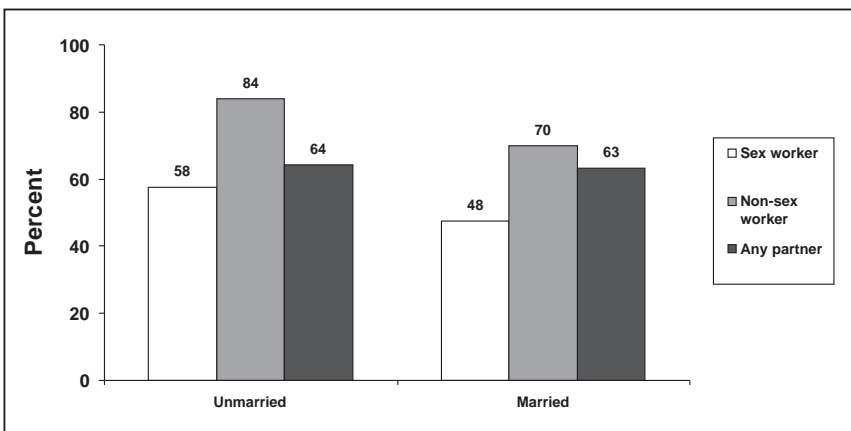


5.3 *Nonuse or inconsistent use of condoms during sex with different partners*

Understanding the male migrants' HIV risk requires not only measuring the level of nonmarital sex they have with various partners but also their level of condom use with these partners.

About two-thirds of recent male migrants, regardless of their marital status, reported either not using condoms or not using them consistently during sex with any nonmarital partners (see Figure 9). The results also indicate that their use of condoms varies according to type of partner, indicating the importance of the men's perception of their level of risk in sexual activity with these partners (see Table 9). Relatively higher proportions of men reported using condoms with sex workers (42 percent of those who were not married and 52 percent of those who were currently married) than with non-sex workers (not currently married: 16 percent; currently married: 30 percent). The migrants' inconsistent condom use with their nonmarital partners is of particular concern, given the prevalence of casual sex among these men regardless of their marital status.

Figure 9 : Percentage of recent male migrants who reported inconsistent condom use, by type of sex partner and marital status, Andhra Pradesh, India, 2007





The results also indicate that the increase in degree of mobility is associated with an increase in nonuse or inconsistent use of condoms, especially among currently married men. This finding clearly suggests a need for immediate intervention.

The extent of nonuse or inconsistent condom use is higher among men who are currently under contract, regardless of their marital status. Seventy-eight percent of not currently married and 75 percent of currently married men who are under contract reported no use or inconsistent use of condoms; the corresponding proportions for those who are not under contract are 57 percent and 55 percent, respectively.

The qualitative data also suggest a low level of condom use among the study participants. As one of the respondent remarked:

"I have sex with those women, but I don't use a condom. Now my coworkers are using condoms that were provided by the SAMATHA voluntary organization. The organization people also explained about the benefits of condom use, which prevents us from HIV infection. They provide condoms free of cost." (Industrial worker, Kondapalli, Vijayawada)

Another respondent said:

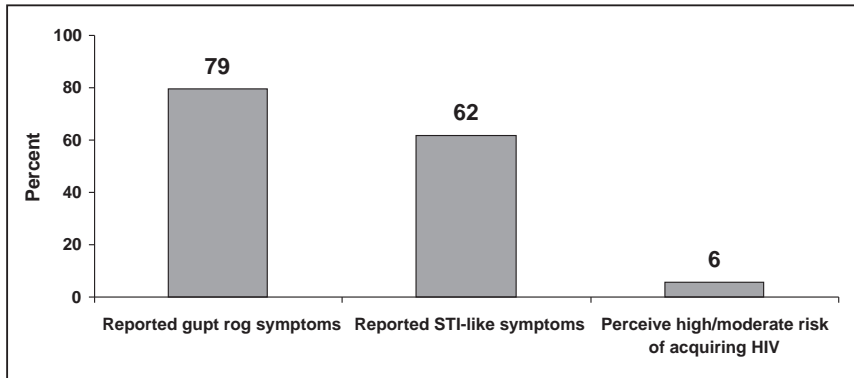
"I hear people talking about the condom. I came to know about it through their talk. I have also come to know about it from radio and television advertisements, but I mostly don't use condoms because they are inconvenient." (Hotel worker, Chitti Nagar, Vijayawada City)

5.4 Migrants' symptoms of STIs and perception of their HIV risk

Among the 2,770 respondents for whom information is available, four-fifths (79 percent) reported *gupt rog* (venereal infection) symptoms, and 62 percent reported STI-like symptoms (see Figure 10). Yet only 6 percent of the respondents said that they perceive themselves at moderate/high risk for acquiring HIV infection.



Figure 10 : Percentage of recent male migrants who reported *gupt rog* and STI-like symptoms in the past 12 months, and who perceive that they have a high/moderate risk of acquiring HIV infection, Andhra Pradesh, India, 2007



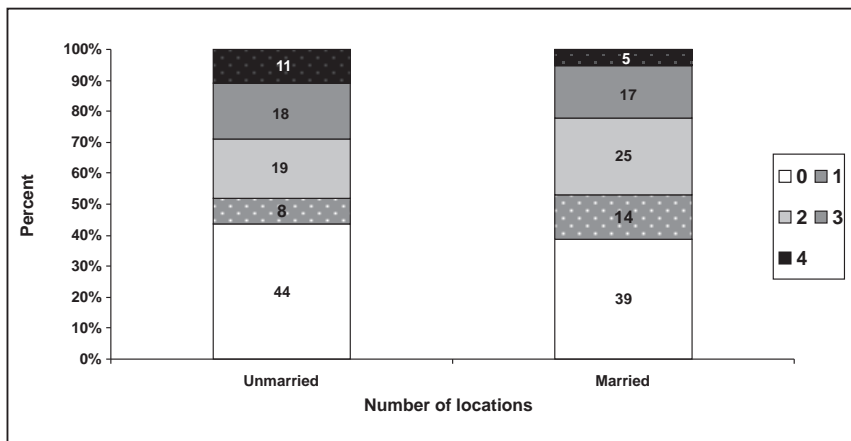
The highest proportion of migrants reporting that they had experienced *gupt rog* symptoms (82 percent) were those who had moved to more than three places in the past two years, whereas labourers working under contract reported the highest (78 percent) of STI-like symptoms. Seven percent of the highly mobile migrants perceived themselves to be at high/moderate risk of acquiring HIV infection (see Table 10).

5.5 Sexual behaviour along migration routes

Table 11 presents information about the number of places where the migrants surveyed had sex along their migration routes. Results show that 60 percent reported engaging in nonmarital sex in at least one of the places to which they had moved or at their place of origin.



Figure 11 : Percentage distribution of recent male migrants who reported having nonmarital sex, by current marital status, according to number of locations along the migration route where they had sex, Andhra Pradesh, India, 2007

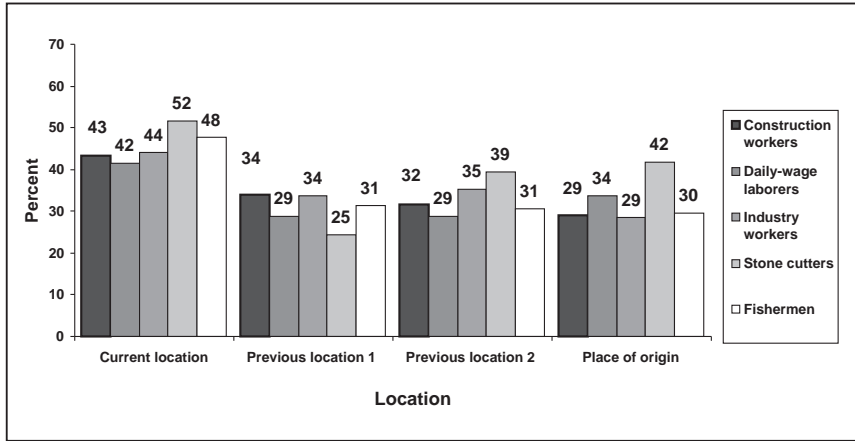


Almost half of the recent male migrants reported having nonmarital sex in more than two places, whereas 7 percent reported having nonmarital sex in all of the four places where they lived in the past two years (see Figure 11). No significant variations were observed in their sexual behaviour by sociodemographic characteristics, as shown in Table 11. High proportions of men working as daily-wage labourers, construction workers, and industry workers, however, reported having nonmarital sex in a greater number of places than did men in other occupations (see Figure 12).

"We have the day off on Sunday. We went to Vijayawada for shopping in the evening. We consumed alcohol and near the railroad park where sex workers are available for Rs.50 to 100. I visited them once when I first went there." (Factory worker, Dharmavaram, Visakhapatnam)



Figure 12 : Percentage of recent male migrants who reported engaging in nonmarital sex, by occupation and location where they had sex along their migration route, Andhra Pradesh, India, 2007



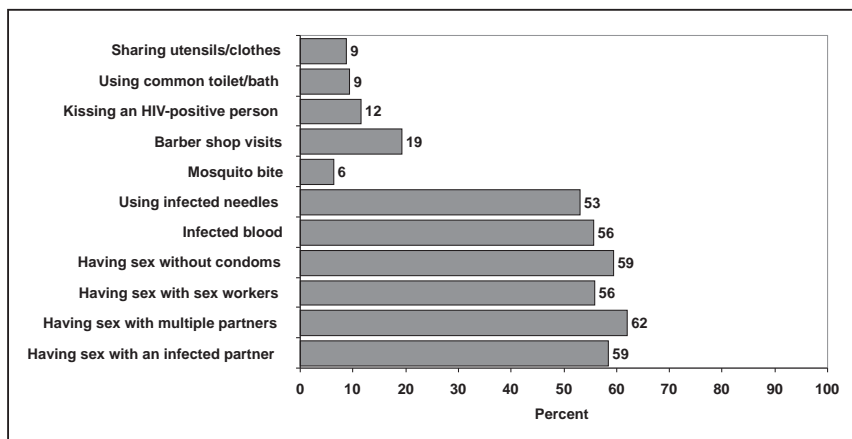
Further analysis was carried out to determine at what points along their migration routes men had sex with nonmarital partners. Almost one-third (32 percent) reported that they had had nonmarital sex in their places of origin, and one-fourth of the total number of respondents reported that they had had sex in their places of origin and in at least one of the three places that they had moved to for work in the past two years (see Table 12).

5.6 Migrants' knowledge of HIV transmission and prevention

The proportion of male migrant workers who report knowledge of HIV transmission and prevention are presented in Table 13. About half of the recent male migrants surveyed reported that routes of transmission include infected needles (53 percent), infected blood (56 percent), having sex without condoms (59 percent), and having sex with someone who is infected with the virus (59 percent). Other ways that the infection can be acquired that respondents reported include having sex with sex workers (56 percent), having sex with multiple partners (62 percent), and from barber shop visits (19 percent) (see Figure 13).



Figure 13 : Percentage of recent male migrants surveyed, by ways of acquiring HIV infection that they reported, Andhra Pradesh, India, 2007

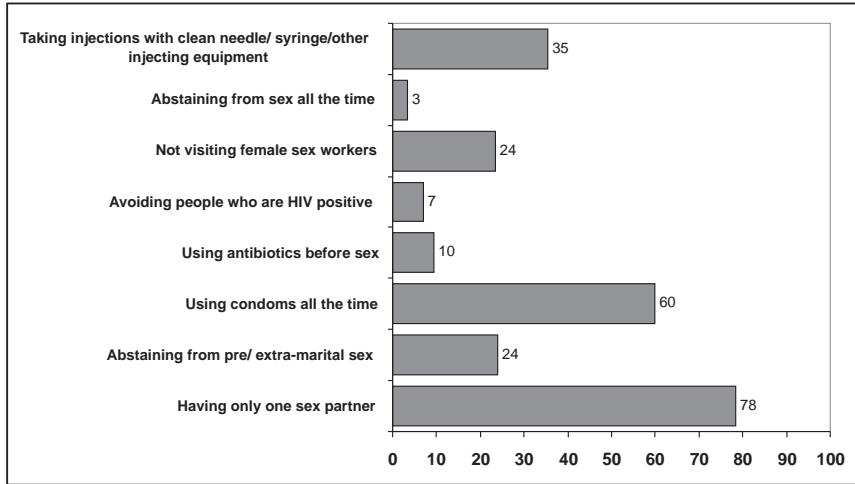


Considerable interdistrict variations are found in male migrants' knowledge of HIV-transmission route. Knowledge of the risk of having sex with multiple partners is most prevalent in Krishna, Guntur, and Hyderabad districts, whereas knowing that having sex without a condom is risky was reported most often by migrants surveyed in Hyderabad, Rangareddy, and Visakhapatnam districts. Overall, the majority of migrant men surveyed in Hyderabad and Rangareddy districts have accurate knowledge about how HIV infection spreads. Misconceptions about HIV infection were reported least often by migrants surveyed in Krishna District, but are relatively common among migrants in Visakhapatnam District.

Four-fifths of recent male migrants reported having only one sexual partner as the way to prevent HIV (see Figure 14). Sixty percent reported that using condoms all the time prevents HIV transmission. Interdistrict variations are found in the number of men who mentioned this preventive method: in Rangareddy District, 74 percent mentioned it, and in Krishna District, only 44 percent did. One in four men reported that abstaining from pre-and extramarital sex and not having sex with sex workers are ways to prevent HIV transmission.



Figure 14 : Percentage of recent male migrants surveyed who reported ways they knew for protecting themselves from HIV infection, Andhra Pradesh, India, 2007





VI

IMPLICATIONS OF FINDINGS FOR THE HIV-PREVENTION PROGRAMME

The results suggest large-scale interdistrict movement of male workers within Andhra Pradesh State. These recent migrants have moved along and through most districts in coastal Andhra Pradesh and to Hyderabad and Rangareddy districts. The occupations of these workers are district specific. Their exposure to pornographic literature is frequent and is associated with their risky sexual behaviour. Almost all of the migrants surveyed drink alcoholic beverages habitually, increasing their tendency to engage in risky sexual behaviour. More than one-third undertook their first migration for the purpose of work by arrangement with agents, brokers, or contractors. About half of the men ever worked under contractual obligation, whereas 30-40 percent were working under contract at the time of the survey.

The data concerning the migrants' sexual behaviour indicate that a significant proportion of them in all the occupations considered engage in sex with sex workers and with non-sex workers. A large majority do not use condoms consistently. Moreover, those under contract reported higher levels of risky sexual behaviour than did those not under contract. To target such a highly mobile population with an intervention to reduce their sexual risk-taking will require a comprehensive understanding of the programmatic directions needed.

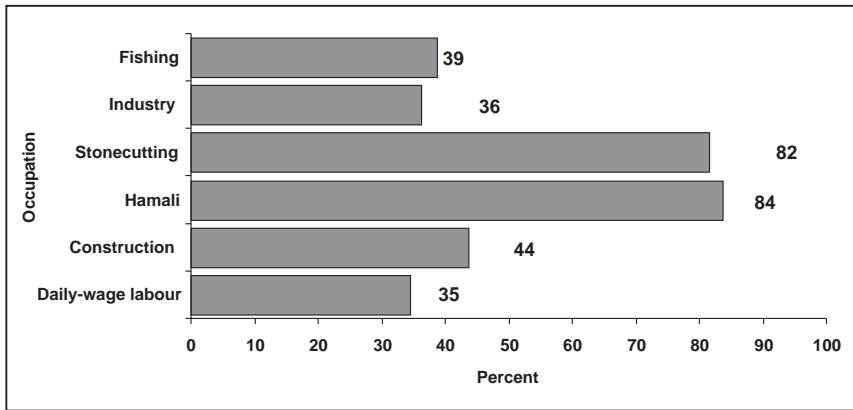
6.1 *Anticipated programme coverage by means of the contractor system*

For the HIV-prevention programme, knowing which occupations are characterized by a large labour force working under contract would be useful. Table 14 presents the proportion of male migrants in each occupation who have never worked under contract, who were not under contract during their first move but are currently under contract, who were under contract during their first move but are not currently working under contract, and who worked under contract during their first move and continue to work under contract. Column 7 in Table 14 indicates the anticipated programme coverage of migrant men in each occupational group, if the program were to be implemented through the network of



contractors (see also Figure 15). This coverage is calculated as a percent representing the male migrants who ever worked under contract.

Figure 15 : Anticipated percentage of male migrants covered by HIV-prevention programme if it is implemented through contract system, by occupation, Andhra Pradesh, India, 2007



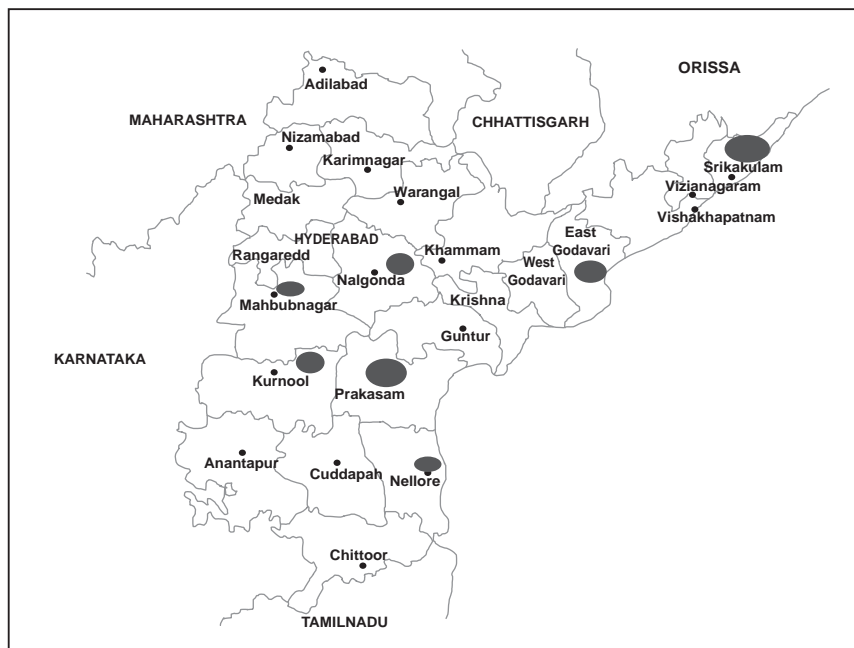
Of the 2,770 migrant workers in different occupations in Andhra Pradesh, almost half worked under the contract system either the first time they moved or at the time of the survey, implying that a substantial proportion of men could benefit by an intervention promoted through the contracts. The coverage would vary by occupation: it would cover 80 percent of hamalis and stonecutters, and almost two-fifths of those in the other occupations considered here.

6.2 A programme focused on the migrants' places of origin

A significant proportion of recent male migrants reported having had nonmarital sex in their places of origin. The study also found that many districts and states send substantial numbers of male workers to find jobs in the five study districts. Those in Andhra Pradesh that send the most men to the study districts are East Godavari, Kurnool, Mahabubnagar, Nalgonda, Nellore, Prakasam, and Srikakulam (see Map 7).



Map 7 : Main source districts for male workers' migration, Andhra Pradesh, India, 2007



These are not necessarily the main source districts in Andhra Pradesh in terms of male migration generally, however. Some of these districts are also the in-migrating districts. The data reveal that the migrants engage in risky sexual behaviours in their places of origin and their places of destination, which suggests the potential usefulness of a study to consider a programme to implement HIV-prevention interventions in migrant workers' places of origin.



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Table 1 : Percentage of recent male migrant workers, by selected background characteristics, according to number of locations they have moved to, Andhra Pradesh, India, 2007

Characteristic	Number of locations moved to since leaving first leaving place of origin		Number of locations moved to in the past two years		(N)
	1+	2+	1+	2+	
District					
Guntur	66.6	55.0	61.6	43.3	(737)
Krishna	77.8	68.4	76.0	45.1	(1,621)
Hyderabad	73.4	54.4	69.4	34.0	(1,540)
Rangareddy	70.0	54.4	67.1	35.8	(1,415)
Vishakapatnam	59.8	49.7	56.7	37.5	(1,138)
Residence					
Urban	68.0	54.5	64.4	36.7	(3,707)
Rural	71.2	58.4	68.5	40.9	(3,444)
Age group					
19	73.8	45.0	69.4	32.8	(271)
20–24	76.4	60.9	73.0	41.4	(1,791)
25–29	71.9	60.7	69.6	41.2	(1,998)
30–34	66.9	56.2	64.2	42.1	(1,409)
35+	61.0	48.8	56.9	31.1	(1,681)
Total	69.5	56.4	66.4	38.7	(7,151)

Note: Recent male migrants tables include men who migrated to their current location in the past two years and who also moved to two or more locations in the past two years.

Source: Screening questionnaire.





Table 2a : Percentage distribution of recent male migrants surveyed by their places of origin, according to their current location in the five study districts, Andhra Pradesh, India, 2007

Sending places	Study districts (Andhra Pradesh)				
	Guntur	Hyderabad	Krishna	Rangareddy	Visakhapatnam
Districts in Andhra Pradesh					
Adilabad	—	1.1	—	2.4	—
Ananthapur	3.8	1.3	0.1	1.0	—
Chittoor	0.4	1.5	1.1	1.6	0.3
Cuddapah	3.8	1.3	1.2	1.4	—
East Godavari	5.6	3.8	11.5	5.1	28.3
Guntur	17.8	5.7	11.6	5.1	7.8
Hyderabad	—	0.8	—	1.2	—
Kammam	2.2	5.9	4.9	7.5	0.4
Karimnagar	0.3	3.4	2.9	1.4	0.1
Krishna	9.1	9.9	11.4	9.3	11.6
Kurnool	11.2	2.9	3.1	7.3	0.6
Medak	—	2.9	—	4.7	—
Mahabubnagar	0.6	6.5	4.0	5.9	—
Nalgonda	5.6	11.9	4.2	9.5	0.8
Nellore	1.9	2.7	2.7	2.0	3.3
Nizamabad	0.3	0.2	1.3	0.4	—
Prakasam	20.3	4.0	26.7	5.7	3.7
Rangareddy	—	4.0	0.1	2.2	—
Srikakulam	4.7	18.0	6.6	17.7	22.8
Visakhapatnam	0.6	2.1	0.6	2.8	2.2
Vijianagaram	1.9	2.7	2.1	1.2	12.3
Warangal	0.3	1.1	0.4	2.0	—
West Godavari	5.2	4.0	2.4	1.6	3.1
Karnataka	0.6	1.2	—	—	—
Maharashtra	—	0.4	0.3	—	—
Orissa	—	—	0.6	0.6	0.9
Tamil Nadu	3.4	0.2	0.1	0.2	1.4
Other states	0.4	0.5	0.1	0.2	0.4
Total (N)	(320)	(523)	(730)	(507)	(689)

— = Not available



Table 2b : Mobility - related characteristics of recent male migrants surveyed, by district, Andhra Pradesh, India, 2007

Characteristic	Guntur	Hyderabad	Krishna	Rangareddy	Vishakapatnam	Total
Number of locations moved to in the past two years						
2	35.4	46.9	36.8	49.9	50.1	44.3
3-4	51.1	47.3	50.8	47.9	46.2	48.5
5+	13.5	5.7	12.3	2.2	3.8	7.2
Stayed overnight away from home for work in the past month						
No	66.5	72.7	36.8	84.0	39.5	56.3
At least once	33.5	27.3	63.2	16.0	60.5	43.7
Commutes between residence and workplace						
No	53.9	36.5	34.4	54.8	19.4	37.1
Yes	46.1	63.5	65.6	45.2	80.6	62.9
First-time move facilitated by contractor						
No	46.7	69.6	35.3	86.4	75.8	62.5
Yes	53.3	30.4	64.7	13.6	24.2	37.5
Frequency of visits to place of origin						
Once per year	11.4	4.9	5.8	6.2	3.8	5.8
A few times a year	6.4	4.2	21.8	7.3	16.6	12.6
Many times a year	11.7	7.2	7.5	12.9	9.2	9.4
No specific schedule	70.5	83.7	64.9	73.6	70.4	72.2
Time of last visit to place of origin						
Less than one month	39.8	31.9	46.9	31.9	28.9	35.9
1-2 months	20.3	27.6	23.7	23.9	26.5	24.8
3-4 months	8.6	15.5	9.0	15.6	13.8	12.7
4+ months	31.3	25.0	20.4	28.6	30.5	26.6
Total (N)	(319)	(52.4)	(731)	(507)	(689)	(2,770)





Table 3 : Percentage of recent male migrants surveyed, by factors that influenced their migration, according to district, Andhra Pradesh, India, 2007

Factors influencing migration	Guntur	Hyderabad	Krishna	Rangareddy	Vishaka-Patnam	Total
Pull factors						
Better income	79.9	79.6	81.9	69.6	78.2	78.1
Better work opportunities	53.9	59.2	47.5	68.8	71.8	60.4
Long-term work contract	39.3	20.2	23.5	17.9	29.6	25.0
Contractor moved them	14.7	14.9	35.7	7.9	11.8	18.3
Attracted to the city	2.5	24.2	7.9	18.5	19.9	15.3
Moved to a known place	21.0	15.6	13.8	14.2	14.2	15.2
Family moved	5.6	10.9	4.8	9.7	14.4	9.3
Availability of skilled work	2.5	2.3	1.5	4.7	3.3	2.8
Push factors						
Poverty	19.7	37.6	18.5	42.0	29.3	29.2
Low wages	9.7	15.3	11.5	29.6	31.5	20.3
Family pressure	8.8	15.6	5.3	15.6	11.3	11.0
Floods	0.9	3.6	2.3	8.5	15.2	6.8
Unemployment	3.1	13.0	3.1	11.6	3.9	6.8
Debt	3.8	10.9	2.6	7.9	6.5	6.2
Fed up with work	3.1	3.4	1.5	9.1	9.0	5.3
Drought	0.0	0.8	0.4	1.6	0.4	0.6
Other	0.0	0.6	0.5	0.2	1.6	0.7
Total (N)	(319)	(524)	(731)	(507)	(689)	(2,770)





Table 4 : Percentage distribution of recent male migrants surveyed by selected sociodemographic characteristics and living conditions, Andhra Pradesh state, India, 2007

Characteristic	Guntur	Hyderabad	Krishna	Rangareddy	Vishakapatnam	Total
Age group						
19	2.5	2.7	1.6	3.7	5.2	3.2
20–24	26.3	28.4	21.5	30.8	28.4	26.8
25–29	38.2	32.1	31.7	29.0	22.4	29.7
30–34	18.8	21.4	20.7	21.3	23.5	21.4
35+	14.1	15.5	24.5	15.2	20.5	18.9
Education						
Illiterate	34.5	30.7	30.9	22.9	30.6	29.7
Primary	17.9	17.9	24.0	20.1	29.8	22.9
Secondary	36.4	41.0	36.8	41.2	36.3	38.2
High school+	11.3	10.3	8.4	15.8	3.3	9.2
Religion						
Hindu	80.3	79.4	64.2	84.8	86.2	79.5
Non-Hindu	19.7	20.6	30.8	15.2	13.8	20.5
Caste						
Schedule caste/schedule tribe	48.6	52.0	65.6	49.9	60.7	57.0
Other	51.4	48.0	34.4	50.1	39.3	43.0
Current marital status						
Married	58.0	56.5	74.5	57.4	62.8	63.2
Unmarried	42.0	43.5	25.5	42.6	37.2	36.8
Income (Rs.) per month						
2,000	30.1	9.9	40.5	2.4	7.3	18.3
2,001–3,000	49.5	54.3	44.6	53.8	47.0	49.3
3,001+	20.4	35.8	14.8	43.8	45.7	32.4
Living arrangements						
Alone	51.4	55.0	39.0	48.9	52.5	48.6
With friends	0.3	0.0	0.1	0.0	0.1	0.1
With relatives	14.4	14.3	9.3	19.9	26.3	17.0
With wife	33.9	30.5	51.3	31.2	21.0	34.2
Type of house						
Pucca (concrete/sheet roof with cement wall)	11.6	14.0	11.9	13.4	3.6	10.5
Sempucca(with cement wall and thatch roof)	30.1	52.6	26.3	67.9	61.0	48.0
Kaccha (without concrete/sheet roof or cement walls)	58.0	33.5	60.6	18.5	35.4	41.2
Wife living with respondent (among currently married men)						
Yes	63.2	61.1	68.1	69.8	36.3	58.8
No	36.8	38.9	31.9	30.2	63.7	41.2
Total (N)	(319)	(524)	(731)	(507)	(689)	(2,770)



Table 5 : Percentage distribution of recent male migrants surveyed, by occupation, according to district, Andhra Pradesh, India, 2007

Occupation	Guntur	Hyderabad	Krishna	Rangareddy	Vishakapatnam	Total
Factory	15.0	20.5	9.9	80.1	2.2	23.4
Construction	6.3	39.0	11.0	19.3	29.9	22.0
Fishing	0.3	7.5	17.4	0.0	53.0	19.2
Hamali (loads/unloads market produce)	8.5	2.7	36.1	0.6	0.0	11.1
Daily-wage labour	26.6	23.5	7.7	—	0.4	9.6
Stonecutting	25.7	—	5.2	—	6.2	5.9
Mining	0.9	—	5.6	—	—	1.5
Agricultural labour	1.6	0.2	1.8	—	0.1	0.7
Hawking	0.6	0.2	1.4	—	—	0.5
Driving	—	0.2	—	—	—	0.1
Art/Design	0.3	—	—	—	—	—
Salaried (private)	0.3	—	—	—	—	—
Other	14.4	6.1	4.0	—	8.1	5.9
Total (N)	(319)	(524)	(731)	(507)	(689)	(2,770)

— = Not available





Table 6 : Percentage of recent male migrants, by their exposure to the mass media and sex-related materials and by their consumption of substances, Andhra Pradesh, India, 2007

Exposure in the past month	Guntur	Hyderabad	Krishna	Rangareddy	Vishakapatnam	Total
Media						
Newspaper/magazines	55.8	62.4	51.7	68.0	50.5	56.9
Films in cinema halls/ video parlours	85.9	88.9	84.8	80.1	66.5	80.3
Television	87.5	92.4	78.1	87.2	86.2	85.6
Radio/FM	42.0	45.8	61.4	53.8	69.7	56.9
Sex-related materials						
Posters/photos	73.0	80.9	81.5	73.8	63.4	74.5
Sex magazines/books	29.8	23.9	28.7	27.2	25.0	26.7
Adult movies/blue films	61.8	57.4	62.9	57.2	56.3	59.1
Any of the three kinds of materials	79.0	85.5	84.4	78.5	78.2	81.4
Substance use						
Bhang/ganja	4.7	3.4	3.0	0.6	0.6	2.2
Injecting drugs	0.6	0.2	0.3	0.6	0.4	0.4
Desi-daru/toddy alcohol	55.8	42.3	68.3	33.3	46.0	50.0
Beer/foreign liquor	78.1	82.0	80.2	83.4	89.3	83.2
Any alcohol	82.4	83.4	87.7	85.6	90.1	86.5
Total (N)	(319)	(524)	(731)	(507)	(689)	(2,770)





Table 7 : Percentage of recent male migrants, by selected background characteristics, according to current marital status and type of partner with whom they engaged in nonmarital sex, Andhra Pradesh, India, 2007

Characteristic	Unmarried					Married				
	SW	NSW	Any partner	3+ sex partners	(N)	SW	NSW	Any partner	3+ sex partners	(N)
Age group										
19-24	37.9	31.4	46.6	25.9	(723)	na	na	na	na	na
25+	47.2	45.8	57.9	33.6	(271)	na	na	na	na	na
19-29	na	na	na	na	na	28.1	35.3	45.7	28.4	(679)
30+	na	na	na	na	na	27.0	31.4	38.5	29.3	(1,070)
Education										
Illiterate	39.0	36.2	50.7	28.2	(213)	18.5	29.3	34.8	20.8	(610)
Primary	40.3	38.2	49.0	32.1	(196)	33.0	35.0	45.8	33.2	(437)
Secondary	39.8	31.1	48.0	25.3	(483)	31.8	35.3	44.3	32.5	(575)
High school+	40.2	39.4	48.8	27.6	(127)	31.5	32.3	43.3	37.8	(127)
Income (Rs.) per month										
2,000	27.7	32.1	45.1	22.3	(184)	18.7	26.2	32.4	20.2	(321)
2,001-3,000	40.9	34.4	48.4	26.9	(543)	30.1	35.2	44.0	31.1	(821)
3,001+	45.2	36.6	52.1	31.8	(292)	28.6	33.6	42.5	30.9	(605)
District										
Guntur	44.8	33.6	52.2	38.8	(134)	32.4	34.1	44.9	36.8	(185)
Hyderabad	45.2	34.6	53.5	30.7	(228)	22.6	30.7	38.5	28.7	(296)
Krishna	35.5	43.0	55.9	20.4	(186)	21.0	31.6	38.2	22.4	(544)
Rangareddy	40.3	31.5	46.8	25.5	(216)	30.2	31.6	41.2	29.9	(291)
Vishakapatnam	34.8	31.6	39.5	25.4	(256)	34.9	36.5	45.5	33.5	(433)
Occupation										
Construction	31.6	32.9	44.2	22.9	(231)	28.4	31.3	42.7	30.0	(377)
Hamali	32.7	38.9	50.0	17.3	(52)	15.3	30.2	34.9	17.6	(255)
Daily-wage labour	46.0	33.9	50.8	38.7	(124)	23.8	28.7	33.6	27.3	(143)
Industry	42.6	33.1	49.0	27.5	(251)	29.5	31.2	41.1	30.7	(397)
Stonecutting	47.4	47.4	57.9	33.3	(57)	31.1	38.7	48.1	32.1	(106)
Fishing	40.0	34.2	46.3	25.3	(190)	36.5	40.4	48.2	35.4	(342)
Other	42.1	35.1	55.3	29.8	(114)	19.5	28.9	35.2	25.8	(128)
Exposure to pornography in past month										
No	20.3	4.7	23.0	15.5	(148)	14.4	9.3	10.9	13.6	(367)
Yes	43.0	39.7	53.2	29.5	(872)	30.9	39.2	47.0	33.1	(1,382)
Alcohol consumption in past month										
No	21.4	20.5	26.0	18.6	(215)	5.7	11.9	13.8	8.9	(159)
Yes	44.7	38.4	55.0	29.9	(804)	29.6	35.1	44.1	31.0	(1,589)
Living with wife at current location										
Yes	na	na	na	na	na	25.3	33.8	42.5	27.9	(1,029)
No	na	na	na	na	na	30.6	31.7	39.6	30.6	(720)
Total	39.7	34.6	48.9	27.5	(1,019)	27.4	32.9	41.3	29	(1,748)

na = Not applicable. SW = Sex worker. NSW = Non-sex worker.



Table 8 : Percentage of recent male migrants, by migration/mobility characteristics, according to current marital status and type of partner with whom they engaged in nonmarital sex, Andhra Pradesh, India, 2007

Characteristic	Unmarried					Married				
	SW	NSW	Any partner	3+ sex partners	(N)	SW	NSW	Any partner	3+ sex partners	(N)
Number of locations moved to in past two years										
2	29.9	22.9	38.7	13.6	(455)	26.9	26.4	34.9	26.6	(770)
3+	47.7	44.1	57.1	38.7	(564)	27.9	38.1	46.3	30.8	(979)
Stayed overnight away from home while at current location in the past month										
No	36.0	30.6	43.2	28.6	(611)	22.3	26.8	34.7	9.6	(948)
Yes	45.2	40.6	57.2	25.7	(409)	33.6	40.2	49.1	15.5	(801)
Commutes between residence and workplace but does not stay overnight										
No	33.8	22.5	39.7	26.3	(373)	16.8	18.7	27.0	18.5	(653)
Yes	43.2	41.6	54.2	28.2	(646)	33.8	41.5	49.9	35.3	(1,095)
Currently under contract										
No	37.9	30.1	43.7	27.0	(741)	28.2	29.2	37.4	29.7	(1,108)
Yes	44.4	46.6	62.4	28.7	(279)	26.1	39.3	48.0	27.8	(641)
Currently not under contract, but first time worked under contract										
No	39.9	32.2	46.3	29.0	(696)	29.4	32.4	40.3	31.7	(1,035)
Yes	39.2	39.8	54.3	24.1	(324)	24.7	33.8	42.8	25.1	(713)
Total	39.7	34.6	48.9	27.5	(1,019)	27.4	32.9	41.3	29	(1,748)

SW = Sex worker. NSW = Non-sex worker.





Table 9 : Percentage of recent male migrants surveyed who reported nonuse or inconsistent use of condoms, by selected characteristics, according to marital status and type of partner with whom they engaged in nonmarital sex, Andhra Pradesh, India, 2007

Characteristics	Unmarried			Married		
	SW	NSW	Any partner	SW	NSW	Any partner
Number of locations moved to during past two years						
2	50.0 (136)	70.2 (104)	60.2 (176)	38.2 (207)	48.3 (203)	49.1 (132)
3+	61.3 (269)	89.6 (249)	66.5 (322)	54.6 (273)	81.8 (373)	71.7 (453)
Stayed overnight away from home while at current location in the past month						
No	62.3 (220)	88.2 (187)	67.0 (264)	50.7 (211)	77.6 (254)	67.2 (221)
Yes	51.9 (185)	78.9 (166)	61.1 (234)	45.0 (269)	64.0 (322)	60.1 (236)
Commutes between residence and workplace but does not stay overnight						
No	54.0 (126)	94.0 (84)	58.8 (148)	66.4 (110)	94.3 (122)	78.4 (176)
Yes	59.1 (279)	80.7 (269)	66.6 (350)	41.9 (370)	63.4 (454)	58.4 (546)
Currently under contract						
No	52.3 (281)	78.5 (223)	57.1 (324)	41.5 (313)	59.6 (324)	54.6 (414)
Yes	69.4 (124)	93.1 (130)	77.6 (174)	58.7 (167)	83.3 (210)	75.0 (308)
Currently not under contract, but first time worked under contract						
No	51.8 (278)	80.4 (224)	57.5 (322)	42.1 (304)	64.5 (335)	56.6 (417)
Yes	70.1 (127)	89.9 (129)	76.7 (176)	56.8 (176)	77.6 (241)	72.5 (305)
Total (N)	(405)	(353)	(498)	(480)	(576)	(722)

SW = Sex worker. NSW = Non-sex worker.

Note: Figures in parentheses in each category of variable show the total number of men who reported having sex with a sex worker that category.



Table 10 : Percentage of recent male migrants surveyed who reported experiencing *gupt rog* and STI-like symptoms in the past 12 months and who currently perceive themselves to be at moderate/high risk of acquiring HIV infection, by migration/mobility characteristics, Andhra Pradesh, India, 2007

Migration/mobility characteristics	Gupt rog symptoms	STI-like symptoms	Moderate-to-high risk of HIV infection	(N)
Number of places moved to during past two years				
2	76.3	60.5	4.1	(1,226)
3+	81.8	62.7	6.9	(1,543)
Stayed overnight away from home while at current location in past month				
No	78.9	57.2	5.5	(1,560)
Yes	79.9	67.5	6.0	(1,210)
Commutes between residence and workplace but does not stay overnight				
No	75.9	58.2	6.8	(1,026)
Yes	81.9	63.9	5.0	(1,741)
Currently under contract				
No	75.8	53.5	5.5	(1,850)
Yes	86.5	78.3	6.2	(920)
Currently not under contract, but first time worked under contract				
No	75.1	54.0	6.0	(1,731)
Yes	86.6	74.7	5.1	(1,037)
Total (N)	79.4 (2,770)	61.7 (2,770)	5.6 (2,770)	na (2,770)

na = Not applicable.





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

Characteristic	Number of locations					(N)
	None	1	2	3	4	
Age group						
19	74.2	6.7	11.2	4.5	3.4	(89)
20–24	43.4	8.0	19.0	20.2	9.4	(742)
25–29	32.7	10.9	26.6	21.1	8.6	(823)
30–34	39.6	12.8	24.3	16.4	6.9	(593)
35+	44.6	18.9	21.8	11.5	3.3	(523)
Marital status						
Not currently married	43.7	8.0	19.1	18.3	10.8	(1,019)
Currently married	38.8	14.2	24.8	17.0	5.3	(1,750)
Education						
Illiterate	43.3	14.9	22.0	15.8	4.0	(823)
Up to primary	41.2	10.7	20.9	15.6	11.5	(633)
Up to secondary	40.1	10.8	23.5	18.5	7.1	(1,058)
High school+	32.3	9.8	26.0	23.6	8.3	(254)
Occupation						
Construction	41.9	9.7	23.0	19.1	6.3	(608)
Hamali (loads/unloads market produce)	30.9	25.7	25.1	13.7	4.6	(307)
Daily-wage labour	46.1	12.7	14.6	15.4	11.2	(267)
Industry	42.0	8.0	23.9	18.7	7.4	(648)
Stonecutting	36.2	11.7	20.9	21.5	9.8	(163)
Fishing	43.2	9.2	22.0	16.5	9.0	(532)
Other	36.4	15.7	27.3	17.4	3.3	(242)
Contract status						
Never under contract	44.7	10.2	21.1	14.8	9.2	(1,466)
First time worked under contract but now not under contract	25.3	15.1	30.2	22.6	6.8	(265)
First time worked without contract but now under contract	48.4	16.0	19.4	12.0	4.2	(382)
Under contract during first move and currently	32.8	12.2	25.2	24.7	5.0	(655)
Total	40.6	11.9	22.7	17.5	7.3	(2,770)

Note: Data are based on the men's responses about their sexual activity at their current location, their previous two locations and their place of origin.



Table 12 : Percentage of recent male migrants surveyed who reported engaging in nonmarital sex, by selected socioeconomic characteristics, according to number of locations where they had sex, Andhra Pradesh, India, 2007

Characteristic	Current location (CP)	Previous location 1 (P1)	Previous location 2 (P2)	Place of origin	Had sex in place of origin and in one of the other three locations (CP, P1, P2)	Total (N)
Age group						
19–24	45.4	30.5	28.8	30.4	26.8	(830)
25–29	50.9	37.1	40.0	34.6	28.7	(823)
30–34	43.7	29.2	32.6	32.8	25.5	(593)
35+	31.5	23.2	24.9	30.5	17.4	(523)
Income (Rs.) per month						
2,000	37.0	19.8	24.7	29.8	22.6	(505)
2,001–3,000	45.7	31.5	31.5	30.9	24.2	(1,364)
3,001+	45.6	35.8	37.6	35.2	28.7	(897)
Occupation						
Construction	43.3	34.0	31.6	29.1	23.8	(608)
Hamali (loads/unloads market produce)	37.5	24.8	30.6	42.5	28.3	(307)
Daily-wage labour	41.6	28.8	28.8	33.8	27.3	(267)
Industry	44.1	33.6	35.2	28.5	23.1	(648)
Stonecutting	51.5	24.5	39.3	41.7	34.4	(163)
Fishing	47.6	31.3	30.7	29.6	24.6	(531)
Other	44.6	27.8	30.0	33.6	24.4	(240)
Marital status						
Single	48.8	31.8	32.0	31.9	28.3	(1,019)
Married	41.3	30.2	32.3	32.3	23.6	(1,744)
Wife is staying with respondent (among currently married men)						
Yes	42.5	26.7	29.9	37.6	26.9	(1,029)
No	39.6	35.2	35.8	24.7	18.8	(720)
Contract status						
Never under contract	41.1	32.7	31.1	28.8	23.1	(1,466)
First time worked under contract but now not under contract	51.7	36.2	43.0	39.8	30.9	(265)
First time worked without contract but now under contract	35.6	21.1	23.4	27.9	18.1	(382)
Under contract during first move and currently	52.7	29.9	35.4	39.0	32.4	(655)
Total	44.0	30.8	30.8	32.2	25.3	(2,770)



Table 13 : Percentage of recent male migrants surveyed, by knowledge of HIV transmission and prevention, according to district, Andhra Pradesh, India, 2007

Responses	Guntur	Hyderabad	Krishna	Ranga- reddy	Visakha- patnam	Total
How does a man become infected with HIV?						
Having sex with multiple partners	69.0	64.3	71.4	59.4	49.2	62.1
Having sex without condoms	57.4	70.8	44.7	68.6	60.5	59.4
Having sex with an infected partner	64.9	68.7	49.8	62.7	53.8	58.5
Having sex with sex workers	63.0	60.7	50.3	61.7	50.7	55.9
Infected blood	47.0	53.1	50.1	64.7	61.2	55.7
Using infected needles	48.9	55.9	45.4	63.7	53.3	53.1
Barber shop visits	17.6	22.1	14.0	27.0	17.7	19.2
Kissing an HIV-positive person	9.1	11.1	8.3	16.4	12.9	11.6
Using a common toilet/bath	4.4	7.4	6.8	6.9	17.7	9.4
Sharing utensils/clothes	3.1	9.0	6.2	10.8	12.2	8.7
Mosquito bite	5.0	7.6	6.4	9.1	3.6	6.3
How can HIV be prevented?						
Having only one sex partner	76.2	76.5	85.9	72.2	77.1	78.3
Using condoms all the time	56.7	59.4	44.0	73.8	68.2	59.9
Receiving injections with a clean needle/syringe/other injecting equipment	16.6	44.8	12.3	48.1	52.0	35.4
Abstaining from pre or extramarital sex	23.5	26.1	20.4	25.2	25.5	24.0
Not having sex with sex workers	20.1	20.4	18.6	27.2	29.8	23.5
Using antibiotics before having sex	16.0	11.1	7.9	16.0	2.3	9.5
Avoiding people who are HIV positive	1.9	1.7	4.0	12.2	13.1	7.1
Having a good diet	0.0	4.8	1.4	6.7	6.2	4.0
Abstaining from sex	0.9	2.1	3.3	6.5	3.0	3.3
Total (N)	(319)	(524)	(731)	(507)	(689)	(2,770)



Table 14 : Percentage distribution of recent male migrants surveyed who reported working under contract either when they first migrated for work or currently, Andhra Pradesh, India, 2007

Occupation	Never under contract	First time did not work under contract but now under contract	First time worked under contract but now not under contract	Under contract during first move and currently	Anticipated programme coverage if programme implemented through contract system	(N)
Construction	56.3	9.5	12.2	22.0	43.8	(608)
Hamali (loads/unloads market produce)	16.3	17.3	13.4	53.1	83.7	(307)
Daily-wage labour	65.5	2.2	24.3	7.9	34.5	(267)
Industry	63.3	11.6	9.7	15.4	36.3	(648)
Stonecutting	18.4	10.4	13.5	57.7	81.6	(163)
Fishing	61.1	7.3	12.2	19.4	38.7	(532)
Other	55.4	7.0	21.1	16.5	44.6	(242)
Total	53.0	13.8	9.6	23.7	46.9	(2,770)

